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By Xin Wang

Analyzing PhD supervision using the Competing Values Framework

A Doctoral Thesis

Submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy of Loughborough University

Date: 23/01/2013

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ABSTRACT

This thesis provides an analysis of supervisory interactions between PhD supervisors and their students within social science disciplines, using the Competing Values Framework (CVF). Traditionally, such work has been conducted using a supervisor-centred perspective, and this thesis adds to the literature by adopting a student-centred view to look at supervisor's behaviours during the interaction, from a role performance perspective in light of the CVF.

Drawing primarily on semi-structured interpersonal process recall interview data, the thesis considers a number of interlinking analytical themes. These can be divided into three broad groups. The first focuses on investigating the CVF roles that are adopted by the supervisor during the interaction and recognized by the students as important component parts of 'the most helpful' supervisory moments. In line with the previous literature, I note that the most effective supervisory behaviours reflect the performance of all the eight CVF roles with the producer and the director occupying the dominant position.

The second group is closely linked with the first and investigates CVF managerial roles represented by 'the least helpful' supervision moments selected by the student. I note how PhD supervisors' inadequate use, including both overuse and underuse of the CVF roles are related to the least effective supervisory moments. The director and the producer are again the most represented ones which are reported as being mostly underused. The third group analyses students' advice on 'further improvements'. In conclusion, I relate my analysis to existing literature and examined the contributions of the thesis to three main areas of research. This research finds that instances of positive and negative supervisee feedback reflect an increased influence of marketorientation and manageralism on research students and correspondingly inadequate use of managerial roles by supervisors.

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Chapter 1 Introduction

This thesis is about the effectiveness of the 'mystery PhD supervision' and how it is delivered in practice by supervisors through adopting different supervisory roles. As with all controversies, there is more than one criterion for the effectiveness of PhD supervision. I will approach PhD supervision effectiveness as a subjective construct, according to the literature and defined by the perceived satisfaction of the student with the supervision they received. Therefore production of another contribution to the debate about 'how to define the effectiveness of PhD supervision' is outside of the scope of this project. With an intention to develop a heuristic, this study demonstrated that, in terms of analyzing complex PhD supervision effectiveness, formalizing a heuristic can help supervisors to make decisions more quickly and frugally by ignoring part of the information of the complex supervision interactions.

This introductory chapter first outlines key aspects of the context within which my topic is set. It provides some background information of PhD supervision as well as the motivation behind the study. Second, I shall clarify my research purposes and the theoretical framework of the Competing Values Framework (CVF) that I intend to use in the construction of this thesis and the analysis of data. Finally, I shall outline the thesis itself, with a brief clarification of the contents of each chapter in the thesis.

Higher education has been well-recognized as a great national asset which contributes to the economic and social well-being of the nation, and the government sees universities as engines for change and expansion of prosperity. PhD education has experienced considerable growth in student numbers and become widespread with significant development over the last 20 years. Along with this increase in

candidate population come a major concern to improve the quality of research experience and supervision that PhD students receive, as the quality of PhD supervision has a demonstrable effect on postgraduate outcomes, particularly in ensuring quality research work as well as completion rates (Cullen et al. 1994; Wisker, 2005) and it has received little attention from the funding councils compared to undergraduate and master courses (Thomson & Walker, 2010). The practice of supervision is becoming an evolving field of interest not only for supervisors and students, but also for universities and other stakeholders who wish to reliably improve the efficiency of doctoral supervision, which works as a key element in university's benefit cycle.

There have been rapid grown numbers of researchers working on improving PhD supervision (Cullen, Pearson, Saha & Spear 1994; Earwaker, 1992; Gill, 2009; Hockey, 1997; Pole, Sprokkereef & Lakin, 1997; Thomson & Walker, 2010; Wisker, 2005). It can be seen from the literature, the practice of supervision for PhD student is a complex multi-factorial process that encompasses issues at all levels from that of individual student and his/her supervisor, to institutional support and environment, to governmental policies, structures and procedures. PhD supervisors are faced with a variety of challenges, including balancing different traits and values that they need to emphasize, for instance, they need to be supportive motivators of the students, but also be critical for the sake of student's future development; they need to teach fundamental skills of the research if required, but also help the student to achieve independence. It has been an increasingly demanding role for supervisors, and this can be quite a challenging task to balance such a variety of supervisory roles.

The aim of the thesis was to investigate PhD supervisor's role performance during supervision from a student-centred perspective. My thesis focuses on examining supervisory interactions between PhD students and their supervisors from 'soft' disciplines (social sciences, humanities and art) with the purpose of drawing attention to the most and the least effective supervisory activities for a better

understanding of PhD supervision from a role-performance perspective. In order to achieve this objective, the competing values framework (CVF)(Quinn, et al., 2007) is adopted as an analytical tool for interpreting the supervisor's behaviours. PhD students' responses that indicate their expectations of supervision effectiveness were collected, including what kind of supervisor activities are valued by students where effectiveness may be enhanced; as well as those activities that gained most of the criticisms and in which situation tensions may occur. Their selections of 'the most helpful' and 'the least helpful' supervision moments are then analysed in terms of what managerial role is represented by the supervisor while carrying out the selected activities according to their functions and means-ends assumptions in light of the CVF.

My purpose here was also to gather rich, valuable insights into the PhD supervision practices that are perceived as effective by students in terms of what supervisory roles are displayed during the interactions. Rather than to rely on the participant's recall of what happened in supervision meeting, which can be inaccurate and contain ''narrative smoothing'' (West & Clark, 2004), I applied the interpersonal process recall (IPR) to the interviews to examine real-time PhD supervision with the assistance of video-recorded supervision meeting, which will be discussed in more detail in Chapter four.

The participants in this study were full-time PhD students and their supervisors from soft disciplines from Loughborough University. The participants were randomly selected. The interviewed PhD students represented individuals from different stages of the PhD, ranging from the first year candidate who is still working on narrowing down the research topic to the final year candidate who is writing up and ready to submit. Their supervisors on the other hand, also represented individual professionals from different age groups with different experiences and background: some of them were more experienced in terms of supervising PhD students with

many already successful completed supervisees; while others were relatively less experienced.

This thesis has its primary focus on the semi-structured IPR interviews, it treats interview transcript as data and accordingly examines them in light of the competing values framework, drawing on the method of template analysis (King, 1998).

This chapter has introduced the basis for the thesis and provided the reader a brief insight into the research. Chapter two provides a brief review of existing literature on effective PhD supervision practices. Existing literature are reviewed in different groups according to their methodologies and research findings. By doing so, I also justify the context of my own study and the research method used therein. It then moves to a brief overview of background history of doctoral education, PhD supervision to lay the groundwork.

The second part of the literature review, chapter three, introduces the competing values framework, the theoretical framework used in the thesis. It then continues the examination of existing literature on effective supervision, focusing particularly on literature that relevant to my study, including research that used the CVF and those adopt a student-centred perspective, to discuss the advantages of using the CVF in this study from a student-centred perspective and how my research relate to exiting literature.

Chapter four looks at method. This chapter specifies procedures utilised for collecting, coding and analysing the thesis data. Interpersonal process recall and template analysis are described in detail. As the main research method used for data collection is the IPR, each stage of the IPR interview process is addressed chronologically. In addition, I discuss the potential issues surrounding the use of IPR

for data collection. Finally, this chapter looks at ethical issues in terms of respect, responsibility, and integrity; and a summary of data is also provided at the end.

Chapter five focuses on detailed analysis and investigation of supervisory activities that are selected by students as 'the most helpful supervision moments' during an interaction. These selected supervisory moments are analysed within the context of the eight CVF roles according to the core competencies associated with them, following the procedure guidelines of template analysis. In this research, all eight CVF roles are valued and represented by the student's selections, and the most effective supervision moments generally tend to gravitate towards an emphasis on the lower right quadrant – the rational goal management model and its two managerial roles- the producer role and the director role.

Chapter six focuses on 'the least helpful supervision moments'. Considering the 'negative zones' of CVF (Quinn, 1988; Vilkinas, 2002), this chapter concentrates on supervisory activities that lack compatibility with the demands of the student and are perceived as 'least helpful', to investigate what roles are displayed by the supervisor during these moments and why they are selected as 'least helpful'. According to the results, what becomes apparent is that PhD supervisors' inadequate use, including both overuse and underuse of CVF roles are in relation to the least effective supervisory moments, and most of the negative feedbacks were caused by supervisors' underuse of CVF roles in the rational goal model and its two managerial roles - the producer role and the director role. Based on research findings presented in chapter five and six, I argue that current PhD students' views on PhD supervision practices are reflecting the influence of market-orientation and manageralism on research students within higher education institutions as more attention has been placed on productivity (thesis and completion of the degree).

Finally, chapter seven is the conclusions chapter where I summarise the findings of the analytical chapters and discuss the implications of these in relation to PhD

supervision. I address the contributions made by this thesis to three fields of research: PhD supervision effectiveness, competing values framework, and interpersonal process recall.

Chapter 2 Literature Review – Part One

2.1 Introduction

This literature review (part one and part two) will provide an introduction to the research topic through descriptions and evaluations of existing academic literature in the field of effective PhD supervision activities. Various studies in this area will be reviewed critically considering their methodologies as well as result findings, in order to justify the context of my own study and the research method used therein.

The first part of the literature review is a brief examination of existing literature analyses of effective PhD supervision practices, and how my own study fits into this. This research is discussed in three separate groups according to their research findings. The first group focuses on supervisory styles and practices (Acker, Hill, & Black, 1994; Brew & Peseta, 2004; Cullen et al, 1994; Hockey, 1996), and their research results are presented in terms of different desirable role-list for supervisor that offer 'guides to success' (Atkinson, & Parry, 1997; Cryer, 1997; Delamont,); the second group interpret effective supervision within a wider socio-cultural context, provided information on how supervision is affected by political, social and cultural changes (Clark, 1998; Holligan, 2005; Ylijoki, 2008); and the third group created multi-dimensional frameworks as their research results, which offers models of supervisor-student relationship for effective supervision (Fraser & Mathews, 1999; Gatfield, 2005; Gurr, 2001; Murphy, Bain, & Conrad, 2007; Vilkinas, 2002; 2008). At the end of this part, brief background information of doctoral education, PhD supervision and the case study university are provided for reader who is not familiar with this subject.

The second part of the literature review continues the examination of current literature on effective supervision, focusing particularly on research that used the Competing Values Framework and those that adopted a student-centred perspective, to discuss the benefits of using the competing values framework in this study from a student-centred perspective, and how my research relates and contributes to exsiting literature. Introduction of the competing values frameworks is provided at the beginning in order to lay the groundwork for the second part of the literature review.

Therefore, this literature review (part one and two) will include:

Part One:

- An overview of current academic literature on effective PhD supervision;
- Brief background information about doctoral education, PhD supervision, and the case study university.

Part Two:

- Introduction of Competing Values Framework;
- Analysis of literature that relevant to my study, including research using competing values framework in analyzing supervision practices and research applying student-centred perspective, and how my study relate and contribute to existing literature.

2.2 The concept of effective PhD supervision

PhD supervision in higher education institutions has received widespread attention as it has been widely accepted that the actions of a supervisor will affect the PhD student's academic outcomes and learning experiences; supervisor's behaviour and feedback will influence the student's enjoyment of learning, level of motivation, as well as self-perceptions in the research. PhD supervision plays an important role particularly in ensuring quality research work and completion rates.

In the study of international doctoral degrees, Nobel (1994) notes that supervision is important to academics internationally, observing that faculty advising/directing/supervising was the third most important issue indentified by his group of international scholars. The practice of supervision is an evolving field of interest not only for supervisors and candidates but also for other stakeholders and universities who wish to reliably improve the quality of PhD supervision, which making this an relevant and important area to research.

I want to begin by giving a brief description of what is meant by the term 'effective PhD supervision'. According to the literature, there are different interpretations of effective supervision for PhD students. The term 'effective', in a general sense, refers to the accomplishment of established goals and objectives It can be learned from the literature, ''PhD education serves a number of consumers and each of whom has their own needs and hence their own conception of quality'' (Cullen and Allen, 1993, P. 107); and a variety of demands for PhD education have led to ''a somewhat polarised debate about the nature of the doctoral curriculum and its implication for supervision'' (Goode, 2010, p.40). Therefore, PhD supervision effectiveness is assessed by the researcher according to his/her perceived 'objective' or 'intended result' of PhD supervision. I want to briefly discuss a number of research studies to further clarify what is meant by effective supervision in terms of different 'objectives'.

On the one hand, the state and other stakeholders of higher education institutions tend to have results-oriented objectives for PhD supervision, including increasing completion rates and completion percentages as well as decreasing the mean completion times and thus lowering costs (Cullen, Pearson, Lawrence, & Spear, 1994; Kyvick, 1991). This has been described as 'product emphasis' for PhD supervision, and the product in this context including: ''a thesis of adequate quality; evidence of research competence; an original contribution to the literature and a labour market credential'' (Goode, 2010, p. 40). Research that interprets PhD

supervision from this perspective generally sees completion rates as the main indicator for research degree's supervision effectiveness. One of the most comprehensive research studies of this kind is produced by the Higher Education Funding Council for England (HEFCE), responding to the publication of the 1996 Harris report and the HEFCE Review of research in 2000 which call attention to quality of research supervision since it is one of the major factors affecting completion rates, and there is a need to ensure that ''postgraduate students had access to supervision of the appropriate standard'' (HEFCE, 2005, p. 5). In 2005, the Higher Education Funding Council for England published the first HEFCE studies on completion rates for PhD research degrees in English higher education institutions, and updated in 2007, with the purpose of informing ''discussion about the quality of supervision of postgraduate research in general'' (HEFCE, 2007, p.2). According to the latest HEFCE report in 2007, 72 per cent full time students who started their PhD in 1996-1997 completed within seven years, while 48 per cent part-time PhD students completed their PhD within 10 years. These results are used by the Quality Assurance Agency (QAA) as one measure to assess the quality of research degree programmes during institutional review with a focus on allocating funding.

On the other hand, effectiveness of PhD supervision has been broadly understood as a more comprehensive concept that facilitates students in fulfilling their potential (e.g. lifelong learning and development); by completing the PhD, the student not only received a degree but also turned out with a set of 'transferable' skills that can be used beyond academic settings (Goode, 2010). This is described as 'process emphasis' for PhD supervision, which focus on ''an intellectual journey; socialisation into a disciplinary habitus; a process of 'becoming' someone new; one element of a broader agenda of 'life-long learning''' (Goode, 2010, p.41). Therefore, apart from the objective criteria (completion rates and completion time), PhD supervision is also evaluated by subjective measures in terms of individual reflection on the supervision practices and students' achievement in a more general sense: do they have a rich and rewarding supervision experience? Do they believe they have learned and grown? Are they happy with what they have received? Based on the

‘process emphasis’ conception, researchers examined effective supervision in terms of individual subjective experiences, including the student/supervisor’s experiences and understandings of their own supervisory practices. For example, Cullen et al. (1994) explored the nature of effective supervision through identifying the critical elements of effective supervisory practices by examining the roles, responsibilities, experiences and expectations of PhD students and supervisors within the institutional context and academic demands. Kam (1997) analysed effective supervision by exploring how student’s experience and expectation of the supervisor interacts with the way in which the supervisor conducts the supervisory process to produce effective supervision, and found out that there is no set prescription for appropriate research supervision as it is affected by role expectation of student and staff, student dependency, field of study and other characteristics. Hockey (1997) examined how effective supervision practices were developed through analysing the everyday practices of individual PhD supervisors and their individual reflections; he found out supervisors learn from making mistakes with students, ‘‘what did not work was amended, and what did work was retained and build upon’’ (p. 62). Practices developed as experiences grew and supervisors become skilled at conducting effective supervision. Similarly, Manathunga and Goozée (2007) conducted research that analysed supervision practices carried out by supervisors from different disciplines and how they learn from each other’s expertise and experiences of supervision, which offers an example of interdisciplinary collaboration in exploring supervision pedagogy. Pole, Sprokkereef, Burgess & Lakin (1997) examined a range of issues in relation to supervision effectiveness by analyzing PhD students’ expectations and experiences.

According to the literature, observers evaluated PhD supervision effectiveness according to his/her own understanding of what is the first priority objective of PhD supervision. Some of them believe that completion rates and completion time are high on the list of priorities, and supervision effectiveness should be analyzed in terms of figures and numbers; while for others, students’ intellectual growth and personal development are the main objective of PhD supervision, which is better

assessed as an objective construct through analysis of individual experiences and personal reflections.

According to the literature, this study views the term 'effective supervision' as a subjective construct that is reflected by the perceived satisfaction of the student with the supervisory process and practices he/she received. In other words, when the supervisory practices is adapted appropriately in a certain contexts and meets the needs of the student, the supervision is seen as effective and helpful. Research from this perspective allows access to complex supervision behaviours and belief systems which would have been missed in numbers and figures that represent completing rates. The next section of this chapter provides a brief review of some previous literature on effective PhD supervision and what has been achieved so far.

2.3 Literatures on effective PhD supervision

PhD supervision is central to doctoral candidate, yet it is argued to be 'poorly understood' (Grant, 2010) because of the privacy and uniqueness of each supervision (Bartkett & Mercer, 2000; Crant, 2010; Goode, 2010); but also, in the literature, it has been the subject of a growing body of theoretical conceptualisations.

According to a systematic review of the literature on the doctoral experiences carried out by Leonard, roughly a third of the reviewed literature was focused on PhD supervision (Leonard, 2010; Leonard, Metcalfe, Becker, & Evans, 2006), and both qualitative and quantitative methods have been used in analyzing effective PhD supervision practices. In quantitative research, the majority of its data is gathered from questionnaires, surveys or assessment scales or interviews, while the qualitative research into effective supervision practices mainly uses semi-structured interviews to gather responses from PhD students or supervisors. From a quantitative point of view, effective PhD supervision has been identified as affected by three groups of variables: supervisor-related variables, which including expertise, guidance, management skills, adaptability, research workload, research track record,

motivation, and interpersonal communication (Cullen et al., 1994; Wisker et al., 2003); student-related variables, includes higher degree study experiences, age, gender, family concerns, duration of study, funding, modality, type of research, stage in the research process, attitude towards postgraduate study, personality factors, professional development objectives (Earwaker, 1992; Hockey, 1995a; 1995b; 1997; Wisker et al., 2003); and institution-related variables, which include research outputs, academic culture, research capacity, resources and facilities, nature, size and scope of research programme (Wisker et al.,2003; Zhao, 2003). Research from the qualitative research tradition explored a variety of potentially influential issues of effectiveness of PhD supervision, such as student/supervisor's motivation (Hockey, 1996); supervisor's expertise and management skills (Acker, Hill, & Black, 1994; Lee, 2008); and PhD supervision and the changing environment (Cribb & Gewirtz, 2006; Hockey, 1995b; Pearson, 1999; Waghid, 2006; Ylijoki, 2008), which overlapped with majority of the variables identified by the quantitative research.

According to Calma (2007), research found in current literature on effective PhD supervision, both quantitative and qualitative, can be divided into six categories: (1) epistemologies of supervisory practice, which discusess the underlying assumptions and tenets of supervision with the belief that PhD supervision is a process of transforming the student into a 'licensed academic' (Johnson, Lee & Green, 2000; Lee & Williams, 1999); (2) evaluation of supervision, which focus on the effectiveness of existing policies and practices, with the purpose of improving supervision by applying evaluation results into policy decisions (Cullen et al., 1994; Marsh, Rowe, & Martin, 2002); (3) examination of supervision experiences (Earwaker, 1992; Wallace, 2003; Wisker et al., 2003); (4) examination of role expectations of supervisors, which analyze a range of roles the supervisor need to take (Earwaker, 1992; Vilkinas, 2002); (5) aspects of successful supervision, which focus on analyzing both students and supervisors' attributes for effective supervision (Beasley, 1999; Malfory & Yates, 2003; Scheyvens et al, 2003); (6) management frameworks for supervision, which recognize supervision as a process of

management, while supervisors have managerial roles to play (Vilkinas, 2002; Zhao, 2003).

This research shares similar characteristics with literature from some of these categories: it analyses the PhD student's supervision experiences to provide a contemporary view of the effectiveness of existing supervision practices in terms of different role expectations of the supervisor. A student-centred perspective is adopted in this study with the purpose of enriching the current literature, because so far, qualitative research has interpreted effective supervision ''primarily from the supervisor perspective'' (Goode, 2010, p.38), with relatively ''few studies that directly tap into the doctoral students experiences'' (Goode, 2010, p.41). The adaptation of the student-centred view is supported by Bennet and Knibbs (1986), who argued that PhD supervision is a highly personalized process, and is best judged by people who are closely involved. PhD students are the target receiver and beneficiary of supervision practices, therefore they are regarded as the most appropriate judge of its effectiveness. This idea is also consistent with the management theory which asserts that 'the customer is the final judge of quality' (Locander, 1989) as well as the 'bottom-up planning' (Friedmann, 1987), according to which students' experiences are of great importance for the supervision as students are those who are directed affected by supervisory actions. As Astin (1993) concludes, "it is difficult to argue that student satisfaction can be legitimately subordinated to any other education outcome" (p. 273).

I now want to briefly review some literature that adopted the 'process emphasis' perspective on the effectiveness of supervision practices in more details, to provide the reader a general idea of the research area and what has been achieved so far. Selected literature on effective PhD supervision from the process emphasis perspective are discussed in three groups according to their research findings: group one focuses on supervisory styles and practices (Acker et al. 1995; Brew & Peseta, 2004; Cullen et al, 1994; Hockey, 1996), and their research results are presented as

different desirable-role lists for supervisor that offer 'guides to success' (Cryer, 1997; Delamont et al. 1997); group two interprets effective supervision within a wider socio-cultural context, provides discussions on how supervision is affected by political, social and cultural changes (Clark, 1998; Holligan, 2005; Ylijoki, 2008); and group three creates multi-dimensional frameworks which offers models of supervisor-student relationship for effective supervision (Gatfield, 2005; Gurr, 2001; Fraser & Mathews, 1999; Murphy, 2004; Vilkinas, 2001, 2007).

2.3.1 'Desirable roles' research on effective Supervision

According to the literature, there are research studies within the scholarship of effective supervision put their focuses on supervisory styles and practices (Acker et al. 1994; Brew & Peseta, 2004; Cullen et al, 1994; Hockey, 1996), with the purpose of producing a desirable role-list for supervisor that offer 'guides to success' (Cryer, 1997; Delamont et al. 1997). It is suggested that PhD supervisors are faced with a variety of challenges in terms of different roles required in delivering supervision. Supervisors are required to be supportive motivators of the students, be critical for the sake of student's future development, to teach fundamental skills of the research if required, to give freedom and encourage the student to be independent, to handle conflicts or problems between the student and other academic staff, or the institution. Their responsibilities include combining the dimensions of intellectual critic and guide to PhD students, and offering the latter support and encouragement at the same time. Clarifying the role and nature of PhD supervision remains a challenging task, and in attempting to answer this question and capture the nature of PhD supervision, researchers have applied a number of different approaches which vary from unstructured list of desirable roles, to complex multi-dimensional frameworks.

Scholars developed many different forms of standards which offer a kind of 'self-help check list' so that PhD supervisor in any university can have consistent benchmarks for what they should be striving for in their goals for supervision

practice. Brew and Peseta (2004) have provided four key criteria for good supervisory practice, which are:

> *(1) Appreciation of a range of good practice approaches to supervision and an understanding of what constitutes a productive research learning environment;*
>
> *(2) Productive and regular meetings held with students, which provide them with sympathetic, responsive and effective academic, professional and personal support and guidance;*
>
> *(3) Careful management of the supervisory process to achieve timely and successful completion of the thesis;*
>
> *(4) Development of a partnership with students that takes account of the need to assist them to develop a range of generic attributes and to introduce them to the research community;*

Cullen et al. (1994), as a part of a major study carried out at the Australian National University, Canberra, created a list of the characteristics of a 'good supervisor':

- *Approachable and friend;*
- *Supportive, positive attitude;*
- *Open minded, prepared to acknowledge error;*
- *Organised and thorough;*
- *Stimulating and conveys enthusiasm for research.*

A more detailed list of supervisory roles and attitudes is given by Brown and Atkins (1988), which including eleven different roles:

- *Facilitator (providing access to resources or expertise).*
- *Director (determining topic and method, providing ideas).*
- *Adviser (helping to resolve technical problems, suggesting alternatives).*
- *Teacher (of research techniques).*
- *Guide (suggesting timetable, providing feedback).*

- *Critic (to design or enquiry of drafts and interpretations).*
- *Freedom giver (authorizes and supports student decision).*
- *Supporter (show encouragement and interest and discussion).*
- *Friend (non-academic support).*
- *Manager (checks on progress, planning and feedback).*
- *Examiner (internal examiner, mock vivas, progress reports).*

The revised Quality Assurance Agency for Higher Education Code of Practice (QAA 2004, p.16) also gives a clear indication of these responsibilities of PhD supervisors:

- *providing satisfactory guidance and advice;*
- *Being responsible for monitoring the progress of the student's research programme;*
- *Establishing and maintain regular contact with the student (where appropriate, guided by institutional expectations), and ensuring his/her accessibility to the student when he/she needs advice, by whatever means is most suitable given the students' location and mode of study;*
- *having input into the assessment of a student's development needs;*
- *proving timely, constructive and effective feedback on the student's work, including his/her over all progress within the programme;*
- *ensuring that the student is aware of institutional-level sources of advice, including career guidance, health and safety legislation and equal opportunities policy;*
- *proving effective pastoral support and/ or referring the student to other sources of support, including student advisers (or equivalent), graduate school staff and others within the student's academic community;*
- *helping the student to interact with others working in the field of research, for example, encouraging the student to attend relevant conferences, supporting him/her in seeking funding for such events; and where appropriate to submit conference papers and articles to referred journals;*
- *Maintaining the necessary supervisory expertise, including the appropriate skills, to perform all of the role satisfactorily, supported by relevant continuing professional development opportunities.*

Producing a 'to-do' list for PhD supervisor is a common and straight forward approach to addressing the issues that PhD supervision practice should involve. However most of them include competing roles but provides neither instructions in terms indentifying priorities or appropriate supervision strategies for different individuals at different stages nor explanations of why different roles are required, which can be seen as the potential pitfalls with such lists. PhD supervision is not simply an extension of researching or teaching work. It involves the *profession* and the *practice* of that profession because it carries the responsibility to produce critical independent practitioners in the actual community to which they will eventually belong. This does not only requires the supervisor to pertain to the 'hard skills' required in supervision such as statistics and academic research skills, but also to the 'soft skills', such as knowing how to do in action. As Pearson and Krayooz (2004) point out, what is needed is a complex outcome; a skilful performer rather than someone who can list their skills.

2.3.2 Socio-cultural research on effective supervision

Effective supervision studies have also been interpreted within a wider socio-cultural context, which provide discussions about how supervision is affected by political, social and cultural changes. Higher education institutions have experienced significant transformations in their social and institutional context from 1960s to 1990s, including the education system's transformation from an élite to a mass system (Clark, 1998; Clark & Neave, 1992; Trow, 1973; Wagner, 1995); and the new function, contribution to the economy, was added to universities' core duties (Clark, 1998; Clark & Neave, 1992; Ylijoki, 2008) with the rise of a so-called 'knowledge-based economy'. Knowledge is regarded as the driver of national and international economic and social success and higher education policy has begun to stress universities as crucial players in the national innovation system, economic growth as well as global competitiveness (Henkel, 2007; Ylijoki, 2008).

As one of the most advanced levels of higher education programmes, doctoral education have also witnessed profound changes, which is argued to have significant influences on the effectiveness of PhD supervision (Clark & Neave, 1992; Ylijoki, 2008). It would be impossible to discuss how effective PhD supervision is affected by changes in doctoral education without considering what these changes are, and therefore this section provides general introduction of some major changes in doctoral education as well as literatures on effective supervision within this context.

2.3.2.1 Diversity of Doctoral Programmes

First, new forms of doctoral education have expanded over the last two decades, including: 'the new route PhD' and 'professional doctorate' (Gill, 2009). The new route PhD contains one-year taught programme, usually at master level, and then the student will be upgraded to doctoral research and thesis after passing the exams at the end of the first year (New Route Phd, 2011). Professional Doctorates are awarded in certain fields where most holders are not engaged primarily in scholarly research but rather in a profession with more formal taught component consisting of smaller research projects. Especially in the fields of Engineering (Eng.D), Education (Ed.D), Public administration (D.P.A), Business administration (D.B.A), and Music (D.M.A). Such professional doctorates generally including two years of taught coursework and two to four years towards a dissertation, which is typically shorter, and more practice-focused than traditional PhD thesis.

According to the literature, the development of 'professional doctorate' is in relation to pressures put on universities to get closer to industry as well as to pay attention to research problems with commercial and practical potential with the purpose of speeding up technology transfer. There are three levels of research: basic research, applied research and experimental development. Basic research refers to original investigation undertaken to obtain ''new knowledge of the underlying foundation of phenomena and observable facts'' (Clark & Neave, 1992, p. 856) while applied research refers to the search for new knowledge that ''primarily towards

practical aims or objectives'' (Clark & Neave, 1992, p. 856). There is no clear-cut line between basic research and applied research, and the concept of strategic research is often been used to describe research in the middle position, where practical application has not yet been specified. Experimental development is ''systematic work driving an existing knowledge gained from research and practical experience that is directed towards producing new materials, products or devices, to installing new processes, or to improving substantially those already produced or installed''(Clark & Neave, 1992, p.856). Results of basic research with commercial and practical potentials may have some practical applications, and therefore can be followed up by applied research or experimental development which finally leads to new products or better ways of production.

Some observers expressed uncertainty feelings about the professional doctorate due to its lack of clarity over what a taught doctorate is, while others, appeared to be supportive for this kind of 'professional doctorates' because they provide opportunities for higher education to have a closer relationship with professional people who are interested in intellectual problems that emerged from their own working experiences (Gill, 2009,p.32), and provide stronger potential for research results to be practice applicable because their research arises from problems of practice.

In terms of PhD supervision, it is argued that this market-oriented interest in pursuing doctoral study works against what ought to constitute 'authentic' learning (Waghid, 2006), and sometimes challenging the traditional core elements of PhD supervision activities (Ylijoki, 2008). Cribb and Gewirtz (2006) carried out a supervisor-focused qualitative research study to analyze the changing nature of effective supervision in the humanities and social sciences by contrasting the way things used to be with the way they are now. According to Cribb and Gewirtz, the new regime produces a differential valuing of PhD students that affects PhD supervision in terms of research quality and equity. Students who are interested in

undertaking doctoral study for vocational reasons are advanced while those who wish to undertake doctoral study mainly for 'intrinsic purposes' are disadvantaged. They point out, the policies are ''designed around one notion of a PhD, which kind of makes it into doing a qualification in plumbing or something''(Cribb & Gewirtz, p.230), and it has ''reduced the flexibility of good supervisors to be adaptive to different styles of individuals'' (p.230) because ''people want to do a piece of work that is related to their career'' and ''want to finish this PhD sooner rather than later'' (p.230); while supervisors need to work through the balance 'between autonomy and accountability, between professionalism and managerialism, between research productivity and creativity' (Delamont et al., 2000, p.151) with ''pressure to produce a text rather than the ideal thesis as the personal exploration'' (p.151). The results from Cribb and Gewirtz (2006) echoed debate from Wahid (2006) and Ylijoki (2008). Ylijoki (2008) argues that the university education and academic research are increasingly viewed as and evaluated from an economic perspective, which has brings the values and practices of the private sector to higher education institutions, such as accountability, productivity, skills to attract external money, to get partners in industry, which stand in sharp contrast to the values of the traditional disciplinary culture, such as ''individualistic pursuit of knowledge, freedom to follow one own research interests, profound devotion to research without external constraints, and making an enduring contribution to one's filed'' (Ylijoki, 2008, p.81).

Henkel (2000) and Ylijoki (2008) examined PhD supervision from a supervisor-centred perspective. According to their research, the supervisor needs to adjust his/her values and ideals to better fit the current supervisory requirements, and many academics tried to maintain their traditional academic values but ''they were doing so within a hostile culture, which in some cases challenged their sense of self-esteem'' (Henkel, 2000, p. 208), or sometimes, a ''crisis in his /her personal identity'' (Ylijoki, 2008, p. 81).

2.3.2.2 Diversity of the Doctoral Student Group

The second major change noticed in PhD education is the diversity of doctoral student group, in relation to the widening participant policies in the UK. With the diversity of PhD programme, PhD student population has seen significant increase, and doctorate education has become widespread with the profound development over the last 20 years. HESA statistics suggest that the total number of higher education enrolments at UK HEIs stood at 2,396,055 in 2008/09, showing an increase of 4% from 2007/08 with 7% increased of postgraduate enrolment (HESA, 2010). With the development of devised doctoral programmes, doctoral student population changes were observed with a growth in the number of female students, and a significant growth in the numbers of international students. In 1994/95 there were 2590 international students awarded by UK HEIs, 34% of the total number. By 2008/09, this figure had risen to 7720, 44% of the total (HESA, 2010); in terms of equalization of gender balance, the number of female students has risen from 31% of the total student population to 45%(HESA, 2010), which is also theoretically making a major impact on the diversity of UK doctoral student group.

Along with the 'opening up' of doctoral programmes, arrives a hope of improving what has been referred as 'the cottage industry nature' of doctoral education in the UK (UKCGE, 1996), as well as concerns that widening-participating could put completion rates, supervision and research quality at risk. The increased population and diversity of doctoral students present new obligations as well as challenges for institutions and doctoral supervisors. The differences within the doctoral student population are significant in terms of implications for what is required of supervision, provision of resources, monitoring and assessment (Green & Powell, 2005). Scholars argue that, the university's 'widening-participating' of PhD student could well be one of the reasons for low completion rates because more non-traditional students were accepted and some of them are poorly equipped in terms of research skills and background knowledge. With significant increase of

student numbers, there has come a major concern to improve the quality of research experience and supervision that PhD students receive (ESRC, 1991, 1996; Wisker, 2005).

Anna Yeatman (1998) examines PhD supervision in the context of a mass higher education system where PhD student population has seen significant increase with ‘‘a high proportion of PhD students who do not fit the old mould’’(p.23) and argued that, the ‘traditional’ personalised and privatised practices of the PhD supervision pedagogy are no longer appropriate in a mass education system, and ‘‘it is especially inadequate to the needs of many new PhD aspirants who, by historical-cultural positioning, have not been invited to imagine themselves as subjects of genius. This includes all those who are marginalised by the dominant academic cultural: women, and men or women who come from the no-dominant class, ethnic or race positions’’ (p. 23).

Johnson, Lee and Green (2000) also examine the effectiveness of current practices of PhD supervision in terms of the gendered character of the supervision practices. Their research draws on oral history interviews and interviews with current supervisors from several humanities and social sciences disciplines; some arguments of feminists who explore the possibility of adopting a feminist approach for doctoral supervision are also analyzed. Their research findings suggest that ‘‘the problematic character of ideas of autonomy and the independent scholar that underpin the traditional practices of postgraduate pedagogy… are found to guide the practices of several different models of the supervisory relationship’’ (p.135), which is similar to Yeatman’s (1998) argument about the traditional practices of supervision ‘‘persist largely unaltered in the current circumstances’’ (P. 23) although ‘‘inadequate to the demands of a mass higher education system’’ (p.23). Others argue that doctoral education in the UK is at a cross-road or ‘the testing time’, that is not fully recognized by several of the agencies and many of the HEIs that are involved in its financing and delivery (Green & Powell, 2005).

2.3.2.3 Increase of Training Element

The third change in PhD education is the increase of training element. The UK government's interest in doctoral education is described by some observers as 'value for money' (Green & Powell, 2005). The state is anxious to ensure that public money is spent appropriately in the pursuit of doctoral education and research that are of great importance to the sustainability of the national economy in a so-called 'knowledge-based economy'; it appears to have a significant influence on the nature of doctoral programmes although the individual universities remain the guardian of doctoral education.

In 1994, government introduced a policy through the offices of the Office of Science and Technology (OST) to involve more training elements in PhD education in terms of research methods and generic skills which led to a fundamental shift in the way in which PhDs are perceived and delivered (Green & Powell, 2005). Earlier, responding to perceived need for training, the ESRC introduced a Postgraduate Training Guidelines (ESRC, 1991), which identified the skills training that universities had to offer if they were to receive ESRC funding for PhD study. And after the new policy was introduced by the government, in 2001, ESRC indicated a one-year full-time master's course in research training as an essential part to any recognized three-year doctoral programme, their (1+3) full time model or (2+5) part time model. A further response for more training elements from the research council was the introduction of the Graduate School Programme. It is a short residential programme focussing on developing transferable skills such as team skills and interpersonal skills that are necessary for students' future employment. The programme was managed by EPSRC on behalf of the Research Council, and was replaced in 2003 by the UK GRAD Programme. The Research Councils and the AHRB made a joint statement which set up a list of requirements (See table 2.3.2.3-1) for research training in their funded programmes. This joint statement brought together all the Councils and the

AHRB, and believed to have an effort on universities as well by giving them an important steer.

TABLE 2.3.2.3-1 SKILLS TRAINING REQUIREMENTS FOR RESEARCH STUDENTS

Research Skills and Techniques
Research Environment
Research Management
Personal Effectiveness
Communication Skills
Networking and Team Working
Career Management

(Green & Powell, 2005)

In this case study of Loughborough University, for full-time candidates who registered for PhD Programme, first year research is combined with compulsory enrolment on taught Doctoral modules. The main taught components generally include: principles of research design, effective management of research, qualitative methods, qualitative method, and maybe some other training courses according to their own research department. And PhD candidates have to fulfil a minimum of 20 hours training every academic year as part of the assessment criteria, through it is unclear where the quantum of 20 hours comes from.

2.3.2.4 Discussion

There has been a lot of debate among scholars about how these changes in doctoral education affected PhD supervision, and why some of the complexities and challenges of effective supervision practices are in relation to these changes took place in the institutional context of doctoral education.

Apart from what has been discussed before, current researchers analyse the complexities and changes of PhD supervision effectiveness in terms of: difficulties experienced by non-traditional students, such as English languages skills for international PhD student as a basic competence (Scheyvens, Wild, & Overton, 2003); the mismatched expectations between students and supervisors caused by conflicts between learning and researching cultures (Clark & Neave, 1992; Wisker et al., 2003); diverse, sometime competing demands of supervisors (Murphy, 2004; Vilkinas, 2002); the push for universities to legislate PhD supervision (Malfroy & Yates, 2003) and to consequently draft and implement policies in order to institutionalise it (i.e., codes of Practice, Guidelines for Thesis supervision). They are argued to be in line with the external institutional changes: the strong push for universities to legislate PhD supervision is in line with the 'new public management' actions that apply business management approach into universities(Malfroy & Yates, 2003); the widening-participant approach contribute to the increase of non-traditional students who are more likely to come up with diverse background and learning difficulties such as inadequate language skills; and academics who work as PhD supervisor are assigned diverse, sometimes competing responsibilities in order to meet requirements in accordance with changes in higher educational institutions including policy changes, university funding patterns and management style changes, and a clash of academic cultures and values that intertwined with competing demands.

As suggested by Becher and Kogan (1992), being one of the individual level practices in universities, the practice of PhD supervision is affected by the institutional environment; it is a complex multi-factorial process that encompasses issues at all levels from that of individual student and his/her supervisor, to institutional support and research environment, to government policies, structures and procedures. Therefore, in this research, although the primary objective is to analyse effective PhD supervision by examining student's experience and understanding of PhD supervision they received, special attention is also given to emerging issues that are argued to be external-changes related during the analysis

process, in order to have a better understanding of PhD supervision, as well as to be able to provide more comprehensive explanations for observed PhD supervision activities.

2.3.3 'Multi-dimensional framework' research on effective PhD supervision

The third group within the scholarship of effective supervision I want to discuss mainly works on developing multi-dimensional framework that offers models of supervisor-student relationship. Supervision framework development has its longest history in the area of clinical and medical supervision, particularly in the field of counsellor training (Gurr, 2001), such as Stoltenberg's (1981) 'Counsellor Complexity Model', and Anderson's (1988) 'Continuum of Supervision Model'. In the area of PhD supervision, researchers have also developed theoretical frameworks within which to place and assess the complex characteristics of PhD supervisory practice, and majority of them are quantitative research that gathers data from questionnaires, surveys or assessment scales or interviews.

Based on Blumberg's (1974) 'direct'/ 'indirect' concept, Gurr (2001) developed a two-dimensions Supervisor/Student Alignment Model. This model has a 'direct'/ 'indirect' and an 'active'/ 'passive' dimension, with a central point that the effective supervisor moves flexibly between the various modes, even within a single meeting. In this model, there are four categories of behaviour: 1) direct active, characterised by initiating, criticising, telling and directing the student; 2) indirect active, characterised by asking for opinions and suggestions, accepting and expanding students ideas, or asking for explanations and justifications of student's statements; 3) indirect passive, characterised by listening and waiting for the student to process ideas and problem solve, and, 4) direct passive, characterised by having no input and not responding to student's input. Gurr (2001) tested the efficacy of his model by

interviewing students and supervisors in the University of Sydney, and found that, in cases where there was a marked discrepancy between the student and supervisor perceptions, the neutral graphical approach facilitated open dialogue on the student and appropriateness of the prevailing supervisory practices.

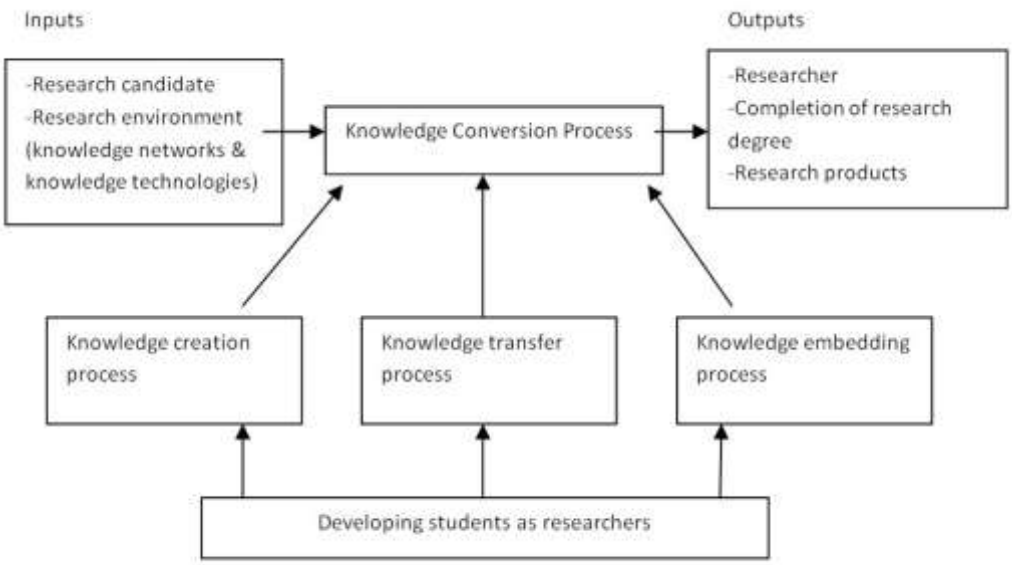
Another example is the framework created by Fraser and Mathews (1999) who carried out a student-centred research to analyse the desirable characteristics of a supervisor, and created a three dimensions framework. These three dimensions are 'support', 'creative', and 'critical'. By analysing supervisors' characteristics in terms of these three dimensions, Fraser and Mathews argued that, the non-expertise-related characteristics which provide support but balance creativity with criticism is more important than expertise-related characteristics.

Business-inspired framework for PhD supervision is a unique and more recent trend that connects supervisors' practice and management theories. As Pearson and Kayrooz (2004) argued, there is a need to devise a 'new theoretical approach drawn from a wider literature than traditional higher education pedagogy'. Researchers were motivated to explore the potential for applying business theories and models to the supervision process, which could provide systematic guidance for supervisors as they carry out their duties and responsibilities (Calma, 2007).

Knowledge Management (KM) is one of these theories that were adopted into PhD supervisory practice from IT-based inspired theory and practice. Recent trends fail to fully distinguish between data, information, and knowledge (Huysman & de Wit, 2004), but there is a generally accepted distinction between tacit and explicit knowledge (Polanyi, 1966). Knowledge creation and transmission is a spiralling process of interaction between explicit and tacit knowledge (Nonaka & Konno, 1998), and the interactions between these kinds of knowledge leads to the creation of new knowledge (Nonaka & Konno, 1998). As universities are recognized to be in the

knowledge business (Goddard, 1998), PhD supervision is viewing as a process of transforming students into future researchers who have the capacity of creating new knowledge, transforming information, and adapting knowledge to environmental needs. Universities have a significant level of knowledge-management activities associated with the creation and maintenance of knowledge repositories, improving knowledge access, enhancing knowledge environment and valuing knowledge (Rowley, 2000). PhD supervision is an integral part of the knowledge-management activities in universities. Zhao (2003) argues that the effectiveness of research supervision process to achieve quality improvement and increased productivity will be enhanced if knowledge-management concepts are effectively integrated into the process. He proposed a model that demonstrates close synergies between knowledge-conversion process and that of research supervision (See Table 2.3.3-1).

TABLE 2.3.3-1 A KNOWLEDGE MANAGEMENT MODEL FOR RESEARCH SUPERVISION



(Zhao, 2003)

The model suggests that research supervision is a knowledge-creation, transfer and embedding process in which research candidates develop new knowledge, theory and methodology (knowledge creation) through integrating, synthesizing and valuing existing knowledge (knowledge transfer), and in which candidates advance

understanding and develop new insight into their area of investigation (knowledge embedding) (Zhao, 2003). In the business sector, couple with a profit motive, KM is often limited in its ability to create far-reaching organizational change, and the application of it has typically been used to address isolated data and information transfer, rather than actual system wide change (Hammer, Leonard, & Davenport, 2004). KM sometimes is mis-used as a phrase to describe the technology that is used to manage an organization's data, while in fact it is the combination of people, process, and technology, which enable people to obtain the information they need and encourage them to share, and creating new knowledge (Zhao, 2003). Many Institutions' activities are termed as KM prove to merely support data and information, rather than actual knowledge, and they only found the necessary organizational conduits for informational sharing, while new knowledge creation are not in place (Petrides & Nguyen, 2006). In higher education institutions, especially PhD supervision, whilst participating in a wider knowledge creating process, instead of simply appropriate KM strategies and practices as they have appeared in the business sector, should use KM to focus on long-term, knowledge creation purposes by understanding it as a cycle that includes data, information, knowledge, and action (Petrides & Nguyen, 2006) as well as assessing knowledge creation and transmission by the KM based methodology(e.g.socialization-externalization-combination-internalization methodology) (Nonaka & Konno, 1998).

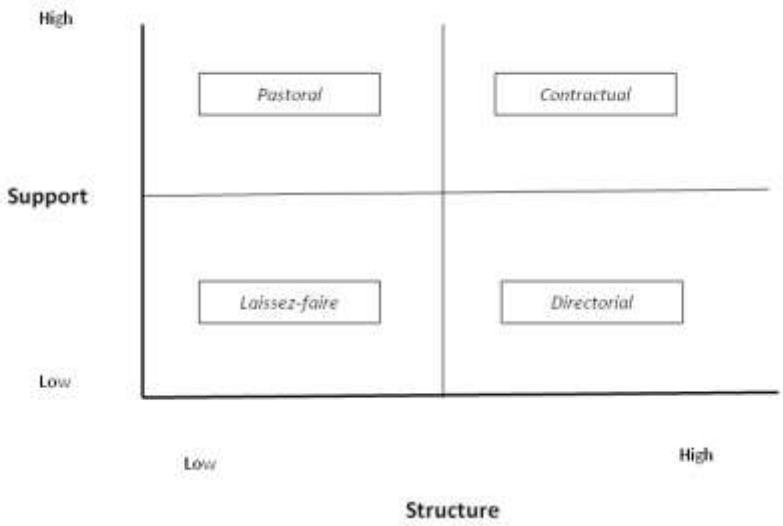
It is also worth to mention here that there are arguments that PhD supervision may be conceived as occupying the middle ground between interviewing and counselling, occasionally verging on one or other in terms of their practical skills include keep control and dictate direction in interviewing and client-centred, enable or facilitate the functioning of the other without being dominate or directive in counselling (Earwaker, 1992). What I am arguing here is, PhD supervision should be identified with neither of them when bring their fundamental objectives into consideration. The primary objective of PhD supervision is to ensure that the candidates receive the needed support and expert help to complete their study with an highlighted emphasis on 'original contribution to the knowledge', which shares

no commonalities with neither interviewing nor counselling, and it also different from other forms of supervision such as clinical supervision or practicum supervision in this way as the later two aim at training candidates to improve counselling skills with no attempt of creating new knowledge (Degeneffe, 2006; Skinstad, 1993).

Apart from Knowledge Management theory, Gatfield (2005) also proposed a business-inspired framework for PhD supervision analysis. Based on Blake and Moulton's 'Managerial Grid' model, he extracted eight key variables form the literature and constructs a four-quadrant supervisory styles model (See Table 2.3.3-2). This model has two axes, one for 'structure' on the X-axis and 'support' on the Y-axis. To these two dimensions, he assigns four separate quadrants: 'contractual style' having a high-high index score; 'Directorial style', which corresponds to a high concern for structure and a low concern for support; 'pastoral style' which has a high concern for support and a low concern for structure; and finally, 'Laissez-faire style' that corresponds to low-low index scores. The characteristics of each style are: 1) Contractual style is most demanding in terms of supervisor time. In this style, the student is highly motivated and able to act on own initiative. Supervisor is able to provide direction and practicing management skills and interpersonal relationships. 2) Directorial style including highly motivated candidate who will engage in high structural activities such as setting objectives, completing and finishing on time. In this style, supervisor has a close and regular interaction with the student, but avoids non-academic related issues. 3) Pastoral style is characterised by student with low personal management skills, but will take advantage of provided support/facilities. Supervisor provides considerable personal care and support, not necessarily task-related. 4) Laissez-faire style has low structure and low support. Students have limited levels of motivation and management skills. Supervisor is non-directive and not involved in high levels of personal interaction (Gatfield, 2005). According to his research, Gatfield (2005) suggests that, supervision style is changing from one type to another during the supervision period in terms of two areas: first, in abnormal conditions such as a student are in need of pastoral care or experiencing a significant change in research direction; second, when the student makes a transition through

the PhD process, such as moving from the problem clarification through to data collection stage. Therefore, movement from one supervision style to another should be expected.

TABLE 2.3.3-2 SUPERVISORY MANAGERIAL GRID



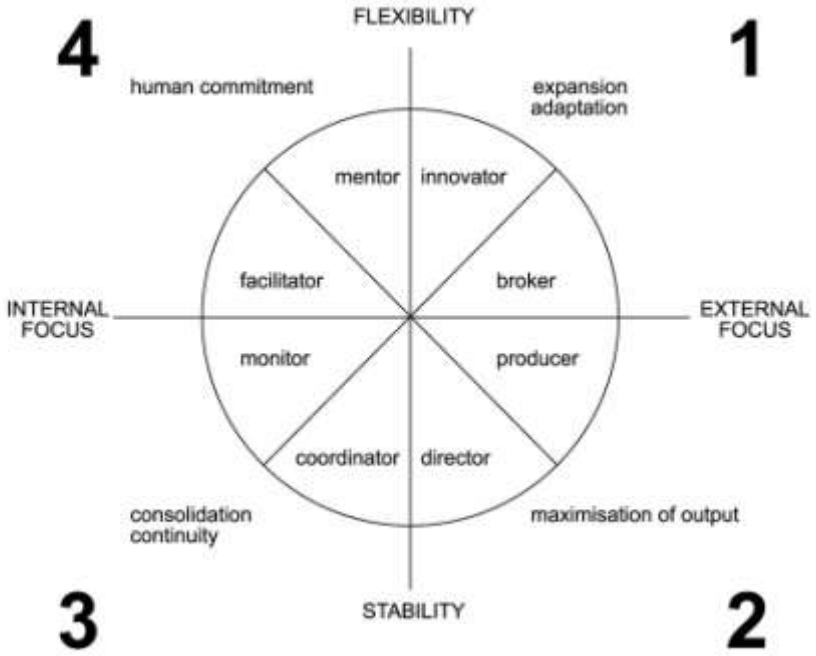
(Gatfield, 2005)

Murphy (2004) also created a business-inspired framework with an attempt to characterise beliefs held by students and supervisors about PhD supervision. According to her study of 34 PhD students and supervisors in Engineering School in Griffith University in Australia, she suggested that research degree supervision is a ‘ plexus of closely related educational believes about researching, teaching, learning, and supervision’, and argues that there are four global orientations to supervision: controlling/task-focused, controlling/person-focused, guiding/task-focused, and guiding/person-focused. She suggested that the supervisor’s role in shaping the student’s beliefs are undermined by the student’s preconceptions of what supervision involves.

Finally, I present the framework developed by Vilkinas (2002) for analyzing effective supervision. Based on the Competing Values (Quinn et. al, 2007) Framework (See table 2.3.3-3), Vilkinas developed a model for PhD supervision which is called Integrated Competing Values Framework by adding a 'integrator' role to the original CVF model identified eight operational roles (innovator, broker, producer, director, coordinator, monitor, facilitator, and mentor) (See table 2.3.3-4). In the ICVF model, the ninth role 'integrator' is located in the middle of the two-dimensional mode ('internal'/'external' and 'flexibility'/ 'stability' dimension) with two components those of critical observer and reflective learner. Later on, Vilkinas (2008) updated the ICVF model with a more simplified version. The new model has five operational roles instead of nine: broker, monitor, deliverer, and developer with the integrator as the central role. According to her study of 25 senior faculty members from seven Australian institutions, the majority of supervisors were primarily task-focused with little evidence for innovation and reflection. Vilkinas argues that the role of supervisor is sharing similar characteristics with that of a business manager; and these operational roles of PhD supervisor are paradoxical in nature, and therefore, an accomplished supervisor/manager need to be able to adaptively switch between the various roles as the situation demands.

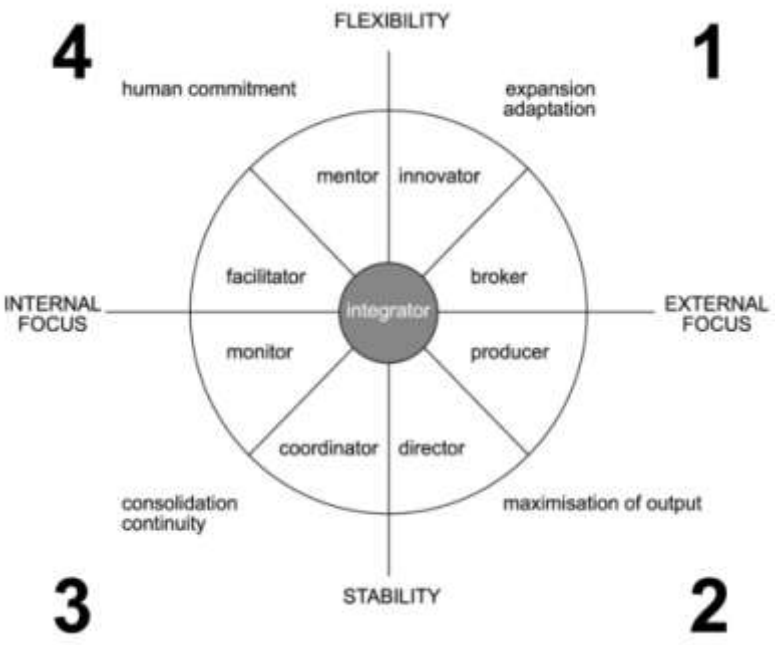
I agree with Vilkinas and Zhao, who view the process of PhD supervision as sharing commonalities with a process of management and management framework can be used in analyzing PhD supervision. Kindled by Vilkinas's research (Vilkinas, 2002; 2008; Vilkinas & Cartan, 2006), the competing values framework is employed by this research in analyzing different roles performed by the supervisor, which will be analyzed in more details as a separate section in the second part of the literature review.

Table 2.3.3-3 Quinn's Competing Values Framework



(Quinn et.al, 2007)

Table 2.3.3-4 Vilkinas Integrated Competing Values Framework



(Vilkinas, 2002)

2.4 PhD supervision

It would be impossible to discuss effective PhD supervision without considering the concept of 'doctoral education', and therefore at the end of this section, I provide a quick review of doctoral education in the UK for reader who is not familiar with this subject, as well as a general introduction of the case study university.

2.4.1What is doctoral education

PhD or Dphil, for the Latin philosophiæ doctor, meaning "teacher in philosophy", is an advanced academic degree awarded by universities. The doctorate was extended to Philosophy in the European universities in the Middle Ages; with generally all academic disciplines outside the professional field of theology, medicine and law placed under the heading of 'philosophy' (Simpson, 1983). The PhD, as a research degree award, was first conferred in Germany by the Friedrich Wilhelm

University, Berlin during the early nineteenth century. From the 1860s onward the United States introduced doctoral degrees starting with Yale in 1861 (Park, 2005). During the twentieth century the research degree spread to Canada in 1910, Britain in 1917, and then to most English-speaking countries including Australia in 1948 (Park, 2005).

In 1917, the resolutions passed at the conference in London are recognized as a major milestone in the history of British graduate education. Through their official report contains little more than the names of those present and the text of the resolutions, the nine resolutions agreed at the conference recommends the PhD as follows:

' 3. For the better promotion of research in this country, and for the encouragement of advance work by 'graduate' students from abroad, a degree or title of Doctor should be instituted, attainable after a period of not less than two years of whole-time work devoted to advanced study or research at one or more universities or institutions connected therewith: or an equivalent period of such whole-time work spread over a longer term of years.

6. The Conference is prepared to recommend that the title of the doctorate in question should be PhD (Philosophiae Doctor).'

(Simpson, 1983: p. 134)

Interestingly, the introduction of the PhD in Britain was driven less by academic considerations than by the political and economic desire to divert American and colonial students away from German universities (Simpson, 1983), and Oxford University introduced the first PhD in Britain in the same year and within three years the PhD spread out fast to majority of the rest universities in Britain. In Social Sciences, the PhD generally involved a research project (thesis) of around 80,000-100,000 words by lone student, with support from his/her supervisor(s) in the period

of three to four years for full-time or six to eight years for part-time. Original contribution is one of the most important criteria for the thesis to be awarded (Yates, 2006). In Natural Sciences, Engineering and some other sciences disciplines, the situation might be different: the PhD can involved several small projects, sometimes team-working with other PhD students or supervisors, culminating in a thesis of less words account compare to social sciences within the same time-limit. This form of PhD is called 'the traditional doctorate', used to be viewed as the 'passport' for an academic career or other professional fields in the past (Thomson & Walker, 2010), maybe still today in some areas.

2.4.2 PhD supervision

The Degree of Doctor of Philosophy (PhD) is awarded by universities in recognition of the successful completion of research that shows evidence of originality and independent critical judgment under supervision of the academic, and this process is generally known as 'PhD supervision'.

The earliest stage of PhD supervision can be seen as starting with selection of PhD student at the beginning of the application process. Potential candidates are required to submit a research proposal which outline his/her research interest, and then accepted candidates are matched with supervisor(s) who are, ideally familiar and interested in the students' research area, to assist them with the completion of their research and to advise on applications for funding, if applicable. All students on registration are supervised by at least one supervisor within the department. If it is a joint supervision, he/she might have one dominant supervisor and other professional(s) as co-supervisor(s). The supervisor is chosen according to their expertise areas and normally the department will only accept students in fields closely aligned to its identified research priorities. In some cases, if the student showed a strong preference with a particular supervisor, the decision is upon both parts. In a joint supervision on the other hand, students are supervised by two or

more supervisors, some of them might be located off campus. There is a main supervisor who has primary responsibility for the academic and personal development for the students, and the others act as co-supervisors. Sometimes supervisor-student relationship do occasionally break down and if all efforts to improve the relationship fail, then it may result in changes to the supervisor(s) being made prior to, or during, the period of study.

Supervisory practices for PhD students conform to the University's Policy and Code of Practice for Postgraduate Research Programmes, which ideally will be able to resolve potential problems/difficulties if followed in practice. In theory, effective supervisor-student relationship will be able to help the student to complete his/her PhD project's on time, as well as make the PhD experience valuable and enjoyable. Majority of the universities have a code of practice for supervision, for example, in the case study of Loughborough University's Policy and Code of Practice saying that research supervisors have the following responsibilities:

To establish and maintain regular contact with the student by whatever means is most suitable given the student's location and mode of study, including any period during which the student is working away from the University. The minimum number of formal contacts between full-time research students and research degree Supervisor(s) will normally be 12 per annum. Part-time research students, and students working away from the University, should have formal contact with their Supervisor at a frequency equivalent to the above related to their mode of study; however this contact may be maintained in part via video conferencing or email where necessary. Formal supervisory contact meetings and their outcomes must be recorded.

(Loughborough University's Code of Practice on Research Degree Programmes, 2011: paragraph 24.1)

There are several interlinked procedures of PhD supervision to monitor student progress. In the case study of Loughborough, regular progress monitoring is required

to be undertaken as part of the supervisory process through regular supervisory contact and the review of written work. (1) Record of supervisory meetings. A formal supervision meeting is required at least once a month between PhD student and supervisor, and an agreed written record need to be produced for each meeting. (2) Year one review. This is the annual review held at the end of the first calendar year and is used to assess students' research progress before a full-time student will be permitted to re-register for their second year of research and up-grade to the degree of PhD. For this purpose, full-time students will be required to submit a report of 10,000 words of their equivalent on the research carried out, which may include research publications; while for part-time students, their first year report is 5,000 words limit instead of 10,000. The report should have a timetable for completion, identified achievable targets for the coming 12 months, any conference attendance and research or transferable skills training taken during the first year. The assessment review meeting is conducted by the students' research director, and at least one independent reviewer. During the meeting, the supervisor may also attend as an observer if agreed. A progress report and recommendation is produced after the meeting based upon the evaluation. At the end of the meeting, if the student's research report shows evidence of an achievable research programme and an element of originality, he/she will be upgraded to the degree of PhD. Alternatively, the student might be permitted to rewrite and resubmit their research report within a specified period of no more than 3 months, and then a further review should be taken. For students who failed to meet agreed research targets, or relate to unauthorised absence, the Head of Department should submit a written recommendation of termination to the Research Student Office. The reasons for the termination of registration should be explained both to the student and the Research Student Office. And according to the university's Regulations for Higher Degrees by Research, a student whose studies are terminated has the right of appeal. (3) Further progress review. After successful submission of the Year One report, full-time students are required to submit a written report with supporting output by the end of year 2 for re-registration. And a further written report is required by the end of year 3, which may be a draft of their thesis. Part-time students, on the other hand, should also produce reports annually for the remaining years of the registration. A

progress review meeting will be held for assessment of these reports, and the independent reviewer who ideally is the same person who conducted the first year review. Supervisor(s) will produce a written report each year after their progress review according to their concerning of the student's research progress. It is normally 300 words in length, including 'discussion of the viability of the research programme, the need for further research training to be undertaken, the students grasp of research methodology and the basis of the decision taken to upgrade registration where appropriate' (*Loughborough University's Code of Practice on Research Degree Programmes, 2011: paragraph 15*).

The purpose of monitoring process is to make sure that students are making appropriate progress towards the research degree, and that their programmes of research are being sustained appropriately. This process implies that all aspects of the programme need to be reviewed, including supervision arrangements, research related material resourcing, and the student's progress both in short term and long term that beyond the immediate requirements of the research project itself, which including general and transferable skills training.

In practice, the individual PhD research project normally includes the following stages: (1) specify research topic and methodology. In this stage, according to individual student's research proposal, supervisor(s) can help student to clarify and decide the research topic he/she wants to do in the next three to seven years as well as the methodology, depending on student's registered status. In some cases, if student's original research proposal appeared to be 'inappropriate' for the degree he/she is after, supervisor may suggest minor or major changes in existing research direction. (2) Literature review or field work stage. During this stage, the research student could start doing literature review or field work, depending on methodology he/she employed to do the research with the help and guidance of supervisor. (3) Data analysis and writing up. After the stage two, obtained data is analysed, and the student starts to finish writing up the thesis. (4) Thesis submission and viva. With approval from research supervisor(s), the student submits the finished final vision of

his/her thesis, and the supervisor then organizes a viva – the essential oral examination of the thesis soon after the submission, which involves both internal and external examiners. A PhD will be awarded under conditions of completion of a thesis which consisting of a body of original academic research and is in principle worthy of publication in a peer-refereed context, which is approved by examiners during the viva. The PhD viva is an oral examination that represents the culmination of the PhD assessment process and how the student performs at it can determine the result of his/her PhD study. It normally occurs after the thesis is finished and not yet submitted to the university. During the viva, student will be required to present his/her research and answer related questions posed by external and internal examiners. The result of the oral examination will be given immediately after the viva, which include: 1) accepted /pass with no corrections; 2) accepted/pass with minor corrections; 3) accepted/pass with major corrections; 4) Unacceptable.

2.5 What to expect from literature review: part two

The first part of the literature review examined current literature on effective supervision from the process focused perspective. Research was discussed in three different groups according to their research findings: the first group focused on supervisory styles and practices (Acker et al. 1994; Brew & Peseta, 2004; Cullen et al, 1994; Hockey, 1996) and presented research results in terms of desirable role-list for supervisor that offer 'guides to success'; the second group interpreted effective supervision within a wider socio-cultural context and provided discussion on how supervision is affected by political, social and cultural changes; and the third group worked on developing multi-dimensional framework that offered models of supervisor-student relationship. I related my study to existing literature on analysing PhD student's supervision experiences in terms of different role expectations of the supervisor. In agreement with and Kindled by Vilkinas's research (Vilkinas, 2002, 2008; Vilkinas & Cartan, 2006), competing values framework is adopted and followed by this research in analyzing different roles performed by the supervisor. In

the second part of the literature review, I continue to examine current literature on effective supervision, focusing particularly on research that has used the CVF as the dominant framework in analyzing effective supervision and those adopting a student-centred perspective, to explain why the CVF is adopted in this study to develop a heuristic which helps make what is a highly complex topic more amenable for supervisors and how my research relates and contributes to existing literature.

Chapter 3 Literature Review – Part Two

3.1 Introduction

Having generally reviewed academic literature on effective PhD supervision in chapter 2, I continue the examination of current research on effective supervision in this chapter, focusing particularly on those adopting the Competing Values Framework in their studies.

This chapter will begin by introducing the Competing Values Frameworks to lay the groundwork for the second part of the literature review, followed by a review of current literature that adopted the CVF to examine leader's behaviours by analysing complex managerial roles performed by them in educational context. Within this research tradition, I will then provide review of research that adopted the CVF to analyse supervision practices, and to justify my choice of adopting the CVF to examine PhD supervision as an analytic tool and a lens for observation. Then, I will explain why I decided to carry out my research from a student-centred perspective after reviewing some of the previous works that adopted a student-centred perspective. Finally, I will explain how my research relate and contributes to exiting literature.

3.2 Competing Values Framework

3.2.1 Introduction

In this chapter, I explain how the Competing Values Framework was initially developed through research on organizational effectiveness; I also explain the four dominant models and the eight managerial roles that emerge from the framework, which serve as the foundation of the CVF and how it has been used in previous educational research, and its applicability in analysing supervisor roles and supervision practices in this thesis.

3.2.2 CVF and its eight managerial roles

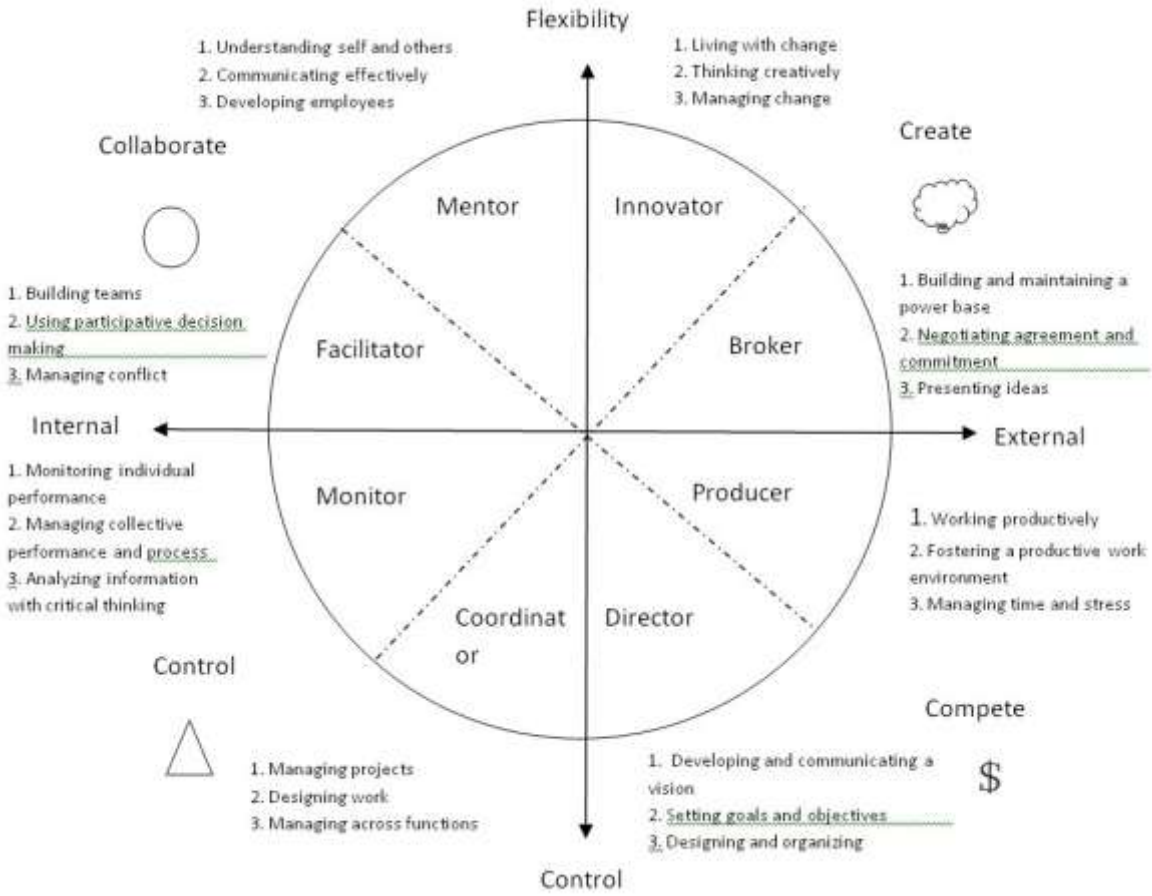
During the last two decades of the twentieth century, Quinn (1988) and Quinn and Rohrbaugh (1983) developed the so-called Competing Values Framework (CVF) to explain the various managerial roles required for effectiveness in complex organizational environments (Quinn, 1988; Quinn and Rohrbaugh, 1983).

The CVF model emerged from a series of empirical studies on the major indicator of organizational effectiveness (Quinn & Rohrbaugh, 1983). With attempt to answer the question that 'what key factors' define organizational effectiveness, Campbell and his colleagues created a list of thirty-nine indicators that represented a comprehensive set of possible measures of organizational effectiveness (Cameron & Quinn, 1999). Later on, Quinn and Robrbaugh (1983) analysed the list and identified a three-dimensional scale for organizational effectives. The first dimension differentiates effectiveness criteria that emphasize flexibility, discretion, and dynamism from criteria that emphasize stability, order and control. The second dimension differentiated effectiveness criteria that emphasized an internal orientation from criteria that emphasized an external orientation (Cameron & Quinn, 1999). The third dimension reflected the degree of closeness as a means-ends continuum (Quinn and Rorhbaugh, 1983), which is not elaborated by Quinn and his colleagues in their later work.

The CVF model is formed by the internal-external and flexibility-control dimensions and consisted of four separate quadrants, which are differentiated by a vertical and a horizontal axis, and each one has two complementary quadrants and one contrasting quadrant. Each quadrant represents a value model (see Figure 3.2.1-1). The four quadrants in the CVF represent four management models and each quadrant comprised of two managerial roles that might be experienced by managers. The Eight roles are identified as: producer, director, coordinator, monitor, facilitator, mentor, innovator, and broker. A brief description of the managerial behaviours associated with these roles is listed in Figure 3.2.2-1.

In the following part I shall explain and illustrate the eight managerial roles individually in detail, as well as the four management models where these roles are located.

FIGURE 3.2.2-1 THE COMPETING VALUES FRAMEWORK AND THE LEADERSHIP EFFECTIVENESS



(Quinn et.al, 2007)

FIGURE 3.2.2-2 THE COMPETING VALUES FRAMEWORK'S EIGHT MANAGERIAL ROLES

Role		Description
Task Master	Producer	Gets the work done Customer focus Achievement orientation
	Director	Provide direction Clarifies priorities Communicates unit's goal
Analyzer	Coordinator	Coordinates activities Schedules Brings sense of order to workplace
	Monitor	Monitors progress Collects information Holds regular reviews
Motivator	Facilitator	Builds teams Facilitates consensus Manages conflicts
	Mentor	Develops staff Communicating effectively Treat staff member in a caring way
Vision Setter	Innovator	Solve problems in a creative way Envisions needed changes Searches for innovation and improvements
	Broker	External focus Acquires needed resources Exerts upward influences

(Quinn et.al, 2007; Smart, 2003; Vilkinas & Cartan, 2006)

3.2.2.1 Producer & Director Role in the Rational Goal Model

The Rational Goal Model is one of the oldest models of management which emerged during 1900-1925 while the world economy was characterized by rich resources, cheap labour, and laissez-faire policies (Quinn et al., 2007). Quinn used the dollar sign as the symbol to represent this model because the ultimate criteria of organization effectiveness in this model are productivity and results. The basic means-ends assumption in this approach is the belief that clear direction leads to productive outcomes, and to a certain degree, it is closely related to the internal process model as it tries to control the processes that lead to a gain in performance (Quinn et al., 2007).

Since the major emphasis in this model is on productivity and results, the managers are expected to be hard-driving producers. ‘‘It assumes that planning and goal setting results in productivity and efficiency. Tasks are clarified; objectives are set; and action is taken’’ (O’Neill & Quinn, 1993, p.4). According to the CVF, in this map, managers are expected to display two roles in order to be effective: producer and director. A producer is expected to be task-focused with accepted responsibilities of completing assignments and maintain high personal productivity; and the competencies of it include: 1) developing and communicating a vision; 2) setting goals and objectives; 3) designing and organizing (Quinn et al., 2007).

As a director, a manger is expected to clarify expectations by setting goals, defining tasks, evaluating performance and giving instructions (O’Neill & Quinn, 1993). The producer role can be seen as a complement to the director role, it requires the manager to maintain a balance between push for productivity and maintenance of overall motivation for their employees. The key competencies of the producer are: 1) working productively; 2) fostering a productive work environment; 3) managing time and stress /balancing competing demands (Quinn et al., 2007).

3.2.2.2 Coordinator & Monitor Role in the Internal Process Model

This model represents perspectives on organizing based on the work of Max Weber and Henri Fayol on bureaucracies, and the early work of the Scientific Management movement from Frederick Taylor (see table 3.2.2.2-1 and table3. 2.2.2-2). This model is highly complementary to the rational goal model, and the criteria of effectiveness are stability and continuity. Great emphasis is placed on measurement, documentation, and information management (O'Neill & Quinn, 1993) with a belief that when the task is well understood by individuals, hierarchies functions the best. The manager's job is to be a technically expert monitor and dependable coordinator (Quinn et al., 2007).

The monitor role focuses on internal control issues, and the manager is ''expected to know what is going on in the unit, to determine if people are complying with the rules, and to see if the unit is meeting its quotas'' (O'Neill & Quinn, 1993, p.2). Three competencies embedded in the monitor role are: 1) managing information overload; 2) analysing core processes; 3) measuring performance and quality (Quinn et al., 2007).

The coordinator role concerned with the resources needed for the work, a manager is required to be dependable and reliable, as well as to ''maintain the structure and flow of the system'' (O'Neill & Quinn, 1993, p.2). The key competencies for it are: 1) managing projects; 2) designing work; 3) managing across functions (Quinn et al., 2007).

TABLE 3.2.2.2-1 CHARACTERISTICS OF WEBERIAN BUREAUCRACY

- *There is a division of labour with responsibilities that are clearly defined.*
- *Positions are organized in a hierarchy of authority.*

- *All personnel are objectively selected and promoted based on technical abilities.*
- *Administrative decisions are recorded in writing, and records are maintained over time.*
- *There are career managers working for a salary.*
- *There are standard rules and procedures that are uniformly applied to all.*

(Quinn et al., 2007, p.6)

TABLE 3.2.2.2-2 FREDERICK TAYLOR'S FOUR PRINCIPLE OF MANAGEMENT

- *Develop a science for every job, which replaces the old rule-of-thumb method.*
- *Systematically select workers so that they fit the job, and train them effectively.*
- *Offer incentives so that workers behave in accordance with the principles of the science that has been developed.*
- *Support workers by carefully planning their work and smoothing the way as they do their jobs.*

(Quinn et al., 2007, p.3)

3.2.2.3 Facilitator & Mentor Role in the Human Relations Model

The Human Relations Model emerged during 1926-1950 while the world economy was recovering with technological advances after the stock market crash of 1929 and the World War II. It is based on the basic ideas formulated by the Human Relations Movement, which was developed in reaction to the formal tradition of the

classic administration models formulated by Taylor and Fayol (Quinn et al., 2007). The Human Relations Model emphasis on commitment, cohesion and morale; its key values are participative decision making, conflict resolution, and information sharing (O'Neill & Quinn, 1993). This model contrasts heavily with the rational goal model; it emphasised teamwork and openness; people are seems as cooperating members who are held together by a sense of belonging and affiliation; and the manager's job is to be an empathetic mentor and a process-oriented facilitator.

The mentor role reflects a caring orientation, and the manger is expected to be empathetic while employees are viewed as important resources need to be valued and developed. The three competencies in the mentor roles according to Quinn are: 1) understanding self and others; 2) communicating effectively; 3) developing employees (Quinn et al., 2007). Referring to the mentor role, Quinn argues that, due to the western individualist cultural orientations, some people may have difficulties in expressing feelings, therefore devalue the mentor role. It is argued that the overall managerial effectiveness could be damaged if failed to demonstrate this role (Bass, 1990) because sometimes 'soft' issues can provide great power (Nair, 1994).

Another role in human relations model is the facilitator role. It shares some characteristics with the mentor role, such as being empathetic and caring for others. The facilitator mainly focuses on working with grounds and collaborate actions. Its three key competencies are: 1) building teams; 2) using participative decision making; 3) managing conflict (Quinn et al., 2007).

3.2.2.4 Innovator & Broker Role in the Open System Model

The fourth mode emerged during 1951-1975,, referred to as 'the open system model' in respond to the changing conditions in an organization's environment. The symbol for this model is the amoeba because it believes that the organization is faced with competitive environment, and in order to be effective, the organization

have to be flexible and responsive. Values that are at the core of this model are innovation, insight and adaptation. This model contrasts with the internal process or the rational goal model, and ‘‘can be associated with terms such as organic system, flat system and loosely coupled system’’ (O’Neill & Quinn, 1993). In this model, managers are expected to be innovators and brokers.

As an innovator, a manager is expected to facilitate adaptation and change. Change is inevitable in all aspects of organizational life, and organization need to manage the change instead of avoiding it in order to maintain its function, growth and to survive. In many cases, innovation and change are indispensable, and the innovator role focuses on adaptability and responsiveness to the external environment, and it involves the use of creativity and the management of organizational changes and traditions. Compared to the monitor role, the innovator role requires the manager to depend on ‘‘induction, ideas, and intuitive insights’’ instead of ‘‘deduction, facts, and quantitative analysis’’ (O’Neill & Quinn, 1993, p.3); and its key competencies include: 1) living with change; 2) thinking creatively; 3) managing change (Quinn et al., 2007).

The broker role focuses on creates relationships and agreements that result in moving the organization forward, particularly concerned with maintaining external legitimacy and obtaining external resources. The manager is required to be persuasive, influential, and powerful, and the core competencies associated with it including: 1) building and maintaining a power base; 2) negotiating agreement and commitment; 3) presenting ideas (Quinn et al., 2007).

3.2.2.5 Overview of the CVF

The CVF’s four management models and their core values are seen as in line with Parsons’s theories which suggest organizations have to solve four basic problems in order to survive, grow and develops (Parsons, Bales & Shils, 1953), referring to the

adaptability, goal attainment, integration and latency. The four CVF's models and the eight embedded managerial roles are closely related and interwoven as each of them both contrast and complement each other (O'Neill & Quinn, 1993). Each model has a polar opposite and two complementary models: the human relation model contrasts with the rational goal model, while the internal process model contrasts with the open system model. The human relationship model shared flexibility with the open system model; the open system model share an external focus with the rational goal model; the rational goal model and the internal process model both focus on control; and the internal process model and the human relation model both have an internal focus (Quinn, 1988).

According to the literature, leadership effectiveness is tied to paradoxical attributes (Cameron, 1984; 1986; Cameron & Quinn, 2006; Denison, Hooijberg, & Quinn, 1995; Quinn & Cameron, 1988). The high performing leaders who are rated by their peers and subordinates as effective, have ''developed capabilities and skills that allow them to succeed in each of the four quadrants'' (Cameron & Quinn, 2006, p.47); ''they are self-contradictory leaders in the sense that they can be hard and soft, entrepreneurial and controlled'' (Cameron & Quinn, 2006, p.47). And there is growing evidence in support of Quinn and Cameron's idea that behavioural complexity of leader is vital to their managerial effectiveness as well as the overall organizational effectiveness (Bolman & Deal, 1997; Hart & Quinn, 1993; Hooijberg, 1996; Quinn et al., 1992).

The CVF is also recognized as a further elaboration of Schein's theory of culture formation in organizations with the development of its matching scale, the Organizational Culture Assessment Instrument (OCAI, including 24 items) (Cameron & Quinn, 1999; 2006), which is widely used in constructing culture profiles for targeted organization through analysing the core values, assumptions, interpretations and approaches that characterise organizations (Cameron & Quinn, 1999).

3.2.3 Applicability of the Competing Values Framework

3.2.3.1 Validity and applicability of the CVF in educational research

There are over 10,000 studies have applied the CVF in organizational studies within various academic disciplines including: education, communication, organizational cultural, management of diversity, gender in management, and management information systems (Cameron et al., 2006; Hartnell, Ou & Kinicki, 2011; Hooijberg et al., 2004; Hunt et al., 2004; Quinn et al., 2007; Vilkinas and Cartan, 2006).

In educational contexts, the CVF has been widely used in the literature mainly in two ways: 1) to assess organizational cultures in higher education institutions (Cameron, 1986; Cameron & Freeman, 1991; Smart, 2003; Zammuto & Krakower, 1991); and 2) to assess leadership effectiveness by analyzing complex managerial roles performed by the leader (Smart, 2003; Vilkinas & Ladyshewsky, 2011; Vilkinas & West, 2011).

Firstly, the CVF has been applied by previous literature in examining organizational culture in higher education institutions (HEIs). For example, Cameron (1986) applied the CVF into higher education institutions, and find out that HEIs tend to emphasis on both the adhocracy quadrant as well as the hierarchy quadrant, which means that innovation and change (adhocracy) are emphasised by HEIs, and at the same time stability and control (hierarchy). Cameron and Freeman (1991) analyzed organizational cultural in 334 higher education institutions, which represents the entire population of four-year colleges and universities in the US, and 3,406 individuals participated in total. Their study found that, all examined education institutions were characterised by more than one culture with clear dominant cultures in most institutions, and culture types are recognized as powerful in predicting organisational effectiveness. Zammuto and Krakower (1991) also studied college cultures, and provided evidence of validity for the CVF in educational

institutions. Smart (2003) examined the relationship between organizational effectiveness and culture of colleges within the context of the CVF by surveying 14 community colleges, and the findings demonstrated a clear tie between the organizational performance of community colleges and the nature of their organizational culture.

In terms of organizational cultural and values analysis, the reliability and content validity of the Competing Values Framework has been empirically supported by studies using multitrait-multimethod analysis (Quinn & Spreitzer, 1991), multidimensional scaling (Howard, 1998), and structural equation modelling (Kalliath, Bluedorn, & Gillespie, 1999). Howard (1998) tested the validity of the CVF by applying a Q-sort and multidimensional scaling analysis with ten American organizations, and produced qualified support for a structure of organizational culture values in line with the CVF. Lamond (2003) confirmed the validity of the CVF by studying 462 manager's perceptions of their organizations. Denison and Mishra (1995) analysed the relationship between organizational culture and effectiveness by using case studies and survey, and their research results also confirmed the relationship between organizational effectiveness and the cultural value types in the CVF.

Secondly, the Competing Values Framework has also been used extensively to assess leadership effectiveness by analysing the complex managerial roles experienced by managers in a number of research settings (Hooijberg et al., 2004; Hunt et al., 2004; Quinn et al., 2007; Vilkinas and Cartan, 2001), and evidence for the validity of the eight CVF's managerial roles is provided by scholars. For example, Denison *et al.,* (1995) examined the eight CVF's roles by using the non-traditional multidimensional scaling analyses to test the fit between data on some 700 managers and the quadrant model suggested by the CVF model, and their research findings show good support for the CVF quadrant model and the managerial roles it proposed. In another study, Pauchant (1991) also reported the validity of the eight operational roles according to the results of surveys conducted with 900 managers.

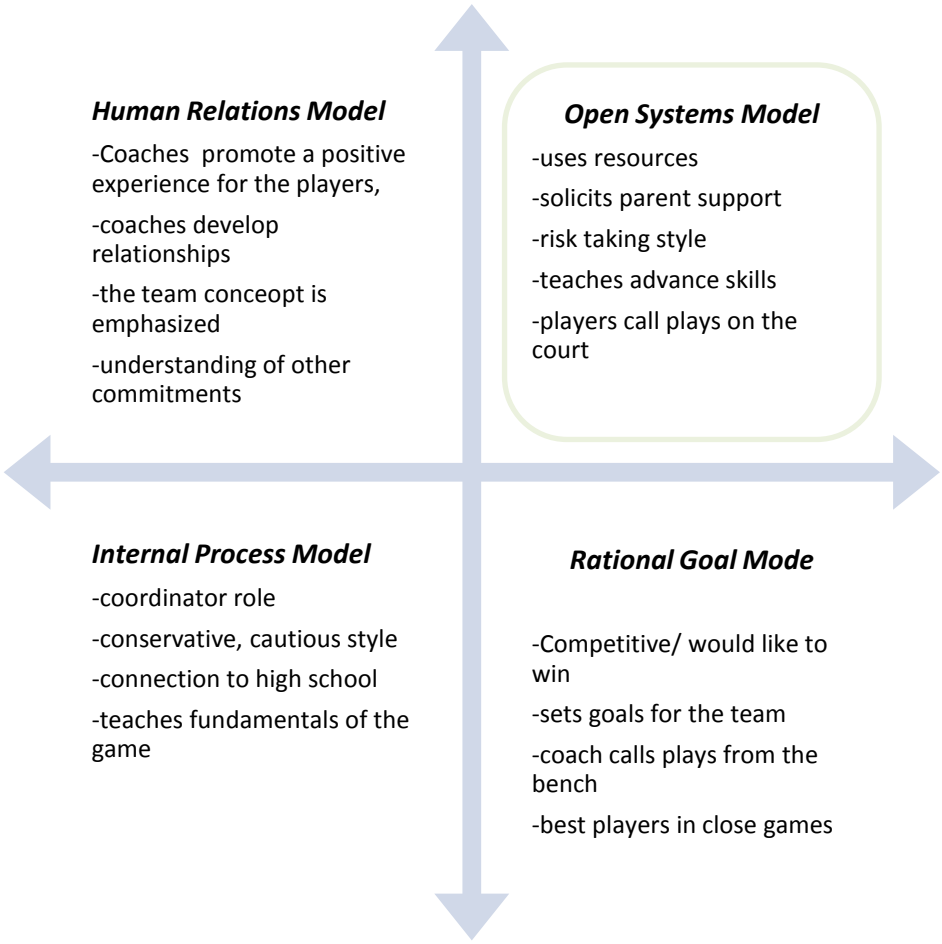
In educational research, the CVF has been adopted to assess complex leadership behaviour in higher educational institutions by observers. Smart (2003) examined the relationship between organizational effectiveness and the leadership behaviours by analysing the leadership roles performed by senor campus officials in colleges in light of the CVF, and found that the ''perceptions of the organizational effectiveness of the institutions and the level of complexity in the leadership behaviours of senior campus officials'' (p.673) are positively related. Vilkinas and Ladyshewsky (2011) used the CVF model to investigate the academic leadership roles by assessing 90 academic program directors and other 710 significant others from four Australian universities, using the 360-degree feedback process. Their research finding shows that surveyed academic program directors were generally effective and tend to focus on collaboration as well as 'having the job done'; while less attention was placed on maintain networks and introducing changes in their work. Meanwhile, Vilkinas and West (2011) also investigated the leadership roles and effectiveness in universities by surveying 19 heads of schools and 120 significant others (including peers, academic staff and administrative staff) from two universities. The CVF model was used as a leadership framework to explain academic leadership behaviours. Their analysis indicates that the heads of school did possess behavioural complexity and display most of the CVF's roles to a moderate level which is in line with some previous research (Denison et al., 1995; Hooijberg, 1992; Hooijberg & Quinn, 1992). However there were significant differences between the roles in the extent to which they were displayed by the academic leader and considered important depends on whether they are required to be internal or external focused; and the results reflect that the mentor and facilitator tend receive more attention than the innovator.

3.2.3.2 CVF and supervision analysis

Being part of the research tradition, several recent studies have applied the CVF to analyse supervisory activities in educational institutions. Prelesnik (2008) adopted the CVF to examine how middle school athletic coach supervisors balanced the

challenges of coaching supervision. Qualitative research techniques are used in the research, and the data collection methods included 1) observations of in-the-field coaching supervision practices; 2) interviews after observations; and 3) field notes. Descriptive data about the actions and behaviours of middle school coaches were coded and analysed within the parameters of the competing values framework. It was discovered that Coach Supervisors in middle school athletic programs are faced with a variety of challenges and competing demands, and coaches who could move more easily through the various quadrants of the CVF are more successful than others. Based on the research findings, Prelesnik (2008) suggests that the CVF can be utilized to examine school coaching supervision as coaches are faced with ‘‘multiple challenges while they are coaching’’; the CVF suggests a business leader need to engage in multiple behaviours in more than one quadrant, and coach supervisors are also found ‘‘demonstrating different behaviours in various components within the framework’’ (p. 133) (see figure 3.2.3-1).

FIGURE 3.2.3.2.-1 MIDDLE SCHOOL COACHING SUPERVISION AND THE CVF



(Prelesnik, 2008, p.133)

The CVF has also been applied into higher education institutions for PhD supervision analysis by Vilkinas (2002, 2008). With more attention doctoral education and postgraduate supervision received and the need for a 'new theoretical approach drawn from a wider literature then traditional higher education pedagogy' (Person & Kayrooz, 2004) in order to have ''a conceptual understanding of what supervision involves'' (Person & Kayrooz, 2004), the CVF was applied into PhD supervision research by Tricia Vilkinas (2002) to illustrate the capabilities required of the PhD supervisor. By comparing the role of a business manager and the role of the academic supervisor, Vilkinas (2002) suggests that ''the analogies between the two supervisory roles are clear and the qualities and benefits of good supervisory practice can be transferred from corporate to academic arenas'' (p.129).

The eight CVF managerial roles were examined individually in detail by Vilkinas (2002): (1) the mentor role: as mentors, business manager and supervisors all should put their focus on individual development of their employees / students. For supervisors, they need to guide and to support students with what they need (more training, more support, or more freedom etc.) according to their understanding of student's research capability and progress. They also need to communicate effectively to students and co-supervisors. (2) The facilitator role: like business manager, PhD supervisor need to manage conflict between students or with other faculty if needed; they also need to build research teams when working with more than one student as a research group. (3) The monitor role: in the role of monitor, both business manager and supervisors need to monitor the project progress with regular reviews. For PhD supervisor, he/she need to analyse students' performance critically in order to determine if the student is progressing at the expected rate, or they were stuck somewhere or lack of motivation. (4) The coordinator: in the role of coordinator, supervisors' job including managing students' projects (designing and organizing the work that needs to be done by the student), and managing across different administrations in the university. The purpose of doing so is to make sure that there is no delays due to lack of planning or organizing, such as delays caused by late notice for examiners. It is the coordinator's role to provide stability, control and continuity. (5) The director: in this role, supervisors need to setting goals and objectives for the students and co-supervisors to clarify directions and to provide structure. They need to priority activities that will help the student to complete their PhD and making sure they do not get side-tracked too much by other activities that are not likely to be used for their work. (6) The producer: in the role of producer, one of the main responsibilities of a manager and a supervisor is to making sure that 'work gets done'. For supervisors, they need to create a productive academic environment in terms of making comments on drafts, hold meetings with the students, encouraging publishing of work, etc. Meanwhile, supervisors have to manage the time and stress of students to make sure that they do not become exhausted because of too much pressure, or in low productivity due to lack of

supervisory pressure. (7) The broker: in the role of broker, supervisors need to build and maintain networks with examiners, to obtain resources, to negotiate agreements with students/co-supervisors/sponsors, and to present ideas to faculty or doctoral panels, etc. (8) The innovator: in the role of innovator, supervisors need to be flexible and adaptable to change and be creative. They should be able to identify the issues and methods that are regarded as significant of the academic environment within which they work. Also, they need to be able to judge what topics or research methods are appropriate, and recognise any changes that are needed for the final thesis, and develop better ways of presenting ideas and of discussing issues with the student.

According to the comparison, Vilkinas suggests that, the role of academic supervisor and the role of a business manager are analogous: they both involve at least one individual who is engaged in a particular task (student /employee), who is being supervised or managed by another individual who shared the same interests to achieve the task. Both the business manager and supervisor are the one who has more expert power and experience in the task they are working on, with the understanding of how to successfully complete the task. For business manager, it means the manger need to understand the budget, the cost, and steps involved, etc., while for PhD supervisor, it means he/she need to have a parallel set of responsibilities when managing a PhD student, such as a timeframe, and a standard of quality (Vilkinas, 2002). It is suggested that, this analogy offers greater insight into the activities of the supervisor, and to demonstrate that PhD supervision requires abilities and attitudes that lie outside of the subject discipline, and a greater understanding of the complex set of roles that the supervisor needs to perform, which served as a foundation for effectiveness of PhD supervision, can be achieved by applying the CVF (Vilkinas, 2002, 2005).

Vilkinas (2008) carried out another exploratory study later on to support her previous research by focusing on ‘‘whether or not the behaviours of faculty members

involved in thesis supervision could be represented by the same conceptual framework that has explained the success of the effective manager in government and industry'' (p.301). Twenty-five faculty members were interviewed about how they supervised their PhD students' in terms of thesis preparation. The participants were selected from different universities and represented a range of disciplines, including natural sciences, humanities, and business and management. Structured interviews were used to cover the key areas of interests, and each participant supervisor was asked seven open questions, such as: 'what sorts of things do you do when supervising? What could you do more of? And what could you do less of?' (Vilkinas, 2008) Transcriptions of the interviews were content analysed. According to the analysis, majority of the supervisors were task-focused with 72% said that they were closely involved student's activities and adopted a ''hands-on'' approach (p. 303). By relating these finding to the CVF model, activities carried out by supervisors can be associated with all of the eight CVF's roles apart from the Innovator (see figure 3.2.3.2.2-2). Based on the results, Vilkinas (2008) reported that the CVF model can be used to explain how academic supervise PhD students in terms of the supervision activities they undertake, and the model also ''has the capacity to identify activities which they may not be pursuing but which could enhance the effectiveness of academics in their supervision role of graduate students' thesis'' (P. 309).

FIGURE 3.2.3.2.-2 RELATING ACADEMIC SUPERVISION ACTIVITIES TO CVF ROLES

CVF Role	Activity	Term Used by Vilkinas
Coordinator, Director, Producer	Hands on approach Support: intellectual Doing the research	Deliverer
Monitor	Regular	Monitor

	contact with students	
Facilitator, Mentor	Support: emotional Cater for individual differences Develop coheort Seeing student's development	Developer
Broker	Support: structural	Broker

(Vilkinas, 2008)

Informed by previous studies which used the CVF to assess complex academic leadership behaviour in higher educational institutions as well as recent research that adopted the CVF into supervision analysis, I was interested in applying the same model, competing values framework, to examine my own data for similar roles displayed by supervisors as those found in Vilkinas's study. The data used in this thesis shows similarities to Vilkinas's data, supervisors are found to deliver all eight managerial roles to different degree (see chapter 5). However, this thesis focused on different aspects of this by looking at the managerial roles supervisor displayed during a collection of supervisory activities which rated by students as ' the most effective ones' in order to find out which roles supervisors display more frequently in perceived effective interactions. This compares to the more 'general' analysis of Vilkinas, who focus on broadly examining all roles displayed by individual supervisors during interactions, regardless of the perceived effectiveness of the supervision delivered. Also, this thesis adopted a student-centred approach to explore the PhD supervision rather than the supervisor-centred approached used by Vilkninas' and

Prelesnik, as students are those who are directed affected by supervisory actions, and regarded as the most appropriate judge of its 'effectiveness'. So, while supporting Vilkinas's findings about the complex managerial roles supervisors delivered during supervision, this thesis extends Vilknia's research by analysing the frequency of these roles in a particular context.

In the following part, I shall justify my choice of using the CVF and a student-centred approach in this thesis.

3.2.4 Adaptation of the CVF in this research

3.2.4.1 Why use the CVF

As reviewed in the previous chapter, research that approaches PhD supervision from different perspectives reached an agreement on the debate that PhD supervisor are required to display a wide range of skills in order to provide effective supervision and appropriate support for students, to assist them in successful completion (Acker et al. 1994; Brew & Peseta, 2004; Cullen et al, 1994; Clark & Neave, 1992; Fraser & Mathews, 1999; Gurr, 2001; Hockey, 1996; Murphy, 2004; Ylijoki, 2008). This is partly due to PhD supervisors were faced with a variety of challenges and competing demands, not only because of the increasing requirements of their capacity in terms of academic knowledge and related skills (e.g. management skills, interpersonal skills, communication skills, etc.), but also the diversity of individual researcher students from diverse backgrounds (e.g. different age group, research skills, academic knowledge etc.). Therefore, it is argued that the supervisor needs to be able to coordinate the activities of the research program, support the students (Pearson and Kayrooz, 2004; Seagram et al. 1998), provide access to resources or expertise; monitor progress, collects information, and holds regular reviews; and build and maintain networks with examiners and researchers in the area. The required role list for PhD supervisors can be surprisingly long and disorderly (Green and Powell, 2005), therefore what is really needed is research that could provide a clear map-like

picture to organize and display all of the required roles, together with reasons and driving forces of the requirements which can leads to a systematic understanding of the supervisor's behaviours (Person & Kayrooz, 2004). This view is supported by Leonard after reviewing previous literature on the postgraduate research student learning experience, 'the majority of the studies were not based on any discernible theoretical framework, and the majority presented mainly qualitative data' (Leonard, et al., 2006, p. 4).

Kindled by previous research that adopted the CVF into leadership behaviours analysis, I agree with Vilkinas (2002, 2008) and Prelesnik's (2008) idea that the CVF's comprehensiveness and visual clarity, described as its 'map-like qualities', can help to support systematic examination of the supervisor's behaviours and provide an organizing schema for the complex supervision activities. As suggested by previous literature, one of the major themes of the PhD supervision is that complex and paradoxes roles are required of the supervisors. With the long list of activities or competing tasks supervisors typically perform, the complexity of supervision needs an organizing schema which can provide an integrated and cohesive description of the behaviours needed for effective supervisors. As one of the major strengths of the CVF is ''its capacity to accommodate and visualize the tensions and paradoxes that contemporary leaders face'' (Thompson, 1993, p.103), the CVF is ideal for making this point in terms of organizing and making connections between these roles in a explicit way with its ''face validity and coherence'' (O'Neill & Quinn, 1993; Thompson, 1993). During my research, the CVF model enable me to systematically analysis the data I have got, while providing that material with a tighter focus and an internal consistency by making explicit the connections between these activities as well as their driving forces with its four managerial models and managerial roles. During the analysis, I followed Thompson's (1993) suggestion, and assessed supervisors' behaviours according to the eight CVF's roles instead of its 24 competencies; because when all of the roles and competencies are attached to all of the quadrants, the framework can be overwhelming, and loses its visual clarity and become too complex.

Second, the CVF provides a functional language for describing and evaluating supervisor's supervisory practices. During the data collection process, the CVF is used as a lens for observation. As Richard Wagner (1991) suggested, unlike financial problems or operational problems, managerial problems are always interrupted and complicated by a deeper context. Described as 'convoluted action', supervisors/managers do not follow the liner model for making decisions and taking actions, and they can perform more than one role at the same time. In the language of the CVF, the supervisor directs while they are facilitators, and they monitor while they are innovators. Complex supervision interactions can be clearly described by using the language of the CVF, which equip the researcher with a functional language for observing and describing supervisors' behaviours, and the vocabulary of the CVF enables me to notice nuances in supervisory behaviour I might not have noticed without that vocabulary, and it also helps to identify and concentrate on the focus for the interviews.

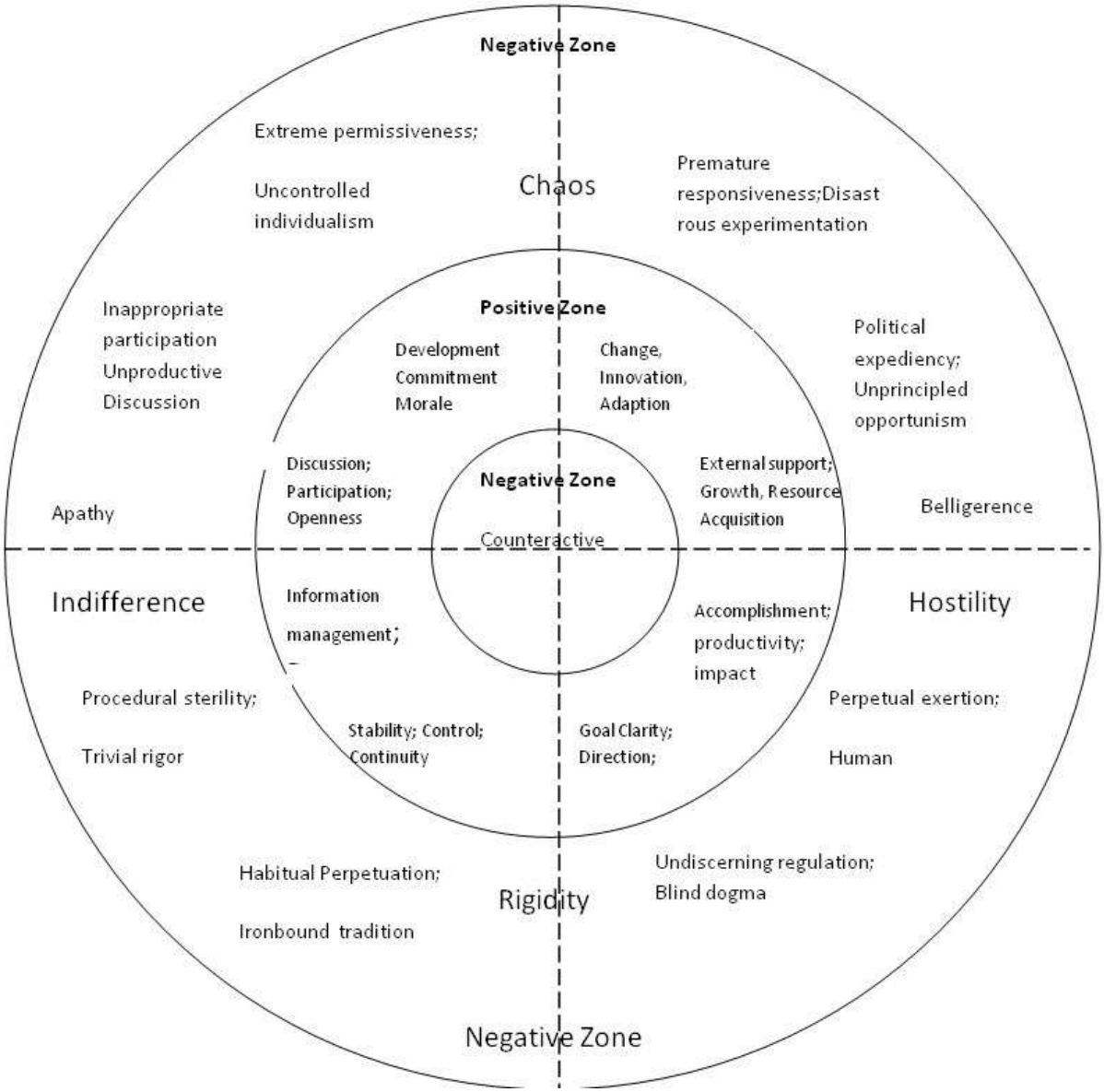
Third, the CVF has the potential to ''complexify'' the analysis. It can frame understating of supervisors' behaviours in a more sophisticated way by building connections between research findings of different groups of literature on effective supervision (e.g. the Socio-culture research on effective supervision; 'desirable roles' research on effective supervision; 'multi-dimensional framework' research on effective supervision) (see chapter two).

As reviewed in the last chapter, literature on effective supervision adopted different approaches to clarify the role and nature of PhD supervisor. Some of them produced the desirable role-list for supervisors which is recognized as a common and straight forward approach in terms of offering a self-help check list for supervisors; while some others provided investigations into how supervisor's roles are affected by political, social and cultural changes and why some of the complexities and

challenges of supervision practices in relation to these changes took place in the institutional context of doctoral education. The CVF has the potential to be used to interpret those research results by linking supervisors' behaviours to organizational culture and values in light of its eight managerial roles and four management models. On the one hand, complex desirable roles required of supervisors can be mapped onto the CVF model according to its eight managerial roles to visualize the activity in the form of a schema, which not only shows what kind of roles supervisor displayed but also the values and motivation associated with the role, such as, why certain role are required or adopted. Meanwhile, by adopting the complete form of the CVF model, the eight managerial roles and their embedded management models can be interpreted as representing four different organizational cultures according to their dominant core values. The relationship between the CVF's four cultural orientations and leadership behaviours in higher education institutions has been tested and supported by previous literature (Cameron & Ettington, 1988; Cameron & Freeman, 1991; Smart & Hamm, 1993; Smart & St. John, 1996), and the CVF can also be used to explore how supervisor's roles are related and influenced by social and cultural changes by analysing how PhD supervisors configure the roles they need to perform (which role supervisor believe they should display to ensure a 'fit' between context and behaviour).

What also worth noticing here is values that reflect certain effectiveness criteria of certain managerial behaviours and organizational culture will become criteria of ineffectiveness if pursued unwisely. According to Quinn (1988), an organization has to value the aspects of the four culture orientations – as identified by human relations, internal process, rational goal and open systems orientations – in order to be effective. However, the paradox in the CVF model relates to the fact that values and managerial roles should not be overemphasised, otherwise it will decrease effectiveness. To clarify this paradoxical nature, Quinn introduced the concepts of 'positive zone' and 'negative zone' (see Figure3.2.4.1-1).

FIGURE 3.2.4.1-1 THE POSITIVE AND NEGATIVE ZONE OF THE CVF



(Quinn, 1988, p.70)

With regard to the open system model, Quinn (1988) argues that an overemphasis on change, innovation, adaptation, may result in 'premature responsiveness' and 'disastrous experimentation'. External support, growth, and resource acquisition, on the other hand, may become 'political expediency' and 'unprincipled opportunism'. With regard to the rational goal model, Quinn outlines that too much emphasis on accomplishment, productivity and impact may turn into 'perpetual exertion', and 'human exhaustion'; while over-emphasis on goal clarity, direction and planning may

result in ‘undiscerning regulation’ and ‘blind dogma’, which mean there is little space left for individual differences.

With regard to internal process orientation, stability, control and continuity can turn into ‘habitual perpetuation’ and ‘ironbound tradition’ if overemphasised. Similarly, concern for information management and documentation might result in ‘procedural sterility’ and ‘trivial rigor’, in which case, organization could become bureaucracy in which everything is strictly regulated, and initiatives of individual members are limited. Furthermore, in human relation model, if over-emphasised, development, commitment, and morale could become ‘extreme permissiveness’ and ‘uncontrolled individualism’; and discussion, participation and openness could result in ‘inappropriate participation’ and ‘unproductive discussion’.

For the central negative zone, Quinn does not explain exactly what is ‘unclear’ and ‘counteractive’ values, generally speāking, it refers to organizations without clear values or with counteractive values will be ineffective due to lack of consistence and coherent. In this research, participating students are also asked to select ‘ the least helpful’ moment during their supervision, and their selections are analysed in light of the ‘negative zones’ propose by Quinn to identify what causes the negative responses, is it caused by underuse or overuse of certain managerial role? The results of ‘the least helpful moments’ are used to supplements the analysis of ‘the most helpful moments’.

However, there is a potential pitfall noticed with Quinn’s idea of the positive and negative zone, which is the absence of clarification about where the ‘negative zone’ ends and the ‘positive zone’ starts. And Quinn’s discussion about the boundaries between the negative and positive zone implied that the boundaries are dependent on contingency factors (Maslowski, 2001). That is to say, there is no transferable criterion for measuring the boundaries between the ‘negative zone’ and ‘positive

zone' because it will differ across organizational types. For an individual organization, the boundaries are subject to change over time due to the complexity and uncertainty of the environment as well as the organizational itself.

3.2.4.2 Adaptation of the student-centred approach and Interpersonal Process Recall

To date, in terms of PhD supervision in general, there is a substantial amount of existing research which adopted a supervisor-centred perspective (Acker et al., 1994; Becher et al., 1994; Cribb & Gewirtz, 2006; Gatfield, 2005; Lee, 2009; Hockey, 1994; 1997; Vilkinas, 2008). As argued by Leonard et al., it appears that ''there has been very little research done on the students' perspective and giving students' views of the doctoral experience'' (2006, p. 5). According to the literature, previous research that does take a student-centred perspective in PhD supervision analysis allows access to student's interpretations of essential components of effective supervision practices, which would have been missed in supervisor-centred studies. One example of a student-centred study in the area of PhD supervision is that of Harman (2002) who carried out interviews with PhD students about their course and supervision experiences. More than 100 students were interviewed, representing 20 departments in two major research-intensive universities in Australian, and the participants appear to provide a reasonable balance in terms of age and discipline (social sciences and natural sciences). Herman found that relatively low rates of satisfaction were reported for the quality and effectiveness of supervision, female student were more dissatisfied then male students, and the most common complaints were that supervisors are too busy to give adequate time to PhD students when they need supervision. This has been interpreted by Herman as in relation to the major reductions in university funding at the national level in Australia. As additional work strains are put on academic staff, they are struggling to maintain high quality and effectiveness of supervision due to their heavy workloads. Other problems are also reported by students, such as insufficient financial support for the research project, difficulties experienced in accessing to specialised equipment, lack

of help in designing the research project, and the supervisor's lack of specific skills in supervision and poor interpersonal skills.

Heath (2002) also used the student-centred approach in PhD supervision investigation by surveying 355 PhD candidates, with the purpose of providing data that could be used to improve the quality of PhD supervision. Different to Harman's (2002) study, the 355 PhD students Heath surveyed are those who have already successfully completed their thesis. Compared to Harman's research result, Heath's research showed a relatively high level of satisfaction: over 85% expressed satisfaction with supervision they have received, and regular formal supervisory meetings are appeared to be important contributors to the satisfaction that PhD students feel with the supervision they received. The data indicate that regular supervision meetings in which the supervisor provide ''constructive guidance on topic definition, research design and data analysis, literature and scholarly writing'' are central to students' satisfaction (p. 52). However for those who did express dissatisfaction, Heath argued, based on the students' surveys only, ''it was not possible to determine the extent to which this reflected problems with the candidate or the supervisor; and if the supervisor, the extent to which it was related to the level of commitment, or to excess workload, or to other factors'' (p.41).

Other observers employed the student-centred perspective in their supervision studies differently by collecting data from both the PhD student and the supervisor, with data from the latter group is used to supplement analysis of the students' data for a more comprehensive understating of the supervision practices. For example, Lee (2009) uses qualitative approach to explore student and supervisor perceptions and experiences of the supervision process within a professional doctorate programme. Data was collected from student workshop discussion and interviews with PhD students and supervisors. Eight themes emerged from Lee's analysis, including: supervisor style, pragmatism, independence, facilitative, partnership and equality, posturing, and professional issues; and the findings indicate that students

believe it is important to have supervisors who know their subject area, understand doctoral requirements, and set targets for the production of written work. One of the most interesting findings of the research is that student responses contrasted with the responses from supervisor in terms of pragmatism: PhD students believe it is more important to have experienced supervisor who can steer a safe passage; while the supervisor believe that, it might be more important for student to have a supervisor of the same professional background.

Pare (2010) also uses qualitative method to examine PhD supervision by analyzing the feedback PhD students received during supervisory sessions. The research draws on interviews, focus group discussions, and recorded conversations between doctoral students and their supervisors in order to help doctoral students take advantage of what their supervisors tell them, even when the comments are obscure. Interpretations of supervisors' remarks about content, organization, strategy, citations, tone, and other aspects of text were also offered. The research indicates that supervisors' feedback is often ambiguous, enigmatic and coded – that is, saturated with meaning, but difficult to understand. A very helpful insight was proposed by Pare according to the research, that is, even supervisors who publish frequently may not be capable of conducting the sort of close textual analysis that leads to insightful feedback. In other words, the ability to write well does not confer the ability to teach others to write.

Another key study informing this thesis is that of West and Clark (2004) who analysed effectiveness of counselling supervision by looking at the experiences and views of the supervisee as well as the supervisors. The methodology used in this research was derived from Elliot's Comprehensive Process Analysis (CPA) (1984, 1986) which including the following stages: 1) video-recorded a regular supervision session; 2) one of the participants was asked to choose the most helpful and the most hindering events within the supervision session; 3) the Interpersonal Process Recall interview was conducted with the participant by playing back the moments he/she

selected and asking the participant to provide explanations for each selected moments; 4) repeat stage 2 & 3 with the other participant in the dyad; 5) analyse the IPR interviews. The study showed that supervisors and supervisees generally agree on what are most helpful or least helpful moments, however are looking for different things from supervision: the supervisee tend to focus on the outcome, while the supervisors put more emphasis on the quality of the work. The most important information delivered by West and Clark's work is the fact that ''participants' unprompted recall of what actually happens in a supervision session may not be strictly accurate'' (p.23). According to their research, examples of imperfect recall of what happened in supervision have been found, which refers to 'narrative smoothing' (West & Clark, 2004). This argument is supported by Delamone's research, according to which data collected through interviews with supervisors only provide information about what supervisors think they did or ready to share with the interviewer (Delamone, et al., 1998). Therefore West and Clark argued that, the use of IPR in supervision research can reveal useful data in terms of uncovering accurate views of what actually happened in supervision, on which the research can be better based.

I was interested to carry out my own research by applying the similar method to those found in West and Clark's study. According to the literature, previous research that applied the Competing Values Framework into supervision analysis (Prelesnik, 2008; Vilkinas, 2002; 2008) generally adopted a supervisor-centred approach and collect their data through interviews or surveys, for example, all of Vilkinas's data is taken from interviews and questionnaires with PhD supervisors from different department; and Prelesnik's data is gathered through interview with coach supervisors; there has been little research into what actually happens in PhD supervision and little attention paid to the student group. Therefore this thesis aims to fill a gap in the literature by using the CVF to examine PhD supervision from a student-centred perspective, rather than rely on the supervisors' self-report data only. Internal Process Recall is applied to reveal the real supervision process. The target supervision practices - the most and least effective supervision moments - are selected by the student at the beginning of the individual IPR interview, who are the

target receiver of PhD supervision and are regarded as the most appropriate judge of supervision effectiveness (Bennet & Knibbs, 1986). Individual IPR interviews were also conducted with the supervisors. According to the research, the student-centred approach and the use of the IPR are highly effective in revealing PhD students' understandings and perceptions of 'effective supervision practices' in terms of role requirements for supervisory positions; and data collected from IPR interviews with the supervisor served as good supplement in analysing and interpreting student's data.

3.2.4.3 Contributions of this thesis

In terms of research contributions, this thesis will contribute to the fields of PhD supervision analysis and the Competing Values Framework. In terms of topic, my thesis fills a gap in existing literature through analysing PhD supervisors' behaviours within the context of perceived-as-effective supervision moments, rather than examining all activities supervisors engaged during the supervisory interaction. In terms of approach, my thesis contributes to PhD supervision analysis on supervisors' behaviours by taking a student-centred approach to investigate supervisors' behaviours in light of the CVF, and also adding to the growing body of CVF literature on supervision analysis. In terms of methodology, my thesis supplements previous research that mainly based on interviews with accurate observation data of doctoral supervision. According to the literature, the majority of previous research has relied on supervisors' accounts of the supervision processes. The studies reported in Acker et al.,(1994), Becher et al. (1994), Cribb and Gewirtz (2006), Gatfield (2005), Lee (2009), Hockey (1994; 1997), Vilkinas (2008) are all based on interviews with the supervisors, where they ''recalling and describing their practices and philosophies related to supervision'' (Delamont, et al., 1998, p.158), and ''such interviews only provide data on what supervisors think they do and are prepared to rehearse in front of researchers'' (Delamone, et al., 1998, p. 158). By applying the IPR in this thesis, what actually happened in PhD supervision has been revealed, which provide accurate reviews of the supervisory practices.

3.2.5 Conclusion

This chapter has provided an overview of the Competing Values Framework and previous research on effective supervision that adopted the CVF. I also justify my choice of using the CVF to examine effective PhD supervision in my thesis. The latter part of this chapter has given a brief overview of research that employed a student-centred perspective and explained why I choose to adopt this perspective in my research. At the end of this chapter, I explain how my research contributes to existing literature in terms of topic, approach and methodology.

Having now introduced background literature behind this study, I will now move on to the methodology part of this thesis. The following chapter will specify how I carried out my research in detail how I collect, transcribed and analysed the data.

Chapter 4 Methodology

4.1 Introduction

Having placed my research in the context of current PhD supervision research, in this chapter I will specify how I carried out my research, explaining in detain how the data is collected, transcribed and analyzed.

I will begin by discussing my interpretation of educational research, the philosophical background, and adoption of qualitative research methods. Then, I will describing the methodology employed to implement this research. In the next section I will go on to describe in detail the method of collecting data. As explained in Chapter 3, Interpersonal Process Recall interview is used in this thesis to obtain accurate views of the supervisory practices (see chapter three). Each stage of the IPR interview process is addressed chronologically, as well as discussions about problems occurred during the data collection, such as getting access to research participants. A summary of data is also provided. I will then describe the template analysis, which is the data analysis method adopted in this research; as well as the qualitative analysis software that was used to assist the process. It will then focuses on ethical issues in terms of respect, responsibility, and integrity. As social process, this research was subject to conventions of social interactions, but was also subject to ethical principles. Finally, this research has been evaluated in terms of its validity and reliability, and limitations.

4.2 The researcher and the research

In this part the interpretation of educational research is described, the philosophical background, the adoption of qualitative research methods, the aims and objectives of the thesis, and the methodology used in the research.

4.2.1 My Relationship to the research

Having long been influenced by the objective methodological strategies, at the beginning of the fieldwork, the significance of a researcher being detached from those being studied was acknowledged. In this research of PhD students and supervisors, at the beginning, I tried to act as an outsider and believed this is essential to identify the participants' perceptions and concerns. By reflecting on the experience over the years, I have become more aware that a pure objective role for the researcher is just an illusion. Never did the researcher keep completely uninvolved with the participants, and their perceptions and concerns also intertwined and affected my own PhD journey. On the one hand, as a researcher, in order to fulfill the objective, interactions with the PhD student were required. Greeting phone calls and emails were sent to each participant before meeting them in person; other social activities, such as having coffee together were also necessary in terms of creating opportunities for developing a trusting relationship with participants. I also went to supervision meetings with the participating students, and meet up with them afterwards to talk about their work, their supervisors, and their supervisory relationships. Being a PhD student myself, I shared all their pressure, concerns and uncertainty about work, mixed feelings and expectations for supervisors, and sometimes, feelings of isolation, too. I was someone they felt connected to, and they tended to ask me for advice or reassurance since I am doing my PhD thesis on doing a PhD, and I can only do so by drawing on my prior knowledge and research.

At the same time, by hearing them and giving advice, I reflected on my own PhD and learned from their experiences, too. The other group of my participants is PhD supervisors, and I have experienced far more than just being an interviewer during the process of interviewing them. As a PhD student myself, interviewing PhD supervisors was such a unique experience, none of them were my supervisor, however it felt like a supervision meeting for me at some point when I interviewed them. I frequently reflected on myself while they were giving evaluation on their students; I made notes on where I need to improve in the further without realizing it while writing a memo for observation; and most importantly, by talking to them, I

have more understanding about PhD supervisors, about their work and their lives, which could be reflected on my own supervisor, too. I started to understand things that confused me between me and my supervisor, and I felt I can understand him better. On the other hand, I continued to consciously reduce my influence on their learning/working and PhD journey as much as I could. It was not my intention to work together with them to achieve a particular development. Thus, although I was inevitably part of their experience, I stuck to my research aims during the period in which I explored their supervision relationship.

Academic research has been seen as an impersonal activity, and researchers have been expected to adopt a stance of distance and non-involvement and that subjectivity was a contaminant (Etherington, 2004). By doing the field work, I have reached a gradual awareness that the attempt to entirely separate myself from my investigation would definitely end in vain (Hollway, 1989). Therefore, I question the practices which dichotomize the subjective and objective role of the researcher. My stance echoes Fine et. al.'s (2000) criticism of those extreme practices, which either view the self of the researcher as a contaminant or over-emphasize the subjectivity of the researcher and consequently silence the 'subjects'. Following Fine et.al. (2000), I prefer to dissolve the boundary between these two approaches. It is not an 'either/or' but a 'both/and' option.

I agree with the social-constructivists, who believe that research is always shaped by researchers' values and interests and socio-historical backgrounds. Therefore, in the following part, I will reveal how my personal experiences and values influenced my research, ranging from the interpretation of educational research to the choice of my epistemological stance, the adoption of qualitative research method, the formulation of my research questions and the application of my chosen research methods.

4.2.2 Epistemological stance

Creswell (2003) indicates that research is shaped by the researcher's inquiry paradigms, worldviews and a basic set of beliefs to the research project which including the following philosophical assumptions (1) ontology -- a stance toward the nature of reality; (2) epistemological -- how the researcher knows what she or he knows; (3) axiology – the role of values in the research; (4) rhetoric – the language of research; (5) methodology – the methods used in the process. These beliefs have been addressed differently by different scholars, they have been called paradigms (Lincoln & Guba, 2000; Mertens, 1998); philosophical assumptions, epistemologies, and ontologies (Crotty, 1998); broadly conceived research methodologies (Neuman, 2000); and alternative knowledge claims (Creswell, 2003). Researcher may employ one epistemological approach according to the set of beliefs he/she bring to research, and also, multiple paradigms that are compatible could be used by individuals in the research (Creswell, 2007).

It is also argued by Walliman (2006) that, the formulation of research questions and the way research is carried out is based on the epistemological and ontological viewpoint of the researcher. According to the literature, there are two main opposing approaches in epistemology, connected to how we know things and acquire knowledge: Positivism and Interpretivism. Positivism is an objective approach that aims to establish cause and effect by testing theories and establishing scientific laws. It is an application of the natural sciences to the study of social issues. Interpretivism on the other hand, aims to reveal interpretations and meaning of social realities by recognizing that subjective meanings play an important part in social activities.

Ontology is a stance toward the nature of reality. It is concerned with what exists to be investigated and it has two main and opposing perspectives: Objectivism and constructivism. Objectivism believes that social phenomena and their meanings exist independently while Constructivism beliefs that social phenomena are in a constant state of change because they are influenced and rely on social interactions. Even during research, the researcher is subject to these interactions.

In terms of qualitative research methods, there are four paradigms that inform qualitative research, which include: post-positivism, constructivism, advocacy /participatory, and pragmatism (Creswell, 2003), according to which the practice of research are informed differently. (1) Post-positivism. Qualitative researchers using a belief system grounded in post-positivism usually take a scientific approach to their work. The key elements in this approach including being reductionistic, logical, emphasis on empirical data collection, cause-and effort oriented and deterministic based on a priori theories (Creswell, 2007). Postpositivist researchers will like view research inquiry as a series of logically related steps, believe in triangulation from multiple perspectives from participants. Computer programs are encouraged to assist in data analysis, and the qualitative research is usually presented in the manner of scientific report, such as problem, questions, data collection, results, and conclusions, which resembling a structure of quantitative approach(Creswell, 2007). (2) Social Constructivism. Those who engage in qualitative research using a belief system grounded in social constructivism ‘‘*seek understanding of the world in which they live and work’’* by *‘‘developing subjective meaning of their experiences’’* (Creswell, 2007, p. 20). The objective of research is to explore the complexity of views of the situation according to the participants. And these subjective meanings are often examined in terms of interaction with others, as well as specific historical and cultural context in which people live and work. In this worldview, researchers accept that their own background including personal, cultural, and historical background shapes their interpretation. It is often combined with interpretivism and social constructivist *‘‘‘position themselves’ in the research to acknowledge how their interpretation flows from their own personal, cultural and historical experiences’’*, and ‘‘*to make sense (or interpret) the meanings others have about the world’’* (Creswell, 2007, p.21). (3) Participatory. This worldview argues that marginalized individuals or groups are not included by laws and theories developed by the post-positivists and the constructivists do not “*go far enough in advocating for action to help individuals*” (Creswell, 2007, p.21). Therefore, basically, this worldview believes that research should focus on helping individuals as well as bring about change in practices. The issues facing these marginalized groups and individuals are of great important to

study, their voice needs to be heard and their consciousness should be raised in order to improve their lives or the institutions in which they live and work. (4) Pragmatism. Although there are many forms of pragmatism, generally speaking, individuals holding this worldview focus on the outcome of the research, such as the actions, situations, and consequences of inquiry. ''*Pragmatism is not committed to any one of philosophy and reality''* (Creswell, 2007, p23). Researchers are free to choose the methods that best meet their research needs and purpose. Pragmatists do not see the world as an absolute unity, and they are not restricted to only one way of collecting and analyzing data. In practice, pragmatist researcher will apply multiple methods for a better understanding of the research question, such as qualitative and quantitative sources of data collection (Creswell, 2007).

Based on my interpretation of the mission of educational research, the following principles characterize the epistemological approach. Firstly, this research is interpretative in nature. As part of the main approaches of epistemology, social constructivism and interpretivism put their focus on the recognition that subjective meanings play a crucial part in social actions, it believe the role of social sciences is to discover how different people interpret the world in which they live, and to reveal interpretations and meanings instead of discovering the universal laws of society and to establish cause and effect (Cohen and Manion, 1994). As this research is investigating meaning and perceptions for the most part, it is considered an interpretive approach. The main task of this research is to draw on the perceptions of interactions between PhD students and their supervisors during supervision meetings in an organic and complex organizational structure (Higher education intuitions), in order to understand effective supervisory activities by drawing on perceptions of the participants, revealing the participant's view of reality (Lather, 1992; Robottom & Hart, 1993), and eliciting their understandings and reasons of actions (Borg, Cal & Gall, 1993).

Secondly, subjectivist epistemology was drawn on. It is argued that educational research is value-laden. The researcher influences all stages of the research. The selection of subject and determination of the research question are not value-free. As

reflected by previous researchers, educational research is carried out differently from that in natural sciences (Jenesick, 2000; McCall, 2000; Tedlock, 2010). Especially those research examining prejudices and social-exclusion have made it clear that the subject matter can only be conceived and understood within the paradigm held by individual investigators. Otherwise, acts, practices, feelings and cognitions can be lost to the benefit of the correlation of variables. Therefore, with the support of Denizin & Lincoln and others, I disagree with the positivist view which measures a research on whether it is 'objectivist science' (Kolaskowski, 1993; Wright, 1993).

4.2.3 Research Aims

In this research, I did not set out with a list of hypotheses other than to closely examine the PhD supervisor's behaviors during effective supervisory activities in terms of role performance.

Previous studies in the field of PhD supervision have focused mainly on the supervisor's recall of what happened in supervision meetings and have generally overlooked the feedback from the student group. This research overlooked the experiences and responses of the target receiver of the PhD supervision, who is the most appropriate judge of the effectiveness of supervision (Bennet & Knibbs, 1986). Meanwhile, data obtained from interviews with PhD students and supervisors where they recall what happened in supervision meeting can be inaccurate (West & Clark, 2004), and examples of ''narrative smoothing'' have been found in previous research (West & Clark, 2004). I was therefore interested in using the interpersonal process recall interviews to closely examine real-time PhD supervision from a student-centered perspective in my thesis.

This study focuses on supervisory interactions between selected PhD students and their supervisors from soft disciplines (social sciences, humanities and art) in a case study university (Loughborough University). It aims to draw attention to effective supervisory activities to have a better understanding of PhD supervision from a role-

performance perspective in light of competing values framework. In order to achieve this objective, PhD students' responses that indicating their 'reasonable expectations' are collected, including what kind of supervision activities are valued by students where effectiveness may be enhanced; as well as those activities gained most of the criticisms in which situation, tensions may occur.

The selected supervision moments are then analyzed in terms of what managerial role is represented by the supervisor while carrying out the selected activity according to their functions and means-ends assumptions in light of the CVF, which is applied not only as an intellectual device for describing complex PhD supervision phenomena, but also as an analytical tool for interpreting the supervisor's behaviors.

The purpose of the study is to gather rich, valuable insights into the PhD supervision practices that are perceived as effective by students in terms of managerial roles the supervisor displayed during such practices. I do not claim to assess representativeness or generalisability, although it is possible that individuals from universities/institutions that share the same characteristics with the case study university/institutions may identify similar experiences as discussed in this thesis.

4.3 Methodological approach

4.3.1 Qualitative Research

There are many versions of definitions for qualitative research. One of these definitions posed by Denzin and Lincoln defines qualitative research as:

Qualitative research is a situated activity that locates the observer in the world. It consists of a set of interpretive, material practices that make the world visible. These practices transform the world. They turn the world into a series of representations, including field notes, interviews, conversations, photographs, recordings, and memos

to the self. At this level, qualitative research involves an interpretive, naturalistic approach to the world. This means that qualitative researchers study things in their natural settings, attempting to make sense of, or interpret, phenomena in terms of the meanings people bring to them (Denzin & Lincoln, 2010, p3).

Creswell also describes qualitative research in his book as *''Qualitative research begins with assumptions, a worldview, the possible use of a theoretical lens, and the study of research problems inquiring into the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is inductive and establishes patterns or themes ''*(Creswell, 2007, p.37).

Notice in the first definition, Denzin and Lincoln convey the changing nature of qualitative research inquiry from social construction, to interpretivist, and onto social justice (Creswell, 2007). It includes the traditional approaches such as the 'interpretive, naturalistic approach', and 'meanings'; as well as the impact of qualitative research and in transforming the world. In the second definition, Creswell, as an applied research methodologist, puts his emphasis on the process and the procedures of the research, and also noticed the impact of qualitative research and in transforming the world by emphasizing that *''the final written report of presentation includes the voice of participants, the reflexivity of the researcher, and a complex description and interpretation of the problems, and it extends the literature or signals a call for action ''* (Creswell, 2007, p.37).

According to the literature, there are some common characteristics of qualitative research: 1) Qualitative researchers tend to collect data in their natural context by talking directly to people and observing them behaves and acts within their natural setting. 2) Qualitative researchers are always acting as key instrument in terms of data collection, such as reviewing literature, doing observation, and interviewing participants. 3) Qualitative researchers tend to use multiple sources of data, such as interviews, observations, documents, instead of rely on a single data source. 4)

Qualitative researchers tend to make sense of their data by organizing them into categories or themes in an inductive process. 5) Qualitative process is always participant-centered. The meaning that the participants hold about the research problem is the focus, not the meaning that the researchers bring to the research or those from the literature. 6) The qualitative research plan cannot be tightly prescribed. The original research plan may be modified or changed during the fieldwork for many reasons. 7) In qualitative research, the research is making an interpretation of what he/she observed and understands. 8) Qualitative researcher often uses a lens to carry out their research. 9) The aim of qualitative researchers is to provide a comprehensive picture of the research problem or issue, and they tend to identify the complex interactions of factors in any situation instead of developing cause-and-effect relationships (Creswell, 2007).

4.3.2 Adoption of qualitative research method

The qualitative approach is adopted considering the nature and objectives of this research. According to Berg (2007), qualitative researchers tend to be interested in how people arrange themselves and their settings and how people make sense of their surroundings through symbols, rituals, social structures, social roles, and so on. Qualitative research provides a way to access unquantifiable facts about the people researchers are investigating. Qualitative researchers are able to share in the understandings and perceptions of others as well as to explore how people structure and give meaning to their lives and others, and how they make sense of themselves and others (Berg, 2007).

As discussed in previous chapters, the focus of this research is on the meanings and perceptions of PhD supervisor's role performance during supervisory activities. Research such as this is intended to understand individual beliefs and activities as they interrelate between the internal and external contexts, and the methodology suited to this kind of enquiry is predominately qualitative because interactions among people are difficult to capture with existing measures. Quantitative methods that

level all individuals to a statistical mean ignore the uniqueness of individuals; whereas interpretive qualitative methods focus on authentic and objective analysis of phenomena (Yin, 2003) to understand human action (Schwandt, 2000).

Also, PhD supervision is more private than any other scene of teaching and learning, and some of its areas have largely remained unscrutinised and unquestioned. Understanding the role of such fantasies is important in explaining the deep investments in, and attachments to, the existing structures and processes of PhD supervision. It has been argued that, in terms of PhD supervision studies, what continues to be missing from this body of research is an understanding of the "hows" and "whys" of the process with reference to the understanding of the epistemologies of the practice, while the later two are essential areas that provide details of the actual process, the richness of the experience, and the judgments made by the candidate and the supervisor during and after the supervision, and most importantly, their reasons behind their actions. And that is where the real research focus should be in order to answer some of the fundamental questions that have been rising for a long time.

The objective of the research is to provide accurate reviews and detailed descriptions which visualize the complex roles the supervisor displayed during supervisory activities. The qualitative research approach fits this research inquiry. As discussed in the previous chapter the qualitative research approach is grounded in a philosophical position that is broadly 'interpretivist' in terms of examining how the social world is interpreted, understood, experienced or produced (Mason, 1996). In this study, the researcher sought to acquire understandings of 'knowing how' and 'knowing why' in order to provide an accurate description and better understanding of the supervisory roles displayed during PhD supervision activities and the interactions between the PhD student and their supervisors. In total, 13 pairs of PhD students and their supervisors participated in this study; data is collected through individual IPR interviews and observation. Qualitative research is defined as a process of understanding a social or human problem by building a complex, holistic word-

picture, which reflecting detailed views of interviewees, and carried out in a natural setting (Creswell, 2007).

Qualitative research methods allow for the collection and analysis of extensive narrative data in order to gain insights into a situation of interest that is difficult or impossible by other type of method (Gay, 1996). In this study, a single site of case study approach was utilized with the experiences of multiple PhD students and their supervisors being examined. With interview questions ranging across many aspects of supervision practices and cross-linkage among them, participants were given opportunities to make connections among and between several aspects of supervision. This method is able to capture individual's typical ways of thinking and the interdependence between that thinking and ways of acting, which shed light on their individual learning and supervising style that need to be explored.

The key advantages of qualitative research are that it recognizes the subjective experience of participants (Langdridge, 2004); its data generation methods are flexible and sensitive to the natural social context in which the data are produced (Mason, 1996), and qualitative research more focus on holistic forms of analysis and explanation rather than trends, generalizable laws, and correlations. Qualitative research approach enables an 'insider' view on examined social world through an open-ended approach to research. It has been noticed that the qualitative research approach is sometimes criticized as not been appropriate or even possible to make generalizations or predictions, however as argued by social-constructivists, the main focus of qualitative methods is to understand and explain how social world is constructed, not to develop the general laws or correlations within it.

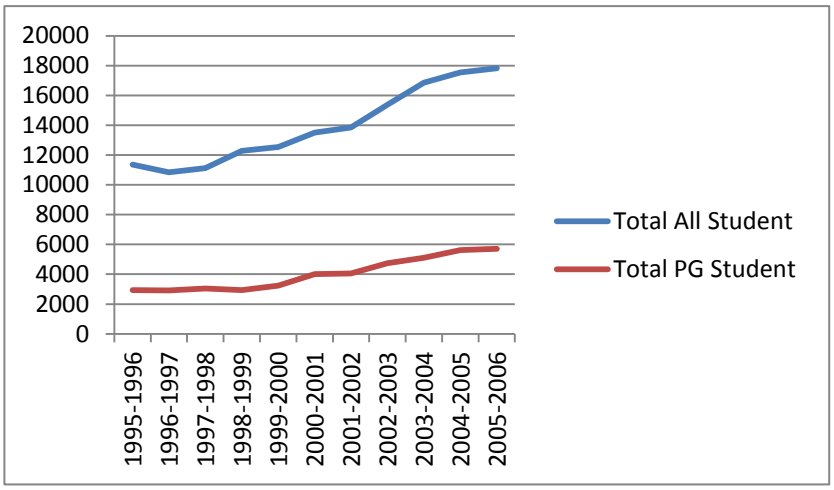
In conclusion, according to the aims and objectives of this research, it followed the holistic research approach, adopted qualitative research method by participant observation and semi-structured interviews with PhD students and supervisors. Loughborough University is used as the case study for this research. Following the award of its royal Charter in 1966, Loughborough University become one of the

leading higher education institutions in the UK with over 40 years development. It is one of the UK's largest single-site campuses, with over 177 hectares of land. The student population groups including 91% of UK/EU students, with 62% male students in total (University guide, 2008). 75% of Loughborough University subject areas were ranked in the top ten for overall satisfaction. With over 40 research centres and institutes and five interdisciplinary research schools, it is the UK's premier university for sport, and home to the ECB England national Cricket Academy and the LTA Tennis Academy. As a comprehensive university, there are twenty-one academic schools in Loughborough University (some of them are recently reformed): 1) the Department of Aeronautical and Automotive Engineering; 2) the School of the Arts; 3) the School of Business and Economics; 4) the Chemical Engineering Department; 5) the Department of Chemistry; 6) the School of Civil and Building Engineering; 7) the Department of Computer Science; 8) the Design School; 9) the school of Electronic, Electrical and Systems Engineering; 10) the Department of English and Drama; 11) the Department of Geography; 12) the Department of Information Science; 13) the Department of Materials; 14) the School of Mathematics; 15) the Mathematics Education Centre; 16) the School of Mechanical and Manufacturing Engineering; 17) the Department of Physics; 18) Politics, History & International Relations; 19) the Department of Social Sciences; 20) the School of Sport, Exercise and Health Sciences; and 21) teacher education unit.

One of the core values that characterise the university is its close relationship with industry and business (Cantor, 2006), which is described by the university's homepage as ''a reputation for excellence in teaching and research, strong links with business and industry''. The great emphasis placed on working with industry and business by Loughborough University is partly inherited from its forerunner, Loughborough Technical Institute. As it can be learned from its history, Loughborough University has a long tradition of working with industry and business, reflected by its widely applied principle ''Training on Production'' (Cantor, 2006) in its teaching and researching programmes; and the sandwich courses it provided to encourage students taking placement in business and industries which has been

undertaken by over 50% of its students (Cantor, 2006). At the same time, Loughborough University's strong links to industry and business are seen further developed in relation to transformations took place in higher education institutions during the 1960s to the 1990s. With the 'widening participation' programme, student numbers in Loughborough University have increased significantly (see figure 2.4.3-1) with new departments established, such as Economics, Education, Library Studies, and Information Sciences.

FIGURE 2.4.3-1 STUDENT POPULATION IN LOUGHBOROUGH UNIVERSITY FROM 1995-2006



(HESA, 2010)

The data collecting process was carefully constructed following the principle of Interpersonal Process Recall interviews (Elliot, 1984; 1986), which will be discussed in more detail later in this chapter. In summary, a qualitative approach could assist this study that put its focuses on exploring student participant's subjective experiences to highlight the supervisory role displayed in effective supervision interactions in its natural context.

4.4 Interpersonal Process Recall

4.4.1 Adoption of Interpersonal Process Recall

Interpersonal Process Recall (IPR) was adopted as a major research method for data collection in this study. It is widely accepted as a simple yet powerful research method in exploring valuable and unique perspective on individual interactions by using a tape/videotape recording of a conversation to stimulate the participants' recall of their experiences during the conversation.

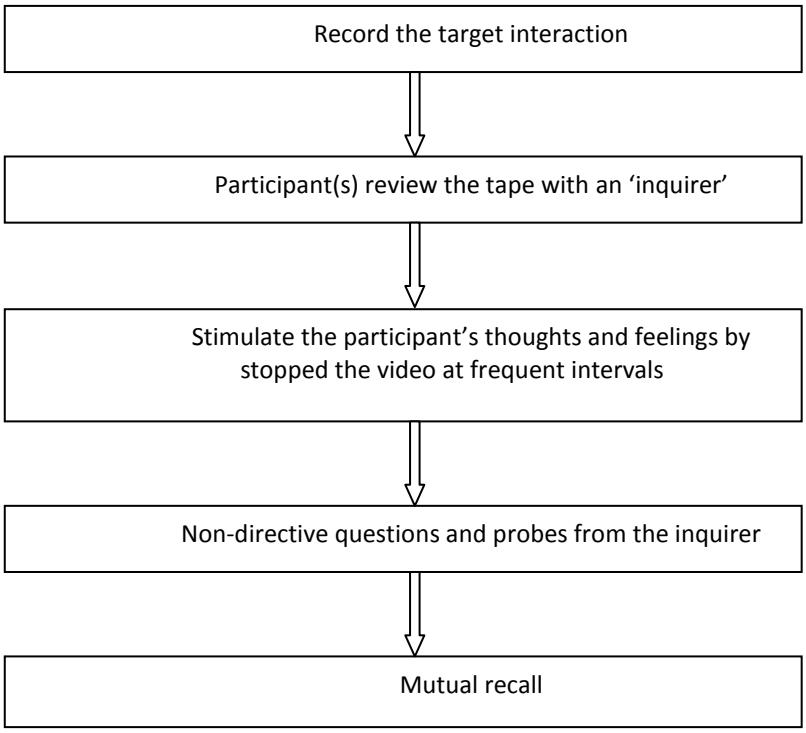
In the last two decades, the interest in the visual dimension of social life has rapidly increased (Spencer, 2011). The potential of visual methods to provide a deeper and more subtle exploration of social contexts and relationships is recognized, allowing people to see the everyday with new eyes (Spencer, 2011). Analogue technologies like audio recording, film, and traditional video have a long history of use in many areas of social and psychological research (Gibbs et al., 2002). Kanstrup (2002) suggest that methodologically, it can be difficult to understand work practices since parts of work practices may even be invisible at fist hand; the need for closer investigation has made researchers within work place studies turn to the use of visual technologies in data collection and analysis. In this connection, the use of video as a technology for data collection and analysis is often applied. While video should be broadly classified as a qualitative method, it can also be used to generate data for input into standard statistical packages. Video recording provided the raw input for later rating or coding by observers, which has crucial advantages over note-taking in the field. Audiovisual inscriptions of events can be reviewed by multiple observers that were not present when the events transpired. Even records maybe stored, re-analyzed, examined for inter-coder reliability and retrieved by future researchers.

As a visual method, Interpersonal Process Recall has a long history of use in educational research studies. Bloom had reported using audiotape recall methods to

study teacher-student interactions in 1954, which can be identified as an earlier form of 'interpersonal process recall' (Elliott, 1986). The phrase Interpersonal Process Recall was coined by Kagan in 1963 to describe the procedure of using videotape recall to stimulate the participants' recall of their experiences during the conversation (Elliott, 1986). IPR's main applications are in the training of clinical and counselling psychologists, and of medical students, and also as a tool for therapy process research. It also has the flexibility to be adapted to the needs of the particular training course or easily be combined with other types of instruction and supervision (Elliott, 1986). In this study, IPR was applied back to the educational field, where this method first being used, to analyse PhD supervisory activities and relationship by examining their moment-by-moment experiences.

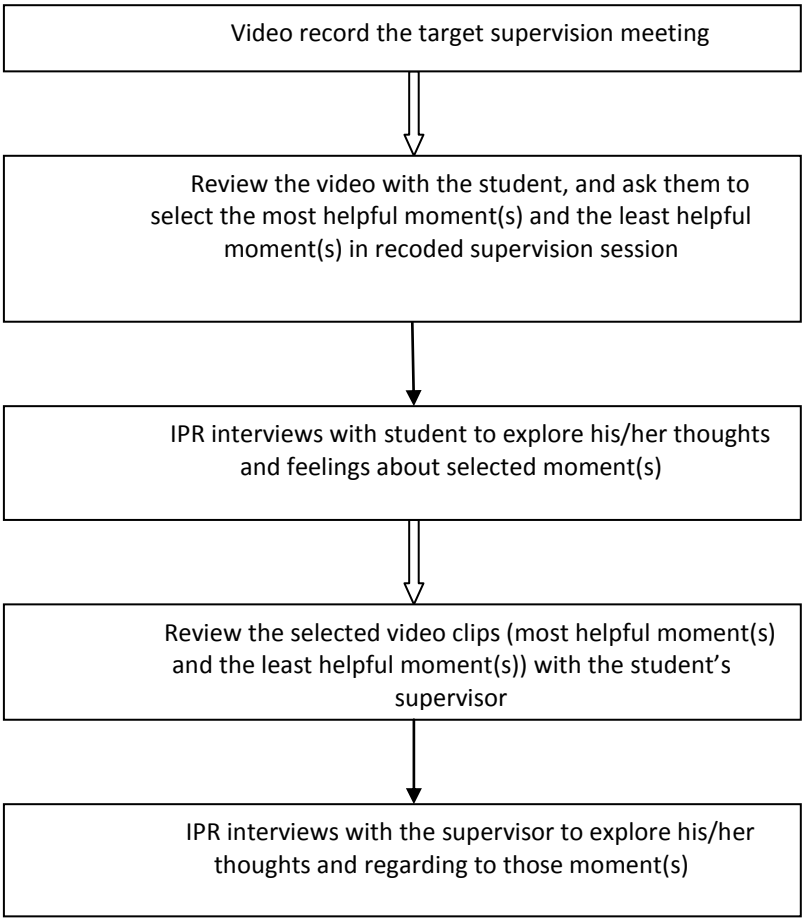
The basic procedure of IPR including video/tape recording the target interaction and the followed-up interview with one or more of the participants to review the tape with the aid of an trained 'inquirer' to stimulate the participants' recall of his/her moment by moment thoughts and feelings (Barker, 1985) (See figure 4.4.1). And in the full IPR procedure in the training of clinical and counselling psychologists, client and therapist also participate in mutual recall by reviewing the video together with an inquirer, and discuss their mutual therapeutic process (Baker, 1985).

Figure 4.4.1 -1 Basic procedure of IPR



According to the basic procedure of IPR, this research was conducted in a funnel-like process over three stages: moving from recording of complete supervision meetings, to examinations of the most and least helpful moments in the recorded meeting selected by students, to individual responses to each of these moments by supervisors (See Figure 4.4.1-2). The final aspect of the IPR model, mutual recall, was not used in this study.

Figure 4.4.1 -2 Procedure of IPR in this study



There is a major advantage of applying IPR for research: its ability to uncover important experiences that would otherwise be irretrievably lost. Also, there are two things to bear in mind: first, the followed-up interview should be taken as soon as possible afterwards for more effective results, for example within forty-eight hours (Barker, 1985; Elliott, 1986). Second, during the IPR interview, non-directive questions and probes should be used to facilitate accurate recall while minimizing sources of inaccuracy (Elliott, 1986).

4.4.2 Interpersonal Process Recall Interview

IPR Interviews play a central role in terms of data collection in this research. According to the literature, although new forms of qualitative data continually emerge over the years, all forms of information can be grouped into four big categories: observation, interviews, documents, and multi-media material (Creswell, 2007) (See Figure 4.4.2-1).

Figure 4.4.2-1 four categories of Data Collection Approaches in Qualitative Research

Observations

- *Gather field notes by conducting an observation as a participant or an observer.*
- *Gather field notes by spending more time as a participant or as an observer.*
- *Gather field notes first by observing as an 'outsider' and then by moving into the setting and observing as an 'insider'.*

Interviews

- *Conduct an unstructured, open-ended interview and take interview notes.*
- *Conduct an unstructured, open-ended interview, voice record the interview, and transcribe the interview.*
- *Conduct a semi-structured interview, voice record the interview, and transcribe the interview.*
- *Conduct a focus group interview, voice record the interview, and transcribe the interview.*
- *Conduct other different types of interviews by using email, on-line face-to-face, focus group, on-line focus group, telephone interviews, etc.*

Documents

- *Keep a journal during the research study.*
- *Have a participant keep a journal or diary during the research.*
- *Collect personal letters from participants.*
- *Analyze public documents.*
- *Examine autobiographies and biographies.*
- *Have informants take photos or videos.*
- *Conduct chart audits.*
- *Review medical records.*

Multi-media Materials

- *Examine physical trace evidence (e.g., footprints in the snow).*
- *Video record a social situation or an individual or group.*
- *Examine photographs or videos.*
- *Collect sounds (e.g., musical sounds, a child's laughter).*
- *Collect emails or electronic messages.*
- *Collect text messages.*
- *Examine possessions or ritual objectives.*

(Adopted from Creswell, 2007, p.130)

Among all these data collection forms, interview and observation are most frequently used in all five qualitative research approaches (Narrative research approach, Phenomenological approach, Grounded Theory, Ethnographic, and Case Study) (Creswell, 2007). Interviews are also suggested to be the most appropriate for research that focus on the meaning of particular phenomena to the participants; where individual perspectives within a social setting are to be examined prospectively; where quantitative studies have been carried out, and qualitative data are required to clarify and illustrate meanings of the findings (Robson, 2002).

For this particular research study, apart from multi-media materials (recorded videos), which is an essential part for IPR, interviews plays a central role in data collecting. Interviews offer the possibility of modifying the line of enquiry, following up interesting responses and investigating underlying motives in terms of analyzing PhD supervisory activities, in a way that self-administered questionnaires cannot. Other forms of data used in this research (such as participant observation, reflection, and memo writing) play a secondary role to interviewing in this study, are also of great help in terms of providing valuable information.

Most of the IPR interviews with all 26 individual participants lasted approximately from 30 to 80 minutes. The majority of data were collected through in-depth, semi-structured IPR interviews in order to uncover participants' thoughts and feelings about the approaches and structures of the supervision they received in their own words. Semi-structured IPR interviews were used instead of unstructured and structured interviews in order to get the most useful information to answer the research questions. It can cover key topics without the constrained the respondents by fixed answers like the structured interviews do. And unlike the unstructured interviews that are unsystematic and difficult to analyze, usually responses from semi-structured interviews can still be compared easily. As a flexible method, interviews can generate large amounts of information quickly and immediate clarification when necessary. Open-ended questions also give participants the opportunity to speak out their feelings and experiences, if not covered. Qualitative interviews also provide the opportunity to follow up new topics or interesting ideas

which was not previously anticipated (Murphy et al., 1998). In this study, the researcher produced a list of issues to raise, if the participants did not bring them up, and this was added to as the study progressed.

There are challenges in qualitative interviews which also need to be mentioned. 1) Getting access to the field is essential. This step could be very difficult for some research that focus on sensitive subjects; it might take more effect and much longer time to find an 'insider' and get access to the research field. 2) Recruiting participants. A low positive response rate is not unusual. Different approaches need to be tried into order to find the one that works for the particular target group. In this study for example, the researcher first used a 'bottom-up' approach to recruit participants: the PhD students were contacted first and if the student agreed to participant, their supervisors were then contacted. It appeared be an ineffective way to approach the target group since the supervisor is the one with more power in their relationship, and they are more likely to say 'no' if they cannot make it or do not want to participant, even if the students showed an interests in participating. According to the research result, a reverse 'top-down' approach appeared to be highly effective in terms of positive response rates. 3) Cooperation from the participants. Participants may be uncomfortable with areas the interviewers wish to explore. In this case, the interviewer needs to carefully encourage participants to talk. For one-to-one interviewing, researcher needs individuals who are not hesitant to speak and share ideas. The less articulate, shy interviewee may present the researcher as a challenge instead of adequate data (Creswell, 2007). Also, the interviewer need to monitor individuals who may dominate the conversation, especially when the interviewees are PhD supervisors, making sure the interview is stay to the research questions. 4) Time management. Complete the interview within the time specified if possible, and be respectful and courteous and offer few questions and advice at the end. Since it is a reminder of how a good interviewer is a good listener rather than a frequent speaker during the interview (Creswell, 2007). Finally, 5) Participants may not be honest and data can be time-consuming to analyze.

The following sections of this chapter elaborate the methodology detailing each stage of the research in turn (IPR interviews with PhD students, questionnaires with PhD students, IPR interviews with PhD supervisors and questionnaires with PhD supervisors), and includes discussion of access and selection issues, problems during the data collection process, and a summary of data collected. The target populations for all stages of the study were Social Sciences PhD students and their supervisors. Following this there is a description of the data analysis method and qualitative data analysis software employed, as well as concerns and an evaluation of the research.

4.5 Recruiting participants and Collecting Data

This study was conducted in three stages: moving from recording of complete supervision meetings, to examinations of the most and least helpful moments in the supervision meeting selected by students, to individual responses to each of these moments made by supervisors. Equipment used for this research including a hard-drive digital camera and a digital voice recorder.

My data consists of approximately 19 hours of recorded supervision meetings, 15 hours of IPR interviews with PhD students and 12 hours of IPR interviews with PhD supervisors.

4.5.1 Pre-stage and access

As preparation for fieldwork, PhD students' social group, department seminars, conferences, and Professional Development Training Courses (PGTC) were attended in Loughborough University in order to meet other PhD students.. About 20 of these classes were attended, and I managed to talk to a large number of PhD students from all departments, and most of them were quite happy to talk about their supervisor. Most of the conversations started with talking about supervision experiences very naturally by themselves. A contact book was created for potential informants.

Then the research method was tested through pilot research and modified considering enquires of both research questions and practical issues occurred. Two supervision sessions, role-played by two PhD students, were recorded as a tester, and followed by IPR interviews with both the 'student' and then the 'supervisor'. The main purpose of doing this role-playing was to decide the analyze procedure of observational data.

According to the literature, there are three types of video-recall procedures have been commonly used: the continuous video-recall; the semi-structured video-recall; and the code-specific video-recall (Welsh & Dickson, 2005). These types vary on a variety of domains, continuous video-recall procedures are used primarily by material researchers, involve asking participants to provide continuous ratings of a single, general affective dimensions, usually positive-negative, when reviewing their conversation (Powers et al 1994; Schulz & Waldinger, 2004). Semi-structured video-recall procedures allow the participants to pause the recording at set intervals and having participants explain in their own words what they were thinking, feeling, or doing at that time (Welsh & Dickson, 2005). Code-specific video-recall procedures also involves pausing recording at set intervals, but for the segment, participants separately rate their subjective understanding of their partner(s) on a variety of specific codes that are previously selected by the researchers on the basis of the theoretical models according to their research questions (Galliher et al., 2004; Powers et al., 1994).

4.5.2 Pilot Study

In the first set of role-play, the code-specific video-recall procedure was employed. The recording was cut into different segments by the researcher on the basis of the ***Competing Values Framework (CVF)*** pertaining to the research questions (Quinn et al., 2007)**.** Participants separately talked about their subjective understanding of their own interactions and the interactions of their partner(s) while watching these

segments. The advantage of this procedure is that it helps to obtain more precise information towards the designed research target, such as different roles performed by the supervisor. However it has two major practical problems: the video segments chosen by the researcher limit the research findings as they were chosen from the researcher's perspective instead of the participants'; second, it involves the greatest amount of participants' time.

Then a second set of role-play was carried out in a blend of continuous and code-specific types of video-recall procedure. It proved to be more suitable for this research due to its time efficiency for participants, and clear targeted but less limitation on the participants side (Schulz & Waldinger, 2004), in terms of finding out what the students' opinions about different roles performed by the supervisor and how do they interacted. In the IPR interviews, student participants were asked to choose the most and least helpful moment(s) in the recorded supervision session by pausing the video, and after each clips, he/she was asked to explain in his/her own words the reason of choosing it. And then, the recording was cut into different video clips according to the student's interview in terms of the most helpful moment (s) and the least helpful moment(s). Finally, these video clips were shown to the supervisor and asked why she made the response (Elliott, 1986; West and Clark, 2004).

The Reasons for doing this role-playing were to refine the interview questions and the procedures further through pilot testing, as well as to decide the way of editing the video. It can be learned from the literature that pilot testing is recommended by researchers in order to refine and develop research instruments, assess the degrees of observer bias, frame questions, collect background information, adapt research procedures, refine data collection plans and develop relevant lines of questions such (Sampson,2004; Yin,2003). The other reason for using a pilot test is decide how to edit the video. According to previous research, the length of the segments varies from 5 seconds to 2 minutes. Halford & Sanders (1990) reported experimentally testing different segment lengths and found that intervals less than 20 seconds produced redundancy in reporting, such as insignificant additional information

obtained (Welsh & Dickson, 2005). Therefore, in this research, each video clips lasts roughly from 50 seconds to 3 minutes, by adding 10-20 seconds prior and after the selected moment by the student participant to make sure the supervisor can recall the context of each video clip when reviewing them individually.

4.5.3 Field work stage one: access and selection

Fieldwork documents were prepared before data collection, including invitation letter, consent form (see Appendix 1), and the timer form was developed during the data colleting process. Data were from different department in Loughborough University, under the category of Social Sciences.

The target population was social sciences and humanities disciplines' PhD students and their supervisors at Loughborough University where the research was carried out during March 2010. This study put its focus on social science PhD students and doctoral supervision they received for three reasons, apart from those two reasons explained in Chapter one -- social science and humanities disciplines completion rates were compared unfavourably to those of the natural sciences and engineering (Hockey, 1995; Winfield, 1987); and compared to students in natural sciences and engineering, PhD students in social sciences represent a lower satisfaction rates about the supervision they received (Cullen et al., 1994; Hockey, 1995, 1997). There was also a more practical consideration for doing this: supervision meetings in social sciences and humanities disciplines department are more likely to be able to be recorded in their natural settings because they are usually formal and scheduled. While in natural sciences department, it is very difficult to capture supervision meetings in their natural environment because most of them are unplanned. Like most of my Natural Sciences interviewees said during the pre-stage open interviews, they talk to the supervisor nearly every day, maybe just a quick chat round the corner or in the coffee area about the progress of their project. What happen in their department are more like, whenever there is an error occurs during experiments, they just go and knock the door, talk to their supervisor, fix the problem and go back

to carry on the experiment. This has been also been proved by previous literature as explained in Chapter 1.

Nine faculties of *Social Sciences and Humanities* in Loughborough University were selected in order to represent a good range of configurations in ethnicity and research disciplinary culture. These faculties were: Geography, English & Drama, Design & Technology, Politics & International Relationships, Art & Design, Sport & Exercise Sciences, Social Sciences, and Business School (listed in the contact order). The only social sciences faculty not selected was the teacher education unit because they mainly provide PGCE courses and there is generally no PhD supervision involved.

In terms of recruiting participants, PhD students were invited first. As mentioned in the pre-stage, 20 PhD students from different workshops were invited. Apart from this, approximately 30 invitation emails were sent out to all these potential informants. The invitation emails explained the role of the research; the objective of the research; the purpose of the interview; and a summary of what would be included; and to what extent participants' anonymity and confidentiality would be guaranteed (Weiss, 1994). Invitation emails were chosen over phone call invitations because emails can offer participants the opportunity to reflect on the information they have about the research and make an informed decision about if they want to take part in the study. Compared to approaching potential participants in person, it might be difficult for them to refuse (Oliver, 2003).

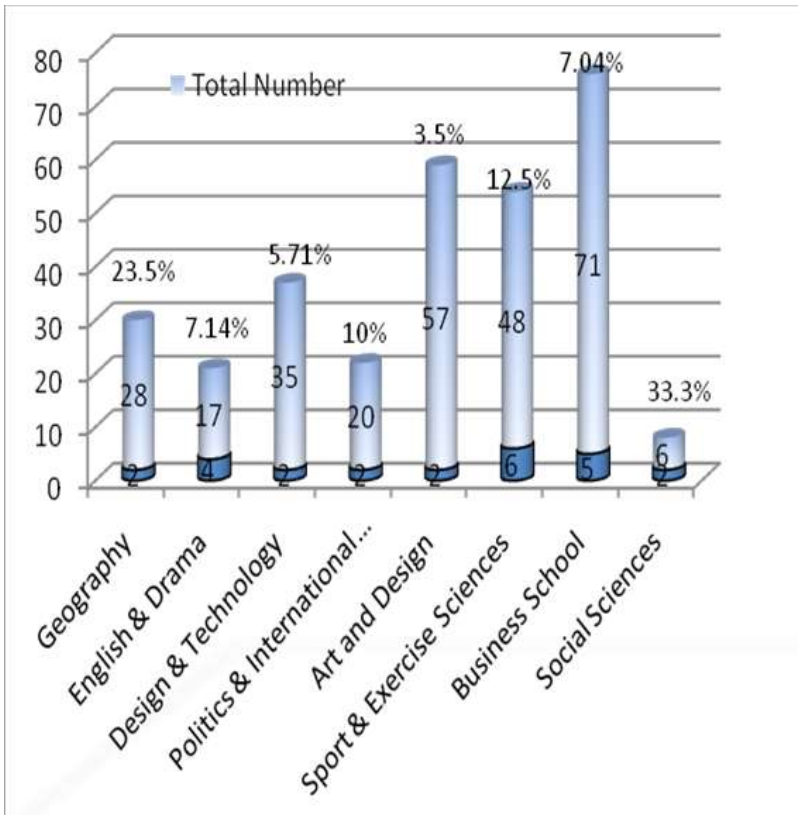
With 50 invitation emails sent out, 12 positive feedbacks were received. And then another form of invitation emails for these students' supervisors was sent out with the student's permission to invite the supervisor to participate in the study. However, the positive response rate appeared to be really low: only 2 supervisors agreed to take part, bring a total response rate to less than 4 per cent.

The reason for this low responding rate is because this kind of 'bottom-up' approach did not work in this particular case. As discussed before, supervisors are generally in a higher power position in the supervisory relationship, they are the one

with more powers and they usually have a tighter schedule than students. So they are more likely to say 'no' if their timetable seems tight or they don't feel comfortable to take part, even if the students showed interests in participating. Bearing this in mind, a reverse 'top-down' approach was applied.

Participants were then invited by contacting the supervisors first. Staff contact lists were made for the following departments: Geography, English & Drama, Design & Technology, Politics & International Relationships, Art and Design, Sport & Exercise Sciences, and Business School (listed in the contact order). This 'top-down' method proved to be more effective: with a total number of 307 supervisors been contacted, the number of positive response from the supervisor was 25, which makes the overall positive response rate 8.1 per cent (See Table 4.5.3-1).

Table 4.5.3-1 Responses Rates from Each Department



And in those negative responses received, following explanations were given for not taking part in the study: a) not supervising at the moment; b) retired or leaving the university soon; c) not on campus at the moment; d) busy; e) student don't want to participate; f) don't want to be video-recorded; g) no particular reason was given.

It took about 10 month to have all the agreed participants interviewed, due to university holidays in between. In total, 14 supervision meetings were recorded, and the meeting last from 30 to 130 minutes, on an average of 70 minutes. With the total number of 26 participants, 21 of them are British, 5 of them are from other countries including 3 students and 2 supervisors. 20 of the participants are male, and 6 are female (See Table 5.2-1).

Table 5.2-1 Description of Participants

Department	Participant	Nationality		Gender	
		Supervisor	Student	Supervisor	Student
Arts	2	1 British	1 British	1 Male	1 Male
Business and Economics	6	2 British 1International	3 British	3 Male	2 Male 1 Female
Design	4	2 British	1 British 1International	1 Male 1 Female	2 Male
English and Drama	4	2 British	2 British	2 Male	1 Male 1 Female
Social Sciences	4	2 British	1 British 1 Internationa	2 Male	2 Male
Sport, Exercise and Health Sciences	6	2 British 1 International	2 British 1 Internationa	2 Male 1 Female	1 Male 2 Female

4.5.4 Field work stage two: PhD students' IPR interviews

Interpersonal Process Recall (IPR) interviews were conducted with the student after recording the supervision meeting during his/her earliest available appointment shortly after; responding to the recommendation that IPR interview works most

effectively with forty-eight hours after the recorded activity (Barker, 1985; Elliott, 1986). Five of the IPR interviews with PhD students were managed to be conducted straight after their supervision meetings, and other Six of the IPR interviews with students were conducted within 48 hours. The rest were interviewed within 3-5 days after the meeting.

Interviews were conducted using a semi-structured interview guide and digital recorder because note-taking alone tend to simplify and flatten respondents' speech patterns, and content is likely to be lost if the participants speaks quickly (see Figure 4.5.4-1). It also has the potential to interfere or inhibit interview proceedings (Marshall & Rossman, 1989). The use of a semi-structured interview guide for the IPR interviews meant that key issues identified by the researchers can be explored, and at the same time interviewees could define issues according to their own experiences and understandings. As Oliver (2003) points out, one of the primary aims of the interview is to map out the issues the interviewee defines as important. According to previous research applying IPR method, in this study the PhD student was also asked to select 'the most helpful' and 'the least helpful' moment within the supervision session while watching the video and invited to give as full an account of the experience as possible. This interview was audio recorded. The figure below provides a summary and rationale for each of the interview topics, which was partly adopted from phase one of the ESRC funded research.

Figure 4.5.4-1 PhD students interview guide

Questions	Purpose
A. Introduction	To introduce the researcher and the purpose of the interview. Assure the interview of anonymity and right to withdraw from research. Request permission to record the interview. Offer opportunity for interviewee to ask any questions.
B. Background	Biographical information collected as comparators.
C. Pathway to PhD decisions	To examine motivations for choosing to do the PhD.
D. Supervision Experiences	To explore the PhD supervision relationship and supervisory activities, and how students experience this.
E. Open-ended questions	These questions concluded the interview and aimed to allow respondents to express any additional comments on research question.

In total, there are 82 'most helpful' moments obtained from the student (see Figure 4.5.4-2). The Producer and the Coordinator are the most represented among the eight roles: 12 out of 13 PhD students' selections of 'the most helpful moments' include moments when his/her supervisor operating the Producer/the Coordinator role. The Director and the Monitor were both represented by 11 students' selections, followed by the Facilitator role, which is represented by 9 students' selections. 8 out of 12 students believe that, the most helpful moment(s) of their supervision meeting is/are when the supervisor performs as a broker/mentor. The Innovator role is the least mentioned, only three students claim that they found it to be one of the most helpful moments when the supervisor was delivering the innovator role.

Figure 4.5.4-2 The overall helpful and unhelpful moments selected by students

Group	No. of the most helpful moments selected	No. of the least helpful moments selected
Group 1	9	0
Group 2	4	1
Group 3	9	1
Group 4	4	6
Group 5	6	1
Group 6	6	2
Group 7	4	1
Group 8	7	2
Group 9	5	0
Group 10	9	0
Group 11	5	2
Group 12	8	1
Group 13	6	3

On the other hand, there are 20 least helpful moments obtained from the participant (see Figure 4.5.4-2). The Director is the most selected role among the eight roles: 6 out of 13 PhD students' selections of 'the least helpful moments' included moments when his/her supervisor failed to operate the Director role appropriately. The Monitor and the Mentor role were represented in 3 students' selections, followed by the Coordinator and the Broker role, each was selected by 2 students. The Innovator, the Producer, and the Facilitator role are the least mentioned.

During the first IPR interview with PhD student, the following problem was noticed: while the student was reviewing the recorded supervision meeting video, only the

most helpful moments were noted, and the least helpful parts were ignored. And he had to repeat the process by watching the video twice to write down both the most helpful and the least helpful moments. In order to avoid this problem from happening in the later interviews, a *timer form* was developed to assist student with IPR interview (a copy of this timer form has been included in the appendix). This form not only helps to consistently remind the interviewees of the tasks they were asked to do -- to choose the most helpful and least helpful (moments), but also appeared to be useful in helping student participants to organize their thoughts and ideas by filling the form. Their answers were more structured compared to the first student who did not have a timer form. Finally, it was proved to be of great help for the interviewer when editing the video during the next stage. According to the students' timer form which proves a 'start time' and 'end time' for each selected moment; it saves a great amount of time for the interviewer in cutting the accurate video clips for the IPR interviews for supervisors.

4.5.5 Field work stage three: PhD supervisors' IPR interviews

In this stage, the recorded supervision session was edited into segments according to student's selections of 'the most helpful' and 'the least helpful' moments during that session. IPR interviews were then carried out with the individual PhD supervisor, which involved playing back the selected segments of the -recorded supervision meeting to the supervisor and ask questions including: why do they make such response, what they were trying to do with these responses and what effect they might have had, regarding to selected video clips. Open-ended questions were also included to allow supervisors to speak out any additional comments on related issues. Interviews with supervisors were also semi-structured with the purpose of encouraging participants to provide as much information as possible. A copy of the interview guide for PhD supervisor can be found in figure 4.5.5-1. With agreement of the participants, all interviews were voice-recorded.

For those IPR interviews with supervisors that were conducted 48 hours after the actual supervision meeting, the original full video of supervision meeting was reviewed by the researcher before the interview. A quick review of the last supervision meeting was provided in order to refresh their memory before showing the interviewees edited video segments.

Figure 4.5.5-1 PhD supervisors interview guide

Questions	Purpose
A. Introduction	To introduce the researcher and the purpose of the interview. Assure the interview of anonymity and right to withdraw from research. Request permission to record the interview. Offer opportunity for interviewee to ask any questions.
B. Regarding student selected video clips (the most and least helpful moments)	To find out why the supervisor make these responses in the video and what effect they might have had.
C. Open-ended questions	To allow respondents to express any additional comments on related issues.

4.6 Data Analysis

In general, data analysis means a search for patterns in data –recurrent behaviors, objects, phases, or ideas. Once a pattern is identified, it is interpreted in terms of a social theory or the setting in which it occurred (Neuman, 2006). The qualitative research move from the description of a historical event or social setting to a more general interpretation by examining, sorting, categorizing, evaluating, comparing, synthesizing, and contemplating the coded data as well as reviewing the raw and recorded data (Neuman, 2006).

Qualitative data can take multiple forms in various stages of research, and they generally are in the form of text, written words, phrases, or symbols describing or representing people, activities, or events in social life. Compared to the analysis of quantitative data, approaches for analyzing qualitative data are more diverse, less standardized or explicitly outlined by researchers (Neuman, 2006).

4.6.1 Organizing and transcribing data

Initial preparation of the data for analysis involves organizing and transcribing the vast amount of information, and transferring it from spoken and written words to a typed file, which can be analyzed by hand or computer. In this research, all the data were organized into computer file folders according to their group number (from group one to group thirteen) (see Appendix 2). Each group folder including three sub-folders named 'video', 'audio' and 'transcript'. The video folder includes the complete video-recorded supervision meeting and edited video clips; the audio folder contains the voice recorded student and supervisor's IPR interview; and the transcript folder has transcriptions of these interviews. By organizing data this way, the researcher was able to locate a specific piece of information (such as an expression, or a sentence) in its original data context when needed. The thirteen groups' data folders were saved and a back-up copy was made in a separate hard drive. After all the data were transcribed, another separate transcription folder that contains all these twenty-six transcriptions was created for the use of NVivo.

As a process of converting audiotape recording and field notes into text data, transcription is labor-intensive. All the interviews' records were transcribed by the researcher, with adequate time devoted. Each one hour of tape takes approximately four to five hours to transcribe, similar to what was suggested by Creswell (Creswell, 2005). Initially, very basic transcripts were produced first, presenting only the actual words each participant said which provide the researcher the basic context of the interaction. After the initial transcripts were created, I listened to the recorded interviews again to correct errors, and added more detailed information to the

original transcripts mainly including: noticeable lengthy pauses, false starts, laughing, etc., and overlapping speech. Although the transcripts of my data are meant to be analyzed primarily for what is said, rather than how it is said, the purpose of adding detailed features is to help the researcher to recall the original flow of the discussion which helps to speed up the analyze process. The transcription notation conversions used in this thesis is adopted from Poland's (2001) instructions for transcribers. For example, a series of dots (…) is used to denote short pauses during the conversation and the length of which reflecting the amount of time elapsed; and over-lapping speech is indicated with a hyphen. A small paragraph of my transcription of the data is provided to illustrate the difference between the original version of transactions and the version followed Poland's instructions.

Example of original transcription

R: Is this part of the PhD project?

S: It's, I guess it is something outside of the actual PhD. It's an opportunity to write something, to co-author something together within our research area. So I just literally feeding back on the outline she put together.

R: Why did you make the response in this video clip?

S: That is my very thinking mode at that stage. I kind of reflected as a participant about whether a 'yes' or 'no' answer will actually be accurate enough in terms of getting valid information from the coach compare to providing some sort of scales for response in terms of knowledge, sports psychology, and use of sports psychology.

The same example transcribed following Poland's instructions

R: Is this part of the PhD project?

S: It's… I guess it is …….. Something outside of the actual PhD. It is an opportunity to write something….. to co-author something together within our research area. Hmm, so … would… just… literally feeding back on the outline she put together.

R: why did you make the response in this video clip?

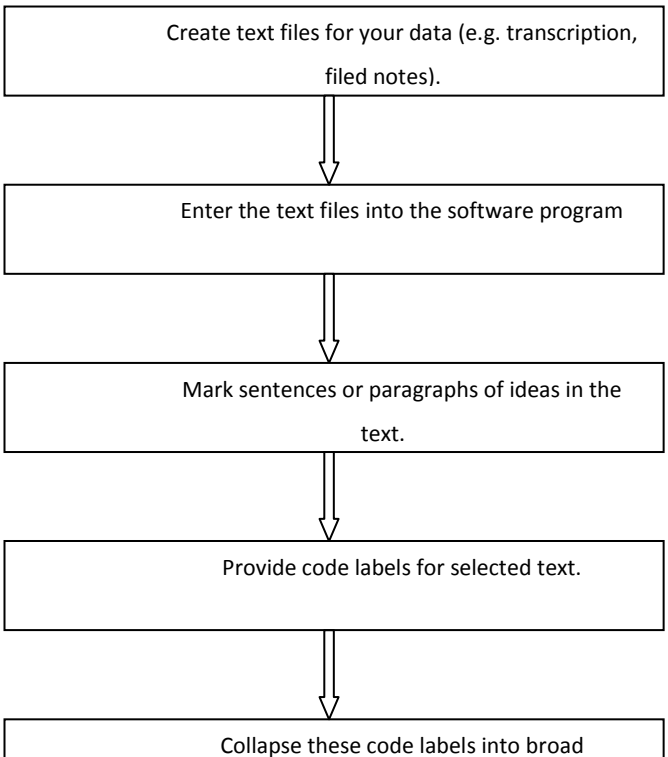
S: I mean…….(laugh)….that is my very thinking mode at that stage….(laugh). I kind of reflected as a participant about whether a 'yes' or 'no' answer will actually be accurate…... enough in terms of getting valid information from the coach compare to providing some sort of scales for response in terms of knowledge, sports psychology, and use of sports psychology.

All the data were transcribed verbatim and anonymised, before being analyzed with the computer software NVivo.

4.6.2 NVivo

NVivo was used to employ an approach informed by Grounded Theory, searching for meaning in the data and generating theory from rich, detailed descriptions in the interview transcriptions. It can be used for storing data, organizing data, assigning labels or codes to the data, and searching through the data and locating specific text or words. The general procedures for using qualitative analysis software program including five steps (see Figure 4.6.2-1).

Figure 4.6.2-1 Procedures for using software programs



(Creswell, 2005)

The qualitative data analysis computer program NVivo was used to facilitate the analysis procedure by storing and sorting the data. According to the literature, the computer program was chosen over the traditional hand analysis for this study because: it involves a relatively large database, and need to organize and keep track of large amount of multi-media information (video recordings for supervision meetings, voce recordings for students and supervisors IPR interviews, and field notes). And close inspections of every word and sentence to capture specific quotes or meanings of passages were needed (Creswell, 2005). Comparatively, the more traditional hand analysis, normally involves using color-coding to mark parts of the text or cutting and pasting text sentences onto cards, would be preferred by other researchers who are dealing with small database, or not comfortable using computer.

There were critiques of qualitative data analysis software suggesting that use of software sacrifices closeness to data as a result of poor screen display, segmentation of text and loss of context, and therefore risked alienation from their data; while the traditional hand analysis enables a closer relationship to the data as well as a hands-on feel for it (Creswell, 2005). The alternative argument is that researchers need the combination of both closeness and distance and the ability to switch between the two (Bazeley, 2007). For researchers, closeness is required for familiarity and appreciation of subtle, while distance is also needed for abstraction and synthesis. And recent software has been designed for this purpose: closeness was improved by ‘‘*improved screen display, rapid access to data through documents or retrieval of coded text, identification of data in relation to source characteristics, and easy ability to view retrieved segments of text in their original context*’’ (Bazeley, 2007, p8). And distance was provided by ‘‘*tools for modeling ideas, for interrogating the database to generate and test theory, for summarizing results*’’ (Bazeley, 2007, p8). By moving

between these tools, researchers are able to move easily from the general to the specific as well as from the specific to the general, and exploring both inside and outside perspectives, back and forth, which is characteristic of qualitative methods and assist produce of sophisticated analysis result (Bazeley, 2007).

4.6.3 Template analysis

Template analysis (King, 1998) is used to analyze data obtained from the semi-structured IPR interviews, where accounts are structured around main themes with illustrations from the text.

Template analysis is a widely used approach in qualitative research, and it has also been referred to as 'codebook analysis' or 'thematic coding' (King, 1998). It refers to a varied but related group of techniques for themaically organizing and analyzing textual data (King, 2004) instead of a single, clearly delineated method. The essential part of this approach is to produce a list of codes or template, representing themes identified in the textual data, adjustments can be made by the researcher when necessary during his/her interpretation of the texts.

Template analysis can be considered as occupying a place between content analysis whereby codes are predetermined and analyzed statistically, and grounded theory where there is no prior determination of codes (King, 2004). Unlike content analysis where the researcher first constructs a coding scheme, and applies it to the texts to generate quantitative data for analysis, in qualitative template analysis, the initial template/a list of codes is applied to assist analyzing the text through the process of coding, and itself revised in the light of the ongoing process. Compared to grounded theory, template analysis shares similarities with it as well in terms of common themes are extracted from the data, which are then interpreted by the researcher, to provide an understanding of the accounts given by participants. Template analysis generally focuses on description rather than synthesis. According to King (1998) most templates comprise between two and four levels of codes, because if templates are

too complex, they could lead to o a lack of clarity in the analysis (King, 1998). Templates consist of codes that are hierarchically organized and related to themes in the data, while the highest level codes are the broad themes, and the lower lever codes are more narrowly focused themes that appear under the higher level codes. It is not required that all codes emerge in each and every transcript, they are open to modification or deletion during the interpretation, until the researcher has a full description of the data (Slade, Haywood & King, 2009).

Template analysis is adopted for this research for two reasons: first, it is flexible in terms of using pre-defined themes (King, 2004; Slade, Haywood & King, 2009). In this research, in order to create a collective profile that represents the most effective PhD supervision style that can be better understood and explained by applying organizational culture theories and management theories, all selected supervision activities need to be visualized in terms of the managerial roles they represented. In order to achieve this objective, each target activity needs to be analyzed and identified as what kind of managerial role it represents, according to its functions and means-ends assumptions. Therefore, the same *a priori* provisional template for the most helpful moments in supervision meetings was utilized following King's method (King, 1998), and in keeping with the specific aims of this research. The full template includes eight high-level codes, adopted from the eight managerial roles (the Mentor, the Facilitator, the Monitor, the Coordinator, the Director, the Producer, the Broker, and the Innovator), which forms the same initial basis for both the most helpful and the least helpful moments. Also adopted from the CVF, the lower-level codes include the twenty-four competencies that covered all functions required for any managerial leader, according to the literature (Quinn, et al., 2007).

The second reason for using template analysis is because it allows the researcher to make adjustments during his/her interpretation of the data in terms of adding new codes as well as deleting irrelevant ones during the process (King, 2004; Slade, Haywood & King, 2009). In analyzing 'the most helpful moments' in supervision meetings, by adopting the eight managerial roles and twenty four competencies from CVF, the researcher provisionally defined a template in advance that explores certain

more clear-cut areas in the supervision interactions. During the interpretation process, the lower-level codes were modified during the analysis process in terms of reducing the total number from twenty-four to twenty-one since three of the competencies in the original list proved to be irrelevant to the text data in this research.

A similar template is used in analyzing 'the least helpful moments' in supervision meetings, as well as participants' advices for further improvements. In the ''least helpful moments'' analysis, the template used comprises only one level of codes, the eight managerial roles adopted from CVF.

In analyzing participants' comments on 'further improvement', the template also has one level of codes, the eight managerial roles adopted from the CVF. During the interpretation of student participants' data of 'further improvement', the predefined codes are adjusted by reducing the number of roles from eight to two; as well as adding one more role to the original list, which is the Reflector role. The reflector role emerged from the student participants' data and is highly valued by some of the PhD students; therefore, it is added to the original list as an addition to the eight CVF roles. The template for analyzing PhD supervisor participants' comments on further improvement is also adjusted during the process by deleting five roles that show no direct relevant.

Template analysis is a great approach for qualitative research for several advantages it has. It is a highly flexible method that can be modified and adjusted to meet the requirements of any research, and it is also of great help in terms of providing the research with a clear and well-structured approach to analyze the data (King, 1998). In terms of disadvantages, there is relatively less literature on template analysis compared to grounded theory or content analysis. Researchers could be left uncertain about the analysis approach he/she is going to use.

Like in most of the qualitative research, there is a tension between ''remain open'' and ''to be structured'' in template analysis as well. During the interpretation of the

data, too much openness will result in a chaotic and incoherent product, while too much structure could leave the qualitative researchers with ‘‘all the drawbacks of quantitative research but none of its advantages’’ (King, 1998, p 133).

Therefore, the method applied in this research is based on King’s original approach, and it is slightly different in terms of coding every interview transcription received from the field work, in order to remain open and allow codes to emerge; while King’s original approach is to ‘fit’ data into a pre-existing template. By doing so, it can not only overcome the downside of King’s original method because the pre-existing template ‘‘may have been developed using transcript(s) that was idiosyncratic in nature’’ (Slade, Haywood & King, 2009, p 131); but also balanced the need to be open as well as to be structured.

4.7 Ethical Considerations

Here I will discuss various ethical considerations that I had to take into account before allowing my research to go further. According to the British Psychological Society Code of Ethics and Conduct (2009), three major ethical issues are discussed in relation to my thesis, they are: respect, responsibility, and integrity. Those ethical issues are discussed individually in three separate sessions, and the ethical codes provided by the BPS regarding to these issues are provided at the beginning of each session, which is used as instructions for the discussion.

Ethics, defined as the science of morals or rules of behavior, were addressed using the The British Psychological Society Code of Ethics and Conduct (2009), as well as current debate by many scholars. As Berg (2007) said, since social scientists ‘delve’ into the lives of other people, they have an ethical obligation to their colleagues, their participants, the academic world, and society in general. Anderson (1990) also points out that, all educational researchers need to consider ethical issues carefully in order to minimized the potential harm to participants as well as maximizes the quality of

research. This is especially relevant to those engaging in qualitative, interpretative, and longitudinal research designs, as well as those falls within the tradition of ethnography. In these cases the researchers' lives are closely linked with field experience that 'each interaction may involve moral choices' (Todlock, 2010).

Conducting a qualitative research study that involves direct interactions with participants had a consequence in some uncertainty over ethical standards, and hence the impossibility of establishing a pre-designed set of rules applicable to each specific issue. For this reason, on the one hand, general guidelines from the British Psychological Society's Code of Ethics and Conduct (2009) were closely followed in this research, including informed consent and respect for people; on the other hand, since there is no ethical guideline could be absolute (see Cohen & Manion, 1994), and therefore the researcher remained ethically sensitive to the various events and contexts of the research process.

4.7.1 Respect

''*Psychologists must value the dignity and worth of all persons, with sensitivity to the dynamics of perceived authority of influence over clients, and with particular regard to people's rights including those of privacy and self-determination*'' (The British Psychological Society Code of Ethics and Conduct, 2009, p 10).

- ***Informed consent***: The BPS (2009) states that psychologists should '*seek to obtain the informed consent of all clients to whom professional services or research participation are offered, and keep adequate records of when, how and from whom consent was obtained*'. Typically, consent is ensured in writing through informed consent slips, which contain a written statement of potential risk and benefit. This ensures that the participants are knowingly involved in the research and do so of their own choice.

In this study, both the supervisor and student participants were first contacted via email. For some of the supervisor participants who showed interests and want to talk to the researcher in person about the details of the research, individual meetings were organized. At the first meeting with the potential cohort, the paper work which detailed the research in terms of aims, design, methods, types of data, sample needed, time involved and promises of confidentiality were given out. Individual meeting and talking with the supervisors who showed interest allowed much time to answer individual questions regarding all aspects of the research. These also turned out to be opportunities to guarantee anonymity and to express great thanks for their interest and for their possible participation. Specifically, the student participants were all forwarded the letter from his/her supervisor who showed an interest, and replied if they wanted to know more. At that time, web mail was the means used to keep in contact with them, replying to their enquiries and giving further deliberation on this study. The asynchronous nature of communication via email facilitated informed consent from participants (Fielding & Thomas, 2001; Kralik, et al., 2005). The accessibility to the electronic version of the paperwork enabled the potential participants to read the details repeatedly, so that the decisions made were not impulsive or made in the researcher's presence. Investing time with them through email correspondence also helped a relationship to develop before seeing them individually in person on campus. Participants' informed consent was obtained at the beginning of each interview.

- ***Respect for participant self-determination:*** The BPS (2009) states that psychologists should '*endeavour to support the self-determination of clients, and make sure that clients are aware of their right to withdraw at any time from the research participation*'. In this study, all participants were made clear of their right to withdraw from the research or to refuse to answer any questions that they feel uncomfortable with. Having said this, no-one withdrew during the process of interviews and only one interviewee expressed the will to withdraw some of the information he provided for personal reasons. And a couple of other interviewees did not answer some questions which appeared to be because they did not have an answer, rather than because they were uncomfortable with the line of questioning.

There was a small drop-out between research pre-stage and stage one. This was generally because of working pressures on the interviewees, apart from sickness for one interviewee.

Another point which must be mentioned is the used of inducement or compensation for participating in research. Some researchers may argue that inducement or compensation for participating in research may change the relationship between researcher and participant, and distort the way data is collected. However, since the research participants spending time to take part in research could be seen as no different to spending time to work at anything else, in which case maybe reasonable to offer participants payment (Oliver, 2003). In this research, participants were encouraged to take part in the research with £10 voucher for taking part in interviews and completing the questionnaire. And this was not a reward to participants, but rather a commensurate recompense for the time and inconvenience of participating in the research. There is no sign that payment unduly influenced participants responses given the variety of opinion expressed in the IPR interviews. And as a matter of fact, although participants were informed that they would be compensated a £10 voucher for their time in participating, some interviewees seems have forgotten about this, and a couple of interviewees kindly refused to take the voucher, and accepted a small box of biscuits instead.

- ***Respect for privacy:*** The BPS (2009) states that psychologist should '*record, process, and store confidential information in a fashion designed to avoid inadvertent disclosure*'; and '*make audio, video or photographic recordings of clients only with the explicit permission*'. In this study, the researcher explained the purpose of video recording supervision meeting and voice recording IPR interviews, and requested permission to record from all interviewees. No interviewees requested not to have their meeting/interview recorded. Field notes were taken in all interviews. However, one interview failed to record and this was entirely a technical fault. Research note was used immediately after to recover the lost data.

All data, including paper-based, audio and video were kept in a locked filing cabinet and computer databases were password protected. All interviews were given pseudonyms and identifiers, such as names of people and places, were removed from transcripts to protect confidentiality and anonymity of participants. Anonymity was also extended to any individual students or supervisors mentioned by interviewees. This was not only to protect those mentioned but also to prevent the people mentioned being used to identify the interviewees.

However, the noteworthy point is that although the researcher tried to maintain the participants' anonymity through deliberately excluding identifying marks from the thesis, absolute anonymity was, to some extent, impossible to fulfil. As already stressed, a great potion of the data consisted of sensitive personal information, which related to personal attributes, relationship with supervisor/student, gossip and even prejudices (see Cohen & Manion's 1994 definition of 'sensitivity'). Participants in this research all came from Loughborough University. Due to the relatively smaller number of PhD students in each department compared to undergraduate students, some of the student participants knew each other and some were friends. As members of the same social network, some PhD supervisors in the university knew or had heard of others. Therefore, in order to protect the participants' confidentiality, before the data collection stage, they have been informed that they might possibly be identified, despite my best attempts to prevent this, and they have the freedom to decide to what extent they would like to provide information. It is hoped that the threats to the participants that may result from their participation have been minimized by obtaining fully informed consent, especially those threats that was unable to recognize within the study as a researcher.

As Fine et al., (2000) have discussed, there is a dilemma between carrying out a moral social study and increasing professional knowledge. For me, to protect the welfare of the participants was an unquestionable obligation. Therefore in terms of presenting the research result and analysis, extreme care and attention went into

finding the appropriate balance between releasing more information than was necessary and releasing too little to allow understanding.

4.7.2 Responsibility

''*Psychologists value their responsibilities to clients, to the general public, and to the profession and science of Psychology, including the avoidance of harm and the prevention of misuse or abuse of their contributions to society*'' (The British Psychological Society Code of Ethics and Conduct, 2009, p 18).

- *Potential harm and gain:* The BPS (2009) states that psychologist should '*avoid harming clients'*, as well as '*to be mindful of any potential risks to themselves'*. In this study no harm was perceived to exist for the participants in terms of their reputation, dignity or privacy.
- *Use of language:* the research aimed to use neutral language and to avoid being patronising, disparaging, biased, stereotyping, discriminating, marginalising, intolerant and male centric. In this study, for the student IPR interviews, I began the research by naming these particular events as 'most helpful' and 'least helpful' moments. I changed the latter term to 'not so helpful' after the first couple of IPR interviews with students who indicated that all those moments are 'all helpful in a way', and 'least helpful' was a too strong description for the less useful parts in their session.

- *Refer clients to alternative sources of assistance:* psychologist should '*refer clients to alternative sources of assistance as appropriate, facilitating the transfer and continuity of care through reasonable collaboration with other professionals'* (The British Psychological Society Code of Ethics and Conduct, 2009, p 19). In this study, one of the PhD students who expressed having difficulties with the supervisor was advised to go to the researcher director for help and suggestions.

- *Discussing outcomes with research participants:* The BPS (2009) states that psychologist should '*take particular care* when discussing outcomes with research participants'. In this study, it became apparent that the simple act of videoing a supervision session and then playing it back with IPR interview had an immediate impact on both PhD students and supervisors and on their supervision relationships. The IPR sessions were moments of insight for the supervisor and the student and such insights seemed likely to be fed back, or in some other way to influence, the future working alliance. Most of the participants self-evaluated their own behavior that has been recorded while watching the video. In terms of discussing outcomes with participants, only their own private IPR interview were mentioned, no information from other participants' interviews were revealed, words have been chosen careful, and evaluative statements were avoided. This is to prevent any influences on their future working alliance, through with all participants are mature practitioners in a good enough working alliance, there should be little risk.

4.7.3 Integrity

Honesty and integrity are necessary in order to maintain the trustworthiness and credibility of the research. There are several aspects to this that this study has strived to achieve:

- *Intellectual ownership:* the work presented in this study is that of the researcher unless otherwise stated; when other people's work is cited, acknowledgement was provided.

- *Philosophical background:* At the beginning of the methodology chapter, the researcher's epistemology and ontology have been explained, so the reader can understand the assumptions on which the study is founded.

- *Accountability:* This thesis provides a detailed description of how the research was carried out in this chapter, as well as how it was designed. Research results were presented accurately and truthfully in the following chapter.

4.7.4 Summary of ethical considerations

As an unavoidable consequence of fieldwork, ethical codes should always be followed when carrying out research. I have learned through the experience of this study how ethical issues could be complex and differentiated. The researcher should be able to perceive moral actions as contingent, and to accomplish them in the light of the commonly shared moral goods in everyday life, in order to better address ethical issues that relevant to his/her research (Christians, 2000; Olesen, 2000). In this research, regarding to ethical issues related, key actions taken included gaining voluntary and informed consent from all research participants. Detailed and sufficient information about the research were provided to potential respondents. All research participants were told that they have the right to refuse to talk about, anything that they did not feel comfortable with, and they could withdraw from the research at any stage. Privacy and anonymity of participants were protected, any information used in the thesis were with agreements from the participants.

4.8 Evaluation of research

4.8.1 Validity and reliability

This section addresses the validity and reliability of the research. In the realm of qualitative research, many perspectives exist regarding the validation and reliability in terms of their definitions, descriptions, and procedure for establishing them. Generally speaking, validity concerns the 'soundness', 'genuineness' and 'truthfulness' of the research (Zhao, 2006, p69); while reliability concerns trustworthiness and consistency in measurement (Anderson, 1990; Bell, 1992). However, these

conventional concepts have been challenged by scholars (e.g. Kolaskowski, 1993; Olesen, 2000) for having an origin in positivistic social sciences, which means they hold to the existence of an absolute reliability and look for scientific measurement in order to establish credibility of the research results. They are suitable in a quantitative paradigm but fail to address the complexity of qualitative research.

It can be learned from the literature that, arguments against the conventional standards of validity and reliability can be divided into two groups according to their conceptual differences: quasi-foundationalists who deny a 'God's-eye-view' and acknowledging the individuals' roles in representing a social phenomenon and constituting knowledge, which is represented by Maxwell (1992), and non foundationalists who critically question the appropriateness of the concepts of validity and reliability for qualitative research. This group of theorists fully accepts relativist implications, and honors the value of plurality and multiplicity. They argue that, the objective of qualitative researcher is not to achieve a single correct interpretation, especially in case studies which stands solidly on its values of uniqueness, therefore, validity is absurd (Janesick, 2000, p392).

The concept of validity has been reframed by researchers who advocate abandoning the conventional interpretation of validity. Lather (1993, p1032) proposed a 'four frames of validation', which categories validity as ironic validation, where *''the researcher presents truth as a problem''* (Creswell, 2007, p205); paralogical validation, which deals with the undecidables, limits and discontinuities in language; rhizomatic validation, which explained the research procedure, and how the new norms are generated; and voluptuous validation, which means that ''the researcher sets out to understand more than one can know and to write toward what one does not understand'' (Creswell, 2007, p205), and it connects ethics and epistemology together. Angen (2000) also suggested that within interpretive research, validation can de advanced into two types: ethical validation, which means research agendas questions their underlying moral assumptions, their political and ethical implications, and the equitable treatment of different voices; and substantive validation, which means understanding one's own understandings of the topic,

understandings from other previous literature, and the process of carrying out and presenting the research. Finally, a more recent postmodern form of validity is proposed by Richardson (2005), her view of validation is described as the crystal, which ''*combines symmetry and substance with an infinite variety of shapes, substances, transmutations, multi-dimensionalities, and angles of approach*'', they are ''*prisms that reflect externalities and refract within themselves*'', hence ''*what we see depends on our angle of response*'' (Richardson & St. Pierre, 2005, p963).

By reviewing works of those scholars, it can be learned that, as a complex social process that subject to social rules and ethical considerations, this research cannot be applied with any coherent, rigid and unified standards of reliability or validity. As argued by Smith & Deemer (2000): the issue of criteria was not epistemological but a practical and moral affair. The list of 'criteria' is flexible, and is always judged and adjusted based on considerations of the ethical issues under given circumstances.

Since there is no fixed framework to follow, this study was carefully steered in order to enhance the quality of the research findings in terms of their trustworthiness and completeness. Efforts were located as follows: 1) adoption of different methods to provide corroborating evidence, which contributes to safeguarding this study against possible misinterpretations and bias and excessive subjectivity (Creswell, 2007; Lincoln & Guba, 2000). The persistent observation, individual interviews with both sides of the pair (the supervisor and the student), casual communication, and questionnaires from both supervisors and students produced data that can be linked to each other, and satisfied the demands of crystallization (Richardson, 2000), and increased the trustworthiness of findings according to Creswell's advice (Creswell, 2007). 2) Pilot studies were used with two non-informants to rephrase and modify the interview questions as well as testing out the best way to edit video clips for IPR interviews. I recognized my lack of skills as an 'apprentice' researcher, and pilot studies also helped to practice my interactions skills which facilitate the initial development of mutual trust. 3) Regular reflection was adopted. This research process was kept open for changes, adaptation, and adjustment; and the preparation, implementation, transcription and analysis of this study were treated carefully with

critical review constantly. According to the literature, these strategies can help to defend the study again implicit and implicit mis-interpreting and improve its validity (Anderson, 1990; Bell, 1992). 4) Great attention was given to establish care and friendship in the study and maintaining a reciprocal equal position with the respondents. The idea was not only to facilitate the data collection but also to give power to students, and provide an opportunity for their voice to be heard. According to the literature, the validity of research findings could be increased by connecting what we know and our relationship with our research participants (see also Lincoln & Guba, 2000).

4.8.2 Limitations

- ***Power sharing and shifts of power:*** my experience of interviewing PhD supervisors and students has led to reflections on power sharing and shifts of power in various interview situations. According to literature, different interview situations can be affected by power dimensions in terms of understanding of interviewees and how narratives are shaped (Davies & Harré, 1990), and it is important for researchers to be conscious of the power hierarchy between the interviewer and the interviewee (Gordon, 1998) in order to be aware of the dominant perspectives in interviews, as well as behaving ethically by avoiding/minimizing situations where individuals taking advantages of their positions.

As it is in all human interactions, power is always present in the transaction of an interview (Nunkoosing, 2005), during which power is created and probably shifts. The power hierarchy between the interviewer and the interviewee has been emphasized by many researchers, including Gordon (1998) and Aléx and Hammarström, (2008). In qualitative research, data collected in interviews are often participants' experiences as expressed in narratives, which are influenced by the interview situation (Sandelowski, 1991). The narration shifts depending on the available power positions during the interview, and discourses such as age, education, gender and ethnicity influence what is narrated and how the narratives

are interpreted (Davies & Harré, 1990). As Foucault argued, individuals are related to various discourses, which can be described as power-related structures of how people understand reality, and the dominant discourses lead the way people move, speak and think about themselves in specific ways (Aléx & Hammarström, 2008).

Nunkoosing (2005) points out that, during an interview, the interviewer is not just an interviewer, and he /she also possess other identities that serve to legitimize his /her actions. For this study, during those interviews I had, as a female, Chinese-oriented, current PhD student researcher, I was striving to position myself as a researcher when interviewing other PhD students and their supervisors, but consciously and unconsciously, I probably also acted in other positions, which caused interwoven power perspectives and in some interview situations, power asymmetries. In one example of these, a 60-year-old male supervisor who commented during the interview: '(another student), she is very young, probably about the same age as you.' And this reaction to my age led me to reflect on whether and how our meeting might have been influenced by such factors as age and gender, because his words and reaction could be interpreted as indicating that age was important for him in meeting with a researcher, while academic education, perhaps specially when presented by a 'young', female, PhD student, did not seem to be a significant factor for him. During this interview, from a gender order perspective, I can recognize that, as interviewee, this supervisor probably dominated the interview. I understand that I had been seen as young, and his view of me and his respect for me as a person may have been different if I was an experienced mature researcher.

In another example, the supervisor talked about one of his PhD students who came from Hong Kong, and said: '(the PhD student from Hong Kong) has more difficulties in academic writing because English is his/her second language, just like yourself.'' On reflection, this can be analyzed as the supervisor captured power as an interviewee by calling attention to the interviewer's 'disadvantage' in contrast to one's own positive quality and shifted the balance in the interview situation (Aléx and Hammarström, 2008). In these two examples, power relations were created

within interview situations, and on reflection I wonder whether or how my discourses such as age, gender, education, ethnicity had influenced those interviews I carried out. If a PhD supervisor is interviewing another PhD supervisor/ PhD student, he/she may talk or share their narrative in a different way.

- ***Personal bias***: although great efforts were made in building my interpretation on multiple sources of data, there are still possibilities of occurrence of personal bias. As addressed by previous literature, the way participants were grouped or named, or how they were categorized could be unconsciously affected by researcher's own background, intuitive thinking and ethical compromises (Tierney, 2000).

- ***Language bias*:** the second concern is the restrictions experienced by interviewees having to perform in their second language. Due to students' language variations, for participants who don't speak English as a first language, they might not be able to express themselves as precisely as they could if performed in their native tongue. In order to reduce this potential limit, for participants who are native Chinese speakers, IPR interviews were conducted in Chinese and then carefully translated into English. For other non-English speakers, further explanations/clarifications were always required when their opinions were not clearly expressed, in order to capture their ideas in the most precisely way.

- ***Negative consequences:*** although attempts to avoid unnecessary negative consequences, this research may cause some harm to the participants. This could result from the research objective of making previously unheard voices heard so as to change the unsatisfactory situation. By exploring and displaying the students' private ideas and concerns in public, even within this limited forum, the study may have influenced the participants and the way in which they reflected on and responded to their experiences.

- ***Nature of doctoral study:*** generally speaking, limitations exist in all researchers. And as a doctoral study, the data (interview transcripts) were coded by one person, and

the results and analyses are discussed with one supervisor. Therefore, it failed to provide multiple perspectives from people with differing expertise.

4.9 Summary

This chapter has provided an overview of the process of data collection, transcription and analysis. I began with a justification of my research epistemology, which is a qualitative and interpretive approach. Reasons for the adoption of Interpersonal Process Recall as the main research method were clarified and details of the data collection process were described. The data was collected by a multi-method approach, which including observation, semi-structured interviews. Data analysis was informed by template analysis and aided by the used of the qualitative data analysis software NVivo. The processes of transcribing and interpreting data in NVivo were explained, followed by considerations of ethics, validity and reliability issues, and potential limitations.

Having now reviewed background literature as well as introduced the methodologies adopted into this research, I will now move on to the analysis of the data. The following chapter will explore the PhD supervisor's behaviours during effective supervision practices in terms of role performance in light of the Competing Values Framework.

Chapter 5 The Most Helpful Supervision Moments

5.1 Introduction

In this first analysis chapter, I will look at PhD supervision particularly focus on effective supervisory interactions selected by the student as the most helpful supervision moments, examining the supervisor's behaviors in these moments from a role-performance perspective in light of the CVF.

Research results are presented in this chapter in two components. At the beginning of this chapter, brief descriptions of 13 supervisor and student dyads are provided. In the second part, I will analyze 'the most helpful' supervision moments of the recorded supervision meetings as selected by PhD students within the context of the eight CVF roles, which is used as the role template in this research. Following the procedure guidelines of template analysis, 'the most helpful' supervisory activities selected by PhD students were analyzed in light of the CVF roles according to the core competencies associated with them. For each CVF role, analyses are provided to explore why these activities are perceived by the PhD students as constitute the 'most helpful moments' and how these supervisory activities contribute to the overall supervision effectiveness. Each CVF role is illustrated by fragments of transcriptions from the student's interviews.

5.2 Background: the course differences

Before moving on to present the findings, some general differences among the PhD programme from different departments need to be outlined. This gives background which may help comprehension of individual differences in their perceptions and supervisory activities.

First, in this research, students undertaking a PhD were supervised by one or more academics; however it is worth noticing that the relationship between the student, the supervisor and the project varies between disciplines. In some subjects such as Social Sciences, English and Drama, and Business, most of the time, the candidate entered a PhD programme to pursue a project very much of his/her own initiation and interests. He/she works on the research project independently. While in some other disciplines analyzed in this study, such as Design and Technology and Sport, Exercise and Health Sciences, part of their research projects involve laboratory-based activities, therefore students and the supervisor needed to work together as a team on such activities, which means they might need to meet their supervisor(s) on a daily base during these periods.

Second, the PhD is typically awarded on the basis of a substantial written piece of work described as a thesis which is examined by internal and external examiners in a viva voce. However in some subjects, such as Design and Technology and Arts, the PhD award demands not only a substantial and original thesis, but also a similarly substantial and original contribution but to professional practice. For example in the School of Arts, students are required to submit a text-based thesis, which is weighted 60% of the total as well as another artifact based document, weighted 40%. This artifact based document could be in the form of 'monographs, editions or articles; electronic data, including sound or images; performances, films or broadcasts; or exhibitions' (Arts & Humanities Research Council, 2009), because it is believed that it is difficult to address everything through language. As Michael Polanyi argued people can recognize individual faces with memorization and the response of awareness in the tools using process; however, this kind of knowing is hard to express in a language system (Polanyi, 1969). Due to the different criteria in PhD assessment, the emphasis in the practice of supervision in relevant subjects may vary, too.

Third, there is considerable variation between subjects in the words that count towards the total and the rigidity with which length is interpreted. For example, the department of English and Drama requires a thesis of 60-80,000 words; while the

School of Arts requires a thesis with a maximum word length of 50,000. In the School of Sport, Exercise and Health Sciences, a PhD student may carry out a couple of relatively smaller individual projects instead of one big project as their colleagues in social sciences, and the word limit for these individual projects varies depends on each particular research.

5.3 Descriptions of the 13 groups

The 13 groups of participants came from disciplines that belong to the general catalog of Social Sciences, Humanities and Arts, which include: 1) the School of the Arts; 2) the School of Business and Economics; 3) the Design School; 4) the Department of English and Drama; 5) the Department of Social Sciences; 6) the School of Sport, Exercise and Health Sciences. For each group, one supervision meeting was observed and video recorded. All participants were interviewed separately after the meeting.

The IPR interviews were extremely successful in producing rich, complex, and often lengthy accounts of participants' experiences. The volume of textual data has created problems in terms of its presentation, and it would not be possible to deal with all of the managerial roles from the CVF in equal depth in the space of a thesis unless a rather superficial approach to be taken. Therefore, CVF roles that were mentioned the most frequently by PhD students in terms of 'the most helpful moment' were explained in more detail, as these most directly address the issue of PhD supervision effectiveness as the primary focus of this research.

5.4 Research findings of 'the most helpful moments'

5.4.1 Introduction

In this thesis, the central focus of the IPR interviews was the student participants' accounts of what are the most helpful supervisory activities in the supervision meeting. A wide range of activities were generated in the analysis. According to the literature, previous studies that applied the CVF in supervision analysis generally adopted a similar approach by analyzing the supervisor's activities within the parameters of the framework. Prelesnik (2008) examined the results by separating the supervisor's activities into four CVF leadership models and presented them in a CVF-based map to demonstrate different behaviors displayed by the supervisor, and how to be effective with conflicting supervising behaviors exist simultaneously. Sanderson (2006) interpreted the results by analyzing the interview transcripts line-by-line to target comments that aligned with the attributes within the CVF, and then mapped those comments onto the CVF matrix to represent the analysis graphically as a CVF-based four quadrant map. According to Sanderson, by constructing the CVF-based matrix, ''a numerical quality could be given to each attribute, which in turn built categorical depth towards determining quadrant strength''(p.107).

Figure 5.4.1-1 The CVF managerial roles and their competencies

CVF Roles	Competencies
Innovator	Living with change Thinking creatively Managing change
Broker	Building and maintaining a power base Negotiating agreement and commitment
Producer	Presenting ideas Working productively Fostering a productive work environment Managing time and stress
Director	Developing and communicating a vision Setting goals and objectives Designing and organizing
Coordinator	Managing projects Designing work Managing across functions
Monitor	Managing information overload Analyzing core processes Measuring performance and quality
Facilitator	Building teams Using participative decision making Managing conflict
Mentor	Understanding self and others Communicating effectively Developing employees

(Quinn, et al., 2007; Smart, 2003)

A similar approach has been applied by this research: after template analyzed the student's IPR interviews, the supervisor's behaviors in ''the most helpful moments''

are grouped under the eight CVF roles (producer, director, coordinator, monitor, facilitator, mentor, innovator, and broker). This is because one of the major advantages of adopting the CVF was its visual clarity, and attaching the framework with eight roles and 24 competencies can make it too complex and loses its visual clarity (Thompson, 1993). The four quadrants CVF matrix with eight managerial roles contains enough information to show the tensions across the roles, and it can also be extended for more details if required (Smart, 2003). Meanwhile, similar to what Sanderson argued, by grouping the supervisor's behaviors under the eight CVF roles, a numerical quality could be given to each role and help to understand the strength of each role.

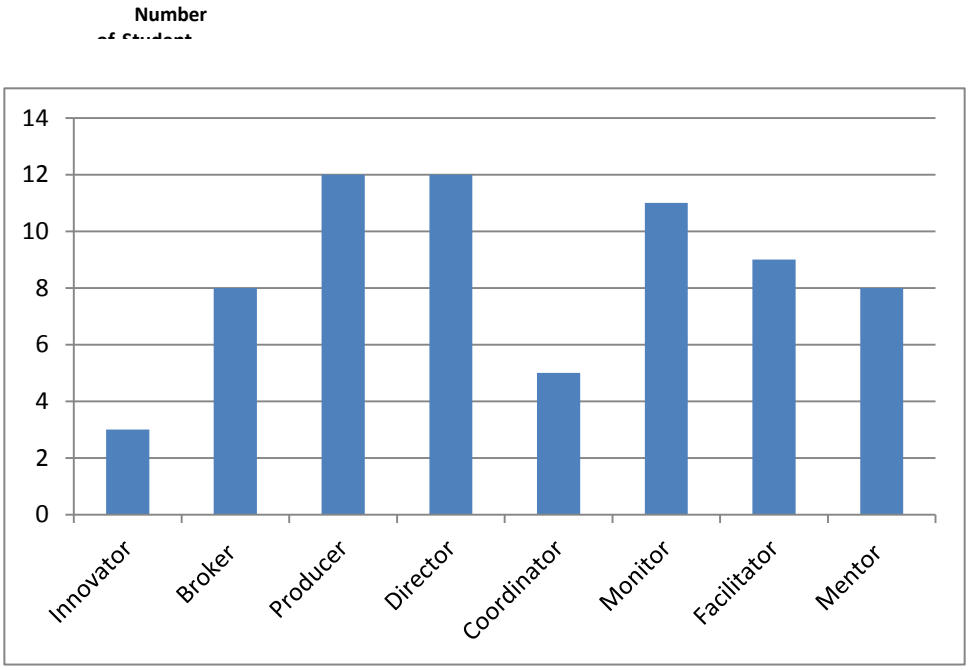
5.4.2 Research findings of 'the most helpful moments'

In the in-depth IPR interviews, PhD students offered their perceptions of effective supervisory behaviors during their supervision interaction and the findings indicated that PhD students have different preference of 'the most helpful moment'. According to 13 individual IPR interviews with all of the PhD student participants, it can be learned that, their selections of 'the most helpful moment(s)' varies significantly in terms of the role the supervisor displayed. And their selections of 'the most helpful moment(s)' covered all of the eight CVF roles, although numbers of moments varied for these roles (see table 5.4.2-1).

In this examination of CVF roles, I will discuss the following:

- How each role is represented
- Ways by which the role is performed by the supervisor
- Why it is perceived as 'the most effective' behavior by the student

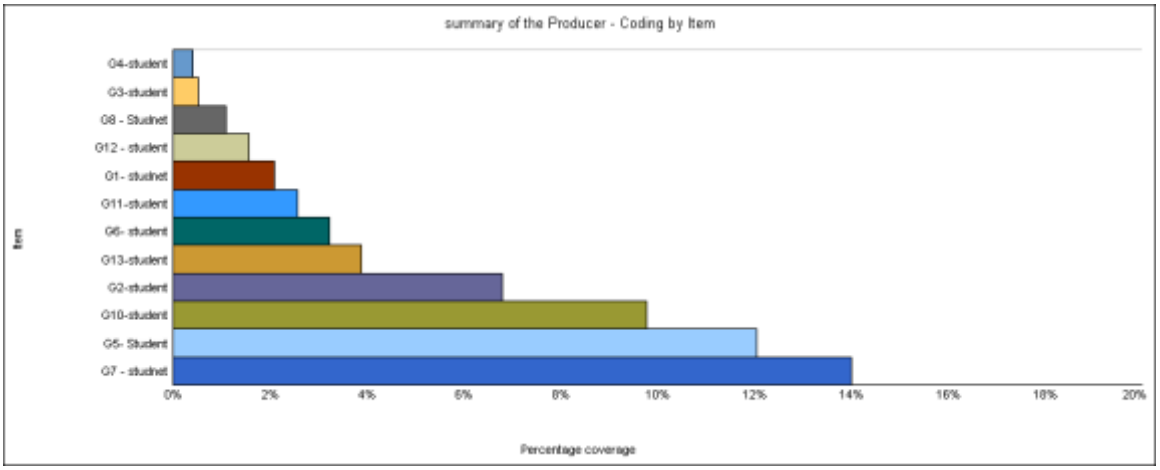
Table 5.4.2-1 CVF roles selected as the most helpful by students



5.4.2.1. The Producer Role

The producer is one of the most represented roles according to the student's selections of the most helpful moments. According to the research findings, 12 student participants, from all stages of the PhD, identified the delivery of the producer role as a contributing factor of supervisory effectiveness. Their selections of the 'most helpful' part(s) of the supervision meeting reflect moments when the supervisor was operating in the producer role. The percentage coverage rages from 0.42% in Group4 to 14% in Group 7 (See table 5.4.2.1-1).

Table 5.4.2.1-1 summary of the Producer Role- the most helpful moment- Coding by Item



It can be learned from figure 5.4.2.1-1; majority of the interviewed student selected the producer role and expressed it to some extent as one of the constitutions of their most effective supervisory moments. I will now present several extracts which typify the delivery of the producer role during the selected moments. In the first fragment, the Group 7 student was talking about how his supervisor encouraged him and helps him to develop faith in himself so that he can work for a better result.

'…I just anticipant in the questions and not having the confidence to ... because I did not have the confidence to phrase it in such way, I was almost kind of dismissing the arguments as kind of... I was making like ... but I could have put it more strongly if I had the confidence, and I think that was ... that is something he gave me it is a good encouragement there. So it kind of develops your own voice and has faith in

it….' (Group7 student, 11/06/10)

In this fragment, the student selected the moment when his supervisor provide him encouragement as one of 'the most helpful moments'. According to Quinn (2007), 'fostering a productive environment' mainly refers to the process of motivating and encouraging people; the similar statement has been made by Vilkinas as 'motivates the student' (2005). According to Vilkinas, in terms of delivering the producer role, the PhD supervisor is required to motivate the student to ensure that they successfully complete the thesis; which is echoed by the PhD supervisor according to this research. For example the following statement made by supervisor from Group 6 talked about the importance of providing encouragement to the student:

''And quite a lot of the time, when we have meetings, what he actually wants is just a bit moral support and a pat on the back. He does not really need (me) telling (him) what to do, or really only a little bit information because he is quite well motivated, and gets on very well on his own…'' (Group6 supervisor, 11/06/09)

It can be learned from the data, similar strategies are employed by the supervisor to motivate their students. In the following three fragments, we see the supervisor motivated PhD students by providing them with confirmation and positive feedback.

'…He is now just to make sure that I am aware that whatever… I have a good theoretical standing. So it gives me the confidence to carry on going. But also then, helped me be able to know my overall thought was along the right lane…' (Group12 student, 03/11/09)

'…so some kind of encouragement and some positive feedback on how it's looking and how it's reason that still are things that I am writing well, is an important confidence boost, So that is really helpful…' (Group5 student, 09/06/09)

'…he just says 'this is good, you can do it quite quickly, or it shouldn't take as long,', you know, it's this little, sort of displays of encouragement that aside from the practical task, or doing work, it's just a very small thing but it kind of motivating

strategy…' (Group2 student, 20/05/10)

In each of the three above fragments, the PhD supervisor motivated their students by providing positive feedback and reassurance about their work; and the student claimed to be more confident with their work and academic skills on receiving these comments.

I now want to look at a fragment which also reflected the employment of the producer role but showed a different pattern:

'…It was nice actually for him to say, no pressure, you know, is it a realistic time frame, you comfortable with that? This helps to take the pressure off…' (Group 10, student, 28/07/10)

This reflected the producer role in terms of 'managing time and stress' (Quinn, et al., 2007). As individuals, different students react differently to different situations. Some student enjoy working under time pressure, and would become more effective in meeting deadlines; while others may find work under a tight time schedule to be extremely stressful, and prefer to have everything completed ahead of time. In this example, the student was experiencing stressful feelings about the deadline, and what the supervisor did was confirming that the time frame was a realistic one. They made sure the student felt comfortable with it.

In the following fragments, I have identified stress management activities:

'…we went for lunch, and we chatted on a … which was just chatted as friends. That is just before my upgrade panel, so it might be a strategy to calm me down, and I appreciated it…' (Group11 student, 12/08/10)

'…I think it is... I think a PhD work can something gets a bit stressful, and... Whenever I speak to my supervisor, it is nice and makes me feel better…' (Group6

student, 10/06/09)

'…it is good because it is … with you and your own approach on the one hand but it is also by giving… because obviously he is already well established in his field, he is a paid academic on that… by telling you that some of the same mistakes he has made, it makes you relax a little bit…' (Group7 student, 11/06/10)

In each of the three above fragments, the supervisor displayed the producer role by managing stress: student in Group 11 talked about how the supervisor helped her to relax before an oral examination; in Group6, the supervisor helped the student with stress management by listening to the student, and sharing the student's positive and negative feelings to develop a positive interpersonal relationship; and in group 7, the student said he felt relax as the supervisor told him that he made some of the mistakes himself, too.

The following extract reflects the other aspect of the producer role in terms of time management:

'…We were talking about time frames, and we kind of discussed the time frame of my drafts. Coz I am coming towards the end of my PhD. And hopefully submit it by the end of September. we were discussing what time frame should be next week when he is on holiday, and what should get to him by July, so then I can concentrate on my discussion chapter…' (Group 10 student, 28/07/10)

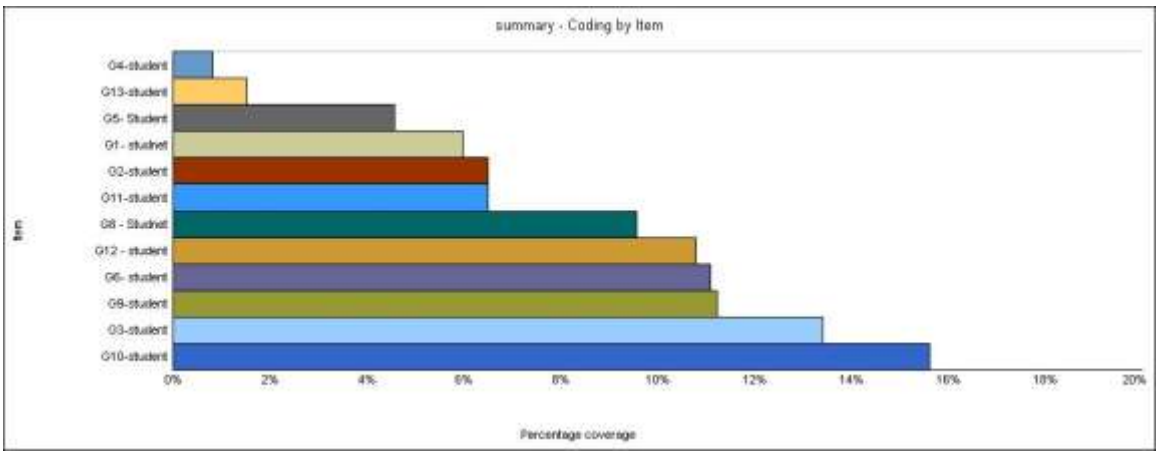
According to the CVF, the producer's time management function mainly refers to how to use one's time effectively and get the job done (Quinn et al., 2007). The student from group 10 provided an example of the supervisor helping the student with time management by producing a time frame for the student to finish her thesis before the deadline, which was greatly appreciated by the student.

Having examined the producer role, I will now be moving on to examine the other most represented managerial roles in the selected most effective supervisory activities – the facilitator role.

5.4.2.2. The Director Role

The director is the other most represented role in the research findings; apart from Group 7, the rest of the 12 student participants believed that their 'most helpful' part(s) of the supervision meeting included moments when the supervisor was operating in the director role. The percentage coverage rages from 0.82% in Group4 to 15.61% in Group 10 (See table 5.4.2.2-1).

Table 5.4.2.2-1 summary of the Director Role- the most helpful moment- coding by Item



According to the CVF, the director is located in rational goal model which focus on the clear direction that leads to productive outcomes (Quinn et al., 2007; Vilkinas, 2008). Using this perspective, in this section I explore the various ways in which the

supervisor delivered the director role and I explicate what function of the director role is being performed through the supervisory interaction.

I will now present several extracts which typify the delivery of the director role in the most helpful moments. In the first fragment, the student was in the second year of her PhD and was doing field work when the video was recorded. Regarding one of the most helpful moment selected, she made the following comment:

> *'…Yeah, this is the most helpful part that, I didn't have a full picture of what I am doing. But she kind of reminds me I need to think about the whole picture of my PhD dissertation, and we are kind of debating about it as well…' (Group 8 student, 11/06/10)*

The student appreciated her supervisor reminding her to think about the big picture of her thesis and the supervisor provided feedback on her ideas about it. This is clearly for the benefit of the student, so that she does not get lost with massive information obtained during the data collection, and stay organized and focused on the objective of the thesis by having the 'big picture' in her mind. This function performed by the supervisor reflects the director's competency in terms of 'developing and communicating a vision'. Vision is defined as ''an ideal and unique image of the future'' (Kouzes & Posner, 1995, p.95); for the business managerial leaders, this function refers to effectively developing and communicating the further outcome (Quinn, et al., 2007). In PhD supervision, according to Vilkinas (2008), this function requires the supervisor ''developing and communicating to the student or co-supervisor what the outcome will be'' (Vilkinas, 2008). In this fragment, the further outcome refers to the student thesis, which supposed to be finished after two years; and the supervisor performed the director role by using the 'big picture control', which is one of the supervision strategies that was valued the most by students, according to the IPR interviews.

In the following three fragments, we have identical 'big picture control' strategy performed by different supervisors:

'…I think my supervisor works well; he gives me overall picture… of where I need to be heading…' (Group12 student, 03/11/09)

'…Because I tend to focus on a very small piece of work, and lose the bigger picture, where this work is going to go, what kind of questions this piece of work trying to address, so , it's a … I know suppose it's a kind of normal job of supervisors, but it's … it's comforting, it's very nice to know that he knows the larger picture, you know, the overall story of the thesis, he has in mind this large picture of the… of where this work is being driven, where it's going to end up…' (Group 2 student, 20/05/10)

'… This scenario I am going to make is for my further work. You can see my supervisor gave me the overview of how the scenario will look like…' (Group3 student, 22/05/10)

In each of the three above fragments, the supervisor was using the 'big picture control' strategy to help the student with their work, and the student perceived this as one of the most helpful supervisory activities because for them, the overall version of the project worked like the big picture of the jigsaw puzzle on the box cover, which make their research objective focus and clear all the time. This echoes Kouzes and Posner's work in which the 'big picture control' strategy is defined as the 'jigsaw puzzle principle' (Kouzes & Posner, 1995; Quinn, et al., 2007).

I now want to look at a fragment which follows the same pattern, but with a different strategy:

'…the method was proposed by myself, not by him, but I told him my idea, and he understood my idea, and he will, naturally, link my idea to his knowledge… after that… the mix of my idea and his knowledge, he helped me to refine… develop clear

ideas…'(Group 3 student, 22/05/10)

In this extract, the student talked about how the supervisor helped him to refine his original thoughts, and according to the CVF, the supervisor is also performing the director role, but using the 'refine the gemstone' technique (Quinn, et al., 2007). Like rough gemstones, visions typically do not turned up as fully formed and whole, with academic experience, knowledge, and the current context, PhD supervisor is able to unearth, polish, and refine the original sources and ideas of the student, so that they can be presented in a better way, so the student can produced more effective ideas which add values to the final outcome.

I now want to look at supervisory activities that reflect the second competency of the director role:

'…I think, because I didn't do much research in this area before …can't say didn't do much…hmmm… just some concepts, some particular concepts, I am not clear, in this situation, my supervisor gave me some tasks to make it clear by breaking it into small parts…' (Group 3 student, 22/05/10)

'…So I like that, I like goal setting, I like to have that organized towards that time frame, so it was helpful to let me know that by the end of September, I will be able to have this and this to get away, and ready for my supervisor to read…' (Group10 student, 28/07/10)

'…From this bit on, I have just finished doing most of my market research, and now I have to go and specify a system which I am going to design, and I am not really sure the right way to do it. SP is now talking about what she thinks I should do next. And so it is very useful because it gave me an idea of what to do after the meeting…' (Group6 student, 10/06/09)

'… (My supervisor) points out to me where to go and what to do for the next meeting, next week. It is a systematic assignment. So I think it's very helpful, it's very clear…' (Group 1 student, 16/06/09)

The above extracts reflected the competency of ‘‘setting goals and objectives’. According to the CVF, this competency functions as extensions of the competency of ‘‘developed and communicating a vision’’, which strengths the connections between visions and actions in terms of translating broad objectives into sub-objectives according to different stages (Quinn et al., 2007), such as formulating specific objectives, targets that need to be done by a certain time, creating a schedule for specific activities, clarify standards of performance. In the selected most helpful moments, the PhD supervisor identified specific steps to be taken by students in order to achieve his/her objectives. According to the results, the ‘big picture control’ and ‘goal setting’ are also recognized by the supervisor as an important component of their job, as the Group 6 supervisor said ‘‘*I think it is just very difficult when you were merged with all these information and to see your way out of it. I am sure you have that experience yourself. And it is very easy for someone like me, who , A) has got more experience and B) is a step outside of the activity, to see where he should go next, which is easier for him. You know, that is why you have a PhD supervisor, isn’t it?’’*

Now, I would like to look at some fragments that show the performance of the third competency of the director role. The PhD student talked about their working relationship with their supervisor:

‘…We have got … quite a relaxed approach that we have in our meeting, and we always… we have… this always warm and friendly working style…’ (Group10 student, 28/07/10)

‘…I like the way we worked, because when I say professional and academic, it is not cold. We will have a chat or whatever, but don’t talk about particularly personal things. And I also know I could talk to him about it if I wanted to…’ (Group11 student, 12/08/10)

‘…His personality is probably more laid back than me, quite relaxed in a

reasonable form, compared to other supervisors that I had experience with. But I found that more productive, I found that more useful. I think if you have a supervisor who is slightly intimidating, or more formal, then sometime it…destroys the flow, and it can sort of decrease the level of productivity…' (Group 9 student, 24/06/10)

In each of the three above fragments, the student appreciated the friendly and less-formal working style with their supervisors, like extended friendships, which help to increase the overall effectiveness of supervision as well as their work productivity. This reflects the third competency of the director role in terms of ''designing and organizing''. According to the literature, there are five main categories involved in the 'designing' function of the manager, which including: strategy, structure, processes, rewards, and people (Galbraith, 1995). In this research, 'the most helpful moments' reflected the structure category, which mainly refers to the distribution of power in the supervisory relationship as well as the supervision style.

As individuals, the PhD supervisor have their own preference of how to work with the student; some adopted a more formal supervisory style while others prefer using a more relax and informal one, as the group 6 supervisor said during the interview:

''…that (the informal working relationship with the student) is the way we operate. I can perfectly see you don't need to have that kind of relationship to be a successful PhD supervisor, for your PhD student to be successful. But it is the way I do it. And most of my close colleagues are the same. I think the relationship to people is very important because you can get so much more out of it if you get on with the person. You as a supervisor can, and they as students can...'' (Group6 supervisor, 11/06/09)

Here we can see individual supervisors adopted their preferred working style, which could be either formal or informal or a combination of both; there is no regulation or rules on this, as long as the supervisor believes it works well with the

student. According to the research findings, all of the students who selected this issue as their most helpful moments all reflect a less formal, more friend-like relationship (see student from Group9, Group 10, and Group 11).

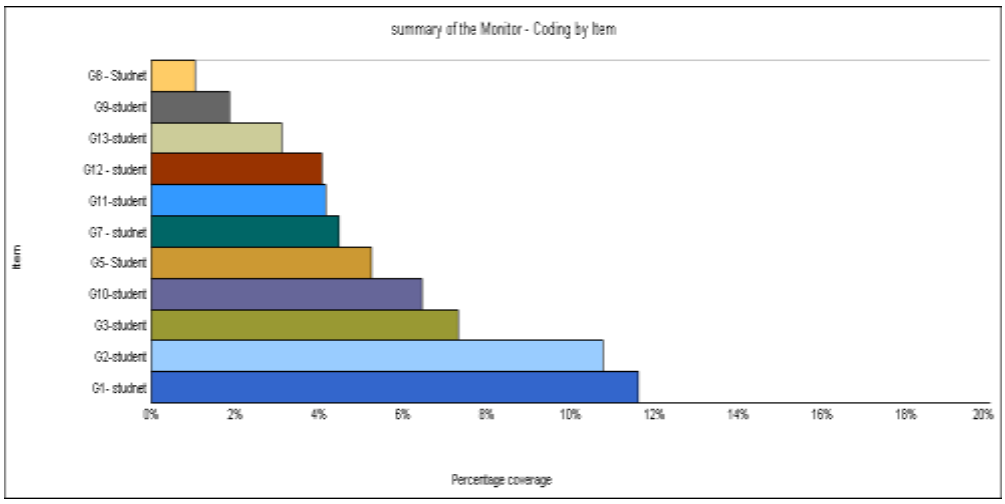
5.4.2.3. The Monitor Role

Here, I want to present the next most selected managerial role in terms of the most helpful moments, which is the monitor role. According to the CVF, the monitor role is in the internal process model with its focuses on internal control issues. Its managerial competencies include: managing information overload, analyzing core processes, and measuring performance and quality (Quinn, et al., 2007; Vilkinas, 2005). In this research, 11 students believed that the 'most helpful' part(s) of the supervision meeting include moments when the supervisor was operating in the monitor role. The percentage coverage rages from 1.06% in Group8 to 11.60% in Group 1 (See table 5.4.2.3-1). Here, I want to discuss how the functions of monitor role are performed by the PhD supervisor in different situations.

Let us now examine a fragment of narrative from Group 10 student, who is a first year PhD student from business school, and was doing his literature review when the video was recorded. In the following extract, he talked about how he was supervised and why it is helpful.

> *'…Because I have got so much literature at the moment… (I am) kind of overloaded with the information, and trying to narrow it down, just find it a bit confusing. For me, having this chat, I found it quite helpful thinking: ok, this is what I am narrowing it down to, this is how to do it, and what I need to focus. So it kind of helps to narrow my research down when I am looking at papers…' (Group10 student, 28/07/10)*

Table 5.4.2.3-1 summary of the Monitor Role-the most helpful moment- Coding by Item



Student from Group 10 described 'I have so much literature at the moment'; and the supervisor helped him with the problem – 'I found it quite helpful thinking: ok, this is what I am narrowing it down to, this is how to do it, and what I need to focus'. Here, the supervisor was performing the monitor role in terms of 'managing information overload'. As Shenk said, information overload is a new problem equivalent to information scarcity in the old time (Shenk, 1997). In the business content, success depends on speed and agility, as well as thoroughness and accuracy, there the manger was required to be able to distinguish useful information from unrelated ones, so they can deal with no more information than they needs to. For PhD supervisors, information overload mainly refers to those papers/books that are not related to what the study is researching and could possibly side-track the student's focus and delay his/her research process. Student from Group 12 also provide an example where the supervisor is performing the same function:

'…in this moment, he was saying that, just be carefully, you do not go down every route, because if you go down every route, you will never finish your PhD…' (Group 12 student, 3/11/09)

Let us now move on the following fragment, transcribed from interviews with student from Group 1 and Group 7. Group 1 student was in the final year of his PhD,

and was writing up his thesis while the video was recorded. Group 7 student was a first year PhD student and was doing the literature review while the video was recorded. Both of the segments describe how the supervisor monitored their work process which they believe is of great help:

'…he tried to suggest which step I should take first, for example, he thinks I am too eager to write the whole chapter out. But at this stage I should make sure what kind of evidence will come out of the analysis. Then collect the evidence, answer my question, then list the structure of the chapters, and then just follow this to write…' (Group 1 student, 16/06/09)

'…I did not think about that from the beginning. I had been kind of rushed in and wrote chapters. And decided to work it out from there. He just commented on that approach and suggested me a more reasonable order of doing things…' (Group 7 student, 11/06/10)

Both of the participants mentioned about that they rushed into the writing up stage: how they started writing part of the thesis without enough evidence to support the chapter, and there was a danger of time wasting later on if the results turned out to be different from what was estimated. The supervisor noticed this potentially problematic process, and suggested a better order that can ensure the student did not waste time on writing something inaccurate.

This mainly reflected the monitor's competency of 'analyzing core processes by analyzing and improving main working processes in order to add value to the designed outcome. The classic example used by Quinn is the task of cooking a breakfast which including a three-minutes boiled egg, toast, and coffee, and deliver it with a scheduled time with good quality (Quinn et al., 2007). For PhD supervision, core processes generally consists of the literature review, field work, analysis, writing up, and presenting and publishing the final work; and PhD supervisor performed this function by organizing the core processes of the whole journey of a PhD according to

their experiences and expertise, so that the student do now waste their time by doing things in a wrong order.

The extracts presented thus far have reflected the monitor role in terms of 'managing information overload' and 'analyzing core processes'; I would now like to look at another extract which demonstrates the use of the third competency of the monitor role:

'…He pointed out some weak points of my current writing, and how I can improve it. I guess the role is a very good editor. He point out a lot mistakes or styles…Grammar mistakes or wrong writing styles. Such as, the word is right but the feeling is wrong. Or the way I express or my writing is not very correct. And I found it to be very helpful…' (Group 1 student, 16/06/09)

'…that's discussing how to structure my essay, by advising me to … keep a focus on content rather than structure and to merge my headings. And that is very useful advice…' (Group 11 student, 12/08/10)

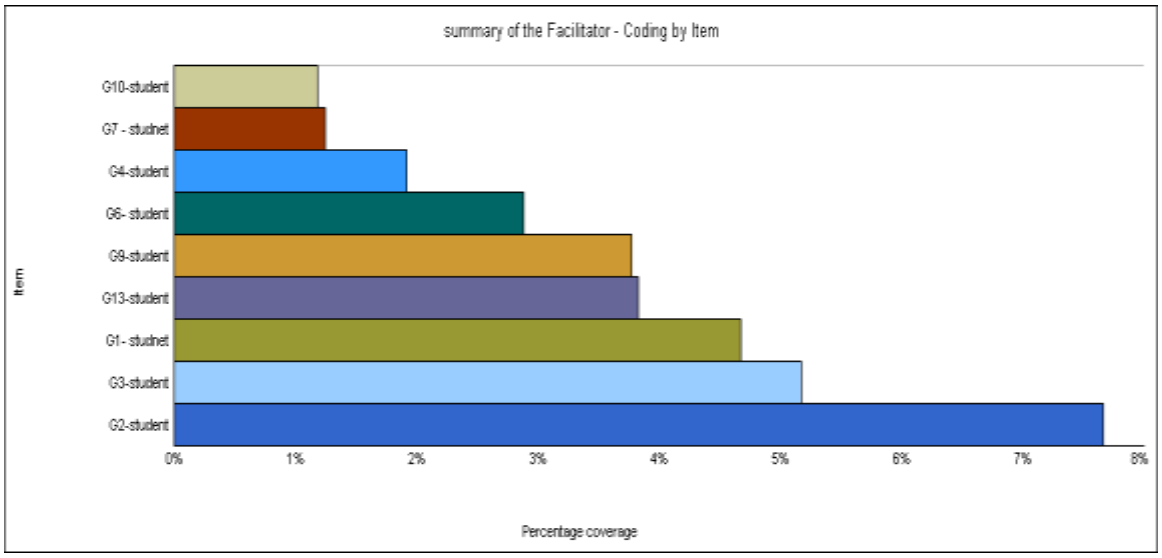
'…(supervisor is)identifying a few points in something that the work that I have gave to him to read, err, he was just driving at or pointing to some subtleties, some very small points in something at the beginning of this writing. Hmm, I found that helpful. he is picking up on the very very small things, I don't know, maybe it's a sort of generic stuff all supervisors do but, you know, he focuses on the sort of individual words…and I find it very helpful…'(Group 2 student, 20/05/10)

Here we can see the supervisor adopted the 'measuring performance and quality' functions of the monitor.

5.4.2.4. The Facilitator Role

The facilitator is the next role I want to examine. It is one of the managerial leadership roles in the human relations model which focus on the relationship between the managerial leader and his/her work group. It is characterized by team building, participative decision making and conflict management. According to the results, 9 out of 13 students claimed that their 'most helpful' part(s) of the supervision meeting included moments when the supervisor was operating in the facilitator role. These students came from Group 10, Group 7, Group 4, Group 6, Group 9, Group 13, Group 1, Group 3, and Group 2. The percentage coverage rages from 7.66% in Group2 to 1.18% in Group 10 (See table 5.2.2.4-1).

Table 5.4.2.4-1 summary of the Facilitator Role- the most helpful moment- Coding by Item



I will now present several extracts which typify the performance of the facilitator role by PhD supervisors during supervision meetings. In the first fragment, the student described how he and his supervisor worked together like colleagues. This student was in the third year of his PhD, and was analyzing his data when the supervision meeting was recorded. He described how his supervisor worked with him on his data analysis using SPSS, which is an unfamiliar tool for the student:

'…And the third role is like… a … like a colleague. Sometime he is in the higher position because he has many experiences so he can give you a lot of instructions but sometimes he can just discuss with you or work with you together, during the SPSS part, ***we*** *try to analyse my data, so* ***we*** *tried to do it together. And he tried several different ways to analyse it. And* ***we*** *feel* ***we*** *work together as colleagues…' (Group 1 student, 16/06/09)*

We see that the student describing his supervisor using the word 'colleague' – 'we feel we work together as colleagues'; and the word 'we' for many times –' we try to analyze my data, so we tried to do it together'. This reflects a more equal supervisory relationship between the student and his supervisor as well as a sense of belonging and mutual accountability.

I will now show two more extracts which demonstrate the same pattern.

*'…****we*** *sort of mutually agree certain patterns emerging, base on the observations I have made on my models, and that extends out to a main model on either side. So I think they collaborating, and* ***we*** *working together, hmm, to produce the final set of models.* ***We*** *collaborate I think, you know, what is why in that moment* ***we*** *are able to make these observations together which I found particularly useful…' (Group 9 student, 24/06/09)*

'… The undergraduate is not really lecturer-equal. As a PhD student, you are not quite (equal), but you and you supervisor are like a team, and you are a lot closer to lecture-equal…' (Group 7 student, 11/06/09)

In each of the two above fragments, we see the student describing their supervisory relationship as collaborating – 'we collaborate I think'; or more equal– 'you and your supervisor are like a team, and you are a lot closer to lecturer-equal'. According to the CVF, these segments can be recognized as reflecting the

supervisor's performance of the facilitator role in terms of the 'building teams' competency. According to Quinn, teams are differentiated from other groups in the following four aspects: 1) members of a team must be committed to a common goal or purpose; 2) members of a team must have clear roles and responsibilities that are interdependent; 3) there is a communication structure that fosters the sharing of information; 4) there must be a sense of mutual accountability (Quinn et al., 2007). In term of PhD supervision, the supervisor and his/her PhD student are sharing the same goal, that is, the successful completion of the student's PhD thesis; and the supervisor and the student both have responsibilities for the research project, they have joint responsibilities and each one has their roles, and their individual responsibility for the project is interdependent. As one of the student said, ''I think the project is not only yours, we (PhD student) do the main job, the supervisor has joint responsibilities as well in terms of quality control, providing critical reviews, and so on…' (Group 3 student, 22/05/09), which is echoed by comment provided by the interviewed supervisor: ''we (the supervisor and the student) are not always socializing outside of work, but we will do things together as a team, you know. And that is quite important'' (Group6 supervisor, 11/06/09).

Let us now move on the following fragment, transcribed from interviews with student from Group 3, who is a PhD student from the Design and Technology department, and was doing data analysis while the meeting was recorded. In this fragment, the student talked about how he negotiated the direction of his research with his supervisor at the beginning of his PhD and again at the selected most helpful moment:

'…We had some trials with chairs, before that he suggested me to do the trial with motorbikes, but I thought… at the beginning, that was in the first year, I thought it was too complex to make a prototype of motorbike, it will cost a lot of time and money, so I don't think it's a good idea. So I talked to him, and he agreed with me, then we modified the direction again. Generally, I agree with his suggestion about directions, the big picture, but sometime if something is wrong, I

will tell him, and we can modify, that is what we were doing in that moment…' (Group 3 student, 22/05/09)

As we can see from the quotation before, the student valued the participative decision making process he had with his supervisor, and believed it was one of the most helpful moments for him, as he tended to have a greater commitment to implementing a decision in which he was involved, and he understood the reasons behind the decision better which also enhanced his skills and abilities and helped him to grow and develop as an individual. This is reflecting the supervisor's performance of the facilitator role's competency of 'using participative decision making'. According to the literature, participative decision making techniques are developed as a result of extending the concept of democracy to the workplace (Weisbord, 1987); while in PhD supervision meetings, similarly, participative decision making techniques are built on the assumption that student should have the opportunity to have input into decisions that affect their research. As argued by Vilkinas, it is important to involve students in decision-making about their thesis because by using participative decision making, more information can be shared between the supervisor and the student, which contribute to generation of research directions or decisions that are in the interest of both the supervisor and the student (Vilkinas, 2008). What is also worth noticing is that, participative decision making is not a single technique that can be applied to all situations, the supervisor needs to use the position power or expertise power to influence while negotiating with the student, especially when the student does not have the proper expertise to make high-quality decisions and that is when the supervisor need to use his/her expertise power, which will be discussed later in more details in the broker role.

Now, I would like to look at another fragment that shows the performance of the third competency of the facilitator role. It is transcribed from interviews with student from Group 6, who was a first year PhD student from the Design and Technology department, and was doing the literature review while the meeting was recorded. He worked in the design industry before starting the PhD 9 months before, in this

fragment, the student was talking about how he used to have problems working with people from the same office at the beginning of his PhD, and how his supervisor helped him to solve the problem.

'…It is just... I think because I was... when I first meet people, I can be relatively ... I don't know. I am not very quiet in the office, and then I think one guy who is a lecturer, said that I need to do something and I said no, it was jokingly, but he took it very badly, and so he then complained to my supervisor and things. And my supervisor helped me to solve... and I think we are good now…' (Group 6 student, 10/06/09)

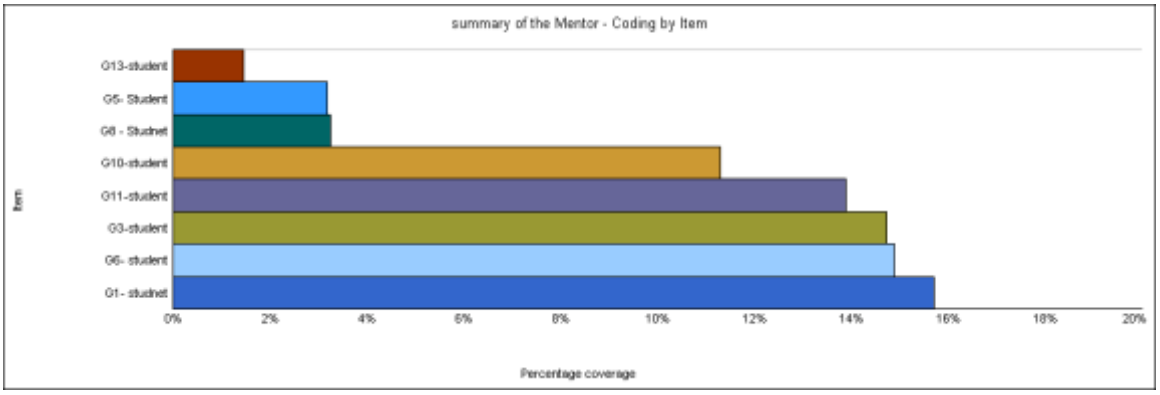
As we can see from the quotation before, this student had a difficult time at the beginning of the PhD, his colleagues from the same office complained about him being too nosey and one of the lecturer made complains to his supervisor because he took the student's joke seriously. After the conflicts between him and the other people at the work place broke out, his supervisor stepped in and helped to solve the problem by adopting a solution-oriented conflict-handling strategy, and familiarized him with the 'working code' of the department. This can be recognized as reflecting the facilitator role in terms of the competency of 'managing conflict'. Conflicts in organization develop for a wide variety of reasons, often because of individual differences, misunderstanding or communication errors, and misperceptions that are related to differing worldviews held by different cultural groups (Quinn et al., 2007). According to the quotation above, the student's problem with his colleague was caused by individual differences and communication errors, which lead other people to disapprove with his attitudes. According to Lippitt's (1982) research, managerial leaders were spending between 20 and 50 percent of their time dealing with organizational conflicts, and these numbers were expected to have increased since then (Quinn et al., 2007). But in PhD supervisory relationship, conflict does not happen that often, partly because in Social Sciences, PhD students do not work in teams. They generally work independently on his/her own project. More importantly, as the only people he/she need to work closely with, the supervisor mutually shared his/her long-term goal of completing the PhD, disagreements may exists only in

terms of the path or means to accomplish the goal. According to the result, this is the only moment where the supervisor performing the function of 'managing conflict'.

5.4.2.5. The Mentor Role

The mentor is the next managerial role I want to look at. It is one of the managerial leadership roles in the human relations model, which is characterized by effective communication, understanding self and others, and developing employees. It reflects a caring, empathetic orientation. The research results indicated that, 9 out of 13 students said that their 'most helpful' part(s) of the supervision meeting included moments when the mentor role was delivered by their supervisor. These students are from Group13, Group5, Group8, Group10, Group11, Group3, Group6, and Group1. The percentage coverage, dividing the total words of the source coded to the node by the whole source document, rages from 15.71% in Group1 to 1.44% in Group 13 (See table 5.4.2.5-1).

Table 5.4.2.5-1 summary of the Mentor Role – the most helpful moment- Coding by Item



I will now present several extracts which typify the delivery of the mentor role in the most helpful moments. In the first fragment, the student was writing up when the video was recorded; and in the second fragment, the student was doing data analysis when his meeting was recorded. Regarding to one of the most helpful moment selected, they made the following comments:

'…The reason I think this is the most important part, or the most helpful moment is because… hmmm… my supervisor is very communicative, now he is trying to make a conclusion of the meeting, to make what he said more focus, and I found it very useful and positive… and his answers are always very clear and I don't feel confused because he does not use jargons or difficulty terminologies to confuse me…' (Group1 student, 16/06/09)

'…I take his comment on board better because of the positive feedback to start with. And I am someone who… I know I am someone who…can struggle at a time with criticism. And it's something I am aware of something that I continually try to work on...' (Group13 student, 27/08/09)

In each of the two fragments, students described effective communication with their supervisors. The Student from group 1 talked about how his supervisor summarised their meeting in a way that make the focus clearer for the student, and he also mentioned how his supervisor avoid using terminologies that would probably confuse him. The student from group 13 described how his supervisor managed to make the student accept criticism by providing some positive feedback first. According to the CVF, these can be recognized as reflecting the performance of the mentor role's competency of 'effective communication' by the supervisor.

Interpersonal communication is a complex process which contains exchange of information, facts, ideas, and feelings (Quinn et al., 2007). In supervisory relationships, PhD students and supervisors are required to communicate to set up tasks, develop objectives, share information and ideas, and identify and solve problems. The ability to communicate effectively is important for supervision effectiveness. The quotations provided above reveals that, in identifying the most helpful moment in supervision meetings, effective communication between the PhD student and their supervisor is recognized and appreciated by most students. According to the literature, one of the elements for effective interpersonal communication is the ability to express one's ideas clearly (Samovar and Mills, 1998).

For example in Group 1, the supervisor's conclusion of the meeting and avoid using jargon during the conversation both helped him in expressing his ideas clearly, and the student recognized these as the most helpful moments, which adding to the overall effectiveness of their supervisory relationship. Also, according to Switzler's framework for effective communication, an important rule for effective communication is to understand the audience, to analyze and set the climate (Quinn et al., 2007). Understanding of the audience can help to create the right audience-specific message, which including a mood and tone favorable for the audience to interpret and accept. For student from Group 13, before delivering a criticism, the supervisor started with positive feedback, which proved to be an effective communication style with this specific student as the criticism was taken on board better.

Now, I would like to look at another fragment that shows the performance of second competency of the mentor role. The following transcriptions are from interviews with student from group 3 and group 5. Both of them are from the Design and Technology department, and were doing data analysis while their meetings were recorded. As we can see, they both commended on the supervisor's role in terms of developing their research-related skills:

'…I think it is just helpful …it is help to improve my (skills) on structuring, my experience with writing, and constructing arguments, organizing your thoughts, hmm… and able to take a step back almost and … put your points… in the most concise and most organized (ways)…' (Group5 Students, 09/06/09)

'…I always want to know the reason. I like the way he explain why he think this is necessary so I can understand the cause of it, the root of it, I think this is research activities, the origin, the cause, and the reason. It helped me to improve my own skills…' (Group3 Students, 22/05/09)

In the above two fragments, the student described how their supervisor helped to improve their research-related skills. This can be seen as reflecting the mentor role's competency of 'developing employees'. Traditionally, post-graduate students are assumed to be 'always/already' researcher with excellent research-related skills, such as critical thinking and writing, etc (Johnson, Lee, & Green, 2000); and the supervisor's job is to 'take talent' rather than 'to grow talent' (Manathunga & Goozée, 2007). With the rapid growth of PhD student numbers, and the fact that not all students were well equipped with good research skills, systematic research training programmes have been developed and provided in the first year, at the same time, supervisors have been encouraged to take a more active role in developing student research and transferable skills (Acker, Hill, & Black, 1994; Manathunga & Goozée, 2007). According to the results, this active role was welcomed by students.

Now let us look at another fragment that reflects the 'developing employees' competency but in a slightly different way. In the following transcription, the student form Group 3 described how his supervisor helped him in developing transferable skills by providing teaching opportunities for him in the department:

'…Your (My) supervisor provides some chances for you (me) to develop your (my) personal ability and this is quite good. I really appreciate it. And the supervisor also gives you (me) more opportunities to get more knowledge and experiences, I appreciate it very much. And I think it's also good for your relationship with your supervisors…' (Group3 Students, 22/05/09)

As Quinn argued that, for the managerial leader, one of the main approaches in terms of developing employees is delegation that focuses on developing employees' competencies and abilities by providing them with opportunities to take on more responsibilities (Quinn et al., 2007). Developing PhD student's transferable skills is

another aspect of the 'developing employees' competency, it is not only valued by the student but also valued by the supervisor. The supervisor from Group3 made the following comment when talking about co-authoring a chapter of a book with his student, he said:

''…I am a big believer in allowing students to achieve as much as they can through the process of the PhD in terms of academic publications, in terms of getting his CV as strong as possible for when he leaves the university…So it fits in quite nicely as a separate aspect to him, to his education, and his career development…' (Group3 Supervisor, 26/05/10)

Next, let us move on to look at two more fragments that show a different pattern of 'developing employees'. PhD Students form group 8 and 5 made comments on freedom given by the supervisors:

'…she never tries to control me like, I don't know about that, and you should not do it. You know. She has been always helpful and let me leading my own way, you know, if you (the student)think it is right, and then go and do it…' (Group 8 student, 11/06/10)

'…I think my supervisor generally let me make my own decisions and decide on the direction that I take, and so it is predominantly driven by me, the direction where I am going, I think…' (Group 5 student, 09/06/09)

As we can learn from quotations listed above from group 8 and 5, students valued the freedom and independence they were given. This 'freedom given' approach is one of the job enrichment methods that help to develop employees by giving individuals autonomy and opportunities for achievement, recognition, responsibility, and advancement, their motivation, satisfaction and performance can be improved

(Quinn et al., 2007). Heckman and Oldham also mentioned that, as one of the five core job characteristics, autonomy leads to the psychological state that influences personal and work outcomes (Heckman and Oldham, 1975). In the study, when students have more control over how research is designed and organized, it poetically increased the core job characteristics in terms of skill variety, task identity, and autonomy; the research tends to be more interesting and motivating, student take more ownership of it and the more willing to invest in finding ways to make the research better.

There was another kind of job-enrichment strategy that contributes to 'developing employees' observed in this research. In the following fragment, the student from group one described how he learned from his supervisor's experience:

'…My supervisor is very good at SPSS, and the most important is his experiences and knowledge about it, like, the way he do the analysis, that (is something) I can't get from any book. So I think that's very important for me…' (Group 1 student, 16/06/09)

As we can see, the student learned from the supervisor's experience – 'the way he do the analyses', and he believed this is something he cannot get form any kind of text books. According to the literature, this fragment reflects knowledge transfer. From the epistemological point of view, there are two kinds of knowledge: 1) explicit knowledge is knowledge about facts, frameworks, and concepts and can be written down and stored; and 2) implicit (tact) knowledge is contained in elusive forms such as experiences, intuition, and judgment, which is informal and difficult to store and transform like explicit knowledge, but of great value and benefit (Jakubik, 2007; Spender 1996). The student from group one provided an example of implicit knowledge transfer during the PhD supervision. According to the literature, Implicit knowledge at the individual level is automatic knowledge, such as for example the artistic skills of a person, while at the social level, it is called collective knowledge

that is the sum of collective routines and experiences (Jakubik, 2007); and the role of implicit knowledge was highlighted in the process of organizational knowledge creation and transfer (Nanaka and Takeuchi, 1995). In PhD supervisory relationship, as expertise, the supervisor is a great source of tacit knowledge that could benefit the student if tacit knowledge is transferred through interpersonal interactions additional to explicit knowledge such as theories and methodologies.

Next, I would like to move on to present some fragments that reflect the supervisor's performance of the mentor role in terms of the third competency. The PhD Student from group one and group 11 described how they felt being understood by the supervisor, and how they trusted them:

'…because he also had done some similar research in the past, he can understand my difficulties with sympathy....' (Group1 student, 16/06/10)

The student from group 11 also mentioned:

'…I trusted him. And I feel he is always on my side, which is really good. If we have a formal thing like my upgrade panel or anything like that, he will fight my corner…' (Group11 student, 12/08/10)

The interview revealed that these participants felt understood when empathy and care were delivered by supervisor, which has been described by some of them as a kind of 'trust' in their supervision relationship. This can be recognized as reflecting the performance of the 'understanding self and others' competency of the mentor role, which is described by Vilkinas as including the supervisor offer the student with empathy and care (2002). Each individual PhD student is unique in some way; they differ in their research-related abilities, as well as feelings, needs, and concerns and it is important for supervisor to be able to recognize individual student's abilities and understand their reactions. This understanding and being aware proved to be positive in enhancing supervision effectiveness. Students from group one and 11

both selected the moment when their supervisor offered them care and empathy as one of their most helpful moments. This echoes previous literature which argue that, with the feeling of being cared and understood, students are more likely to have a positive attitude towards their supervisor, and this positive attitude, in turn, helps to increase student's ability to develop trust as well as understanding for the supervisor (Wisker, 2005). It is also suggested that, when the supervisory relationship grow more trusting, potential conflicts might be solved with understating and open talking, misunderstandings caused by uncertainties can be avoided, and overall supervision effectiveness could also be enhanced. An example of this- potential conflicts solved with understating of each other, was also observed in this research. The following fragment is transcribed from interview with group 6 student, where he describes how he was firstly annoyed by the supervisor's unavailability and failed to process his up-grading document on time, and later on after he got to know the supervisor better, he knew the reason behind the unavailability and this does not seems to be a problem for him anymore:

'… (My supervisor) doesn't work full time at the moment, for personal reasons. And, as you see, she has a quite ...hectic personal life at the moment, and I think she is just a human being, and sometime, she forgets, so...I think it is understandable she has more important thing to do…' (Group6 student, 10/06/10)

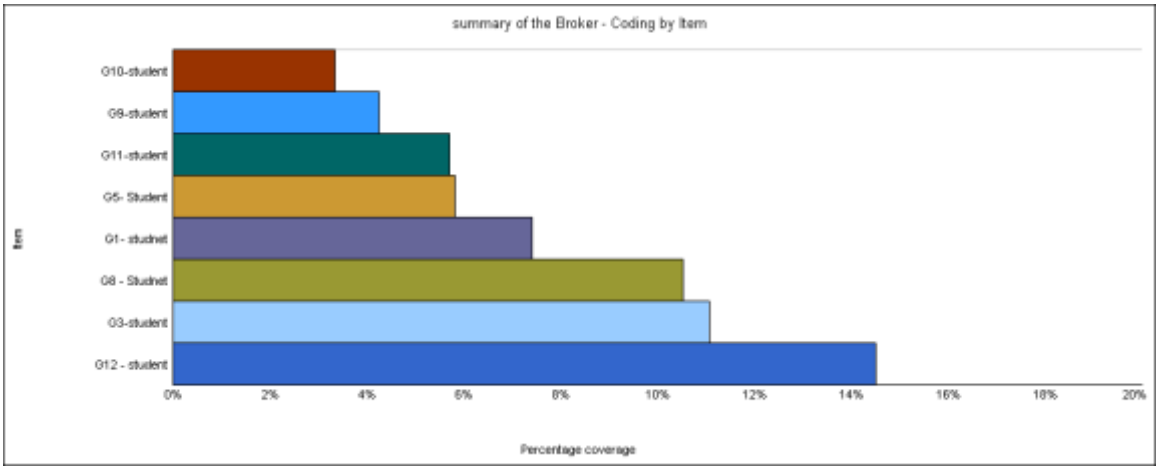
According to the interview with the student from group 6, the supervisor has been unavailable for a relatively long period for personal reasons, and with the student's understanding of the supervisor, the unavailability and delay of progress does not cause any conflicts between them, which is in agreement with the literature in terms of solving potential conflict with understanding of each other.

5.4.2.6 The Broker Role

After examining the mentor role, now I would like to look at the broker role, which is in the open system models and focuses on social skills. It is characterized by the

building and maintaining a power base, negotiating agreement and commitment, and presenting ideas. Similar to the mentor role, there are 8 students believed that their 'most helpful' part(s) of the supervision meeting included moments when the supervisor was operating in the Broker role. These students were from Group 10, Group 9, Group 11 Group 5, Group 1, Group 8, Grooup3, and Group 12. The percentage ranges from 3.34% in Group 10 to 12.24% in Group 12 (See table 5.4.2.6-1).

Table 5.4.2.6-1 summary of the Broker Role- the most helpful moment- Coding by Item



I will now present several extracts which typify the delivery of the broker role during the selected moments. In the first fragment, the Group 12 student was talking about how his supervisor helped to sort out paperwork issues with the department administration staff by using his position power:

'…But all the admin side, he sort out. And I originally tried to sort the admin things out, and it is easier for me to do the informal things, and I will then need somebody with a bit more power, my supervisor to deal with it. Because he knows the system bit more, so he will do it…' (Group12 student, 03/11/09)

Students from group 9 and group 12 described how their supervisor helped them with their PhD project by using expert knowledge and experiences:

'…He is familiar with the theoretical framework side, and he will link this two

together, so he gave me a good grounding, and gave me expertise in where he works…'(Group12 student,03/11/09)

'…comparing it to my model, this observation he made here, and this is fantastic, because we draw on his experience of what he knows about interpretation, and where it's used in some general teaching models, and he is making an observation…'(Group9 student,24/06/10)

The PhD student from group 10 talked about how her supervisor provided her with useful information in terms of where to look for further research opportunities:

'…And he kind of suggested a place called HSL in Boston. They do a lot occupational psychology related research, it is quite engineering base, but they hire up doctoral occupational psychologists. So it is just nice to hear of a company who does the specific organizational behaviour related research like that. So I think, yes, I can check this place out. Which is why I think it is very helpful…' (Group10 student, 28/07/10)

In each of the four fragments provide above, PhD supervisors were operating in the broker role in terms of 'building and maintaining a power base'. According to Kanter, the term ''power'' refers to ''the ability to produce; the capacity to mobilize people and resources to get things done'' (Quinn et al., 2007). One of the misunderstandings about power is that authority and power is the same thing; however, the power and influence one has on other people do not necessarily come with the position one holds. Instead, the managerial leader's ability to influence and convince other people more comes from the power of ideas, effective communication skills.

It can be learned from Quinn's management theory that power come from four sources: 1) position power which is attached to formal authority with three elements including legitimate authority, reward power and coercive power; 2) personal power, which comes from the shape and impact one has on other peoples, 3) expert power that based on the expertise that one has in a particular area, in this study, the

supervisor's expertise in the related research area; 4) network power, which is also known as 'social capital', which plays an important role in terms of long-terms personal and organizational development. In PhD supervision, this function also includes building and maintaining networks with examiner and decision-makers (Vilkinas, 2005).

In this research, the moments PhD students selected reflected the use of this competency: group 12 student described how his supervisor used the position power; students from group 9 and 12 described how the supervisor used the expert power; and the student from group 10 described how the supervisor used the network power by sharing information with the student, which is one of the core networking activities (Quinn et al., 2007).

Now let us move on to look at another two fragments that reflect the use of the broker role, in a different pattern.

'…We have got quite different academic interests, I am interested in theory and he is more interested in theatre. So when I started, it was quite…in my first year, I can tell he wants me to move into a slightly different direction, and I am quite resistant at first, but later on… we talked about it in more details and when I followed his advice and looked it as a different way of working, so that was good. Here, in terms of approaches to work, you can tell he is very interested in technical side which I find it boring, but it is useful…' (Group11 student, 12/08/10)

'…So when I got these wonderful ideas, I think they are wonderful, he agree with them, and then he is manipulating the conversation to bring it down to maybe you should look at the ground attitude rather than just the people . So he is giving you that kind of ... (direct) ... but at the same time, balancing it with the areas that I want to look at…' (Group12 student, 03/11/09)

In the above two fragments, the student described how they negotiated with their supervisor about their research direction and research focus. According to the quotation from student in group 11, she and her supervisor have different academic interests, and the supervisor tried to adjust the student's research direction at the beginning and met resistance; and later on, with more discussion about the details, the student find the supervisor's idea is helpful and followed his advice – 'I am quite resistant at first, but later on… we talked about it in more details and when I followed his advice and looked it as a different way of working, so that was good'. Similarly, student from group 12 also provided an example of the supervisor balancing the student's and the supervisor's interest area and negotiated on the research direction. According to the CVF, this can be seen as reflecting the competency of the broker role in terms of 'negotiating agreement and commitment'. It is a kind of balancing act between looking after the needs and interests of different members in an organization, and gets the designed job done as well. In PhD supervision, the role of negotiating agreement and commitment was adopted in situations where the supervisor and the student have different research interests and directions for the project. Effective negotiation is often refers to as ''dialogue'', which is a ''process of working things out through a thoughtful sharing of viewpoints'' (Quinn et al., 2007, p 314). In order to achieve negotiation effectiveness, there are three important conditions: mutual purpose, mutual meaning, and mutual respect (Quinn et al., 2007). In supervisory relationships, the supervisor and the student have a mutually shared purpose, which is the PhD project. Mutual meaning involves each member knowing what other is saying, which can be enhanced by sharing the same values, definitions of terms, words, and expressions. Similar to mutual meaning, mutual respect can also be improved through more positive interactions, such as listening respectfully.

Next, I would like to present a fragment which reflects the use of the third competency of the broker role. This is transcribed from interviews with the student from group 12.

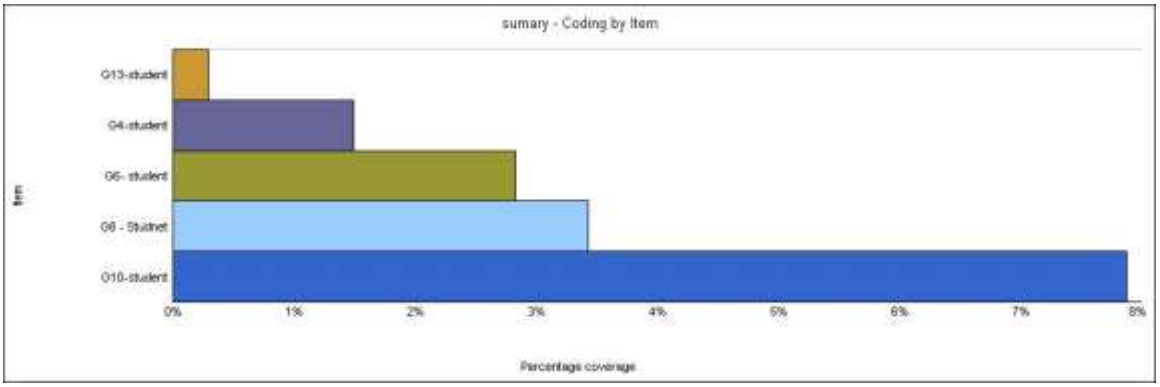
'…he suggested it (the student present his idea by drawing a picture), even though I could happily explain it with talking. I could have explained it by drawing it with my finger... that gives the visualisation to both of us, so that we can have a conversation ... so it is really important that different learning styles and teaching styles will brought in there…' (Group12 student, 03/11/09)

Here, we see the supervisor suggested using figures to aid and making clear explanation of his ideas. The student regarded it as teaching and learning style, while according to the CVF, it is reflecting the competency of 'presenting ideas', which basically means giving effective presentations of communication tasks, such as writing reports, supervising, negotiating, etc. in this fragment, the supervisor showed the student a better way to present his results, which is perceived as very helpful by the student.

5.4.2.7 The Coordinator Role

Here, I want to present the coordinator role, which is less presented compared to the managerial role discussed before. According to the research findings, 5 PhD student participants believed that their 'most helpful' part(s) of the supervision meeting include moments when the supervisor was operating in the monitor role. The percentage coverage rages from 0.29% in Group13 to 7.87% in Group 10 (See table 5.4.2.7-1).

Table 5.4.2.7-1 summary of the Coordinator Role- the most helpful moment-coding by Item



I will now present fragments which reflect the delivery of the coordinator role by the supervisor. In the following fragment, the student from group 8 was in the second year of her PhD, and was doing data analysis while the meeting was recorded; she describes how her supervisor provided her with a new data set to analyze when problems were noticed with her old data set, which she need to use for comparison purpose in the thesis:

'…At the stage, she gives a new data set, and I feel quite relived. If she couldn't find another data set, my whole study was going to be stopped. You know, so, this is the moment she send me the new data set, which is good…' (Group 8 student, 11/06/10)

According to the CVF, this reflects the supervisor's performance of the coordinator role in terms of the competency of 'managing projects'. Different from the Monitor role discussed in the previous part, for PhD supervisors, the coordinator role's managing projects function mainly involves source allocation, including funding budges and other sources needed for the research, such as equipment, lab, data, etc (Vilkinas, 2008). Managing project strategies represented by supervisor in the fragment presented above reflect how the supervisor managed research resources needed by the student.

Next, let us look at another fragment which shows the performance of the coordinator role in a different pattern:

'…This is helpful because this is where he reminds me to send a copy to Tony, my second supervisor, and what we are going to do next…' (Group 13 student, 27/08/09)

'…and it is nice to understand what the current situation is. I would say I would rather have two people because they both have different opinions. But, as long as I know there is a reason why I cannot at the moment, then it is not a problem…' (Group 6 student, 10/06/09)

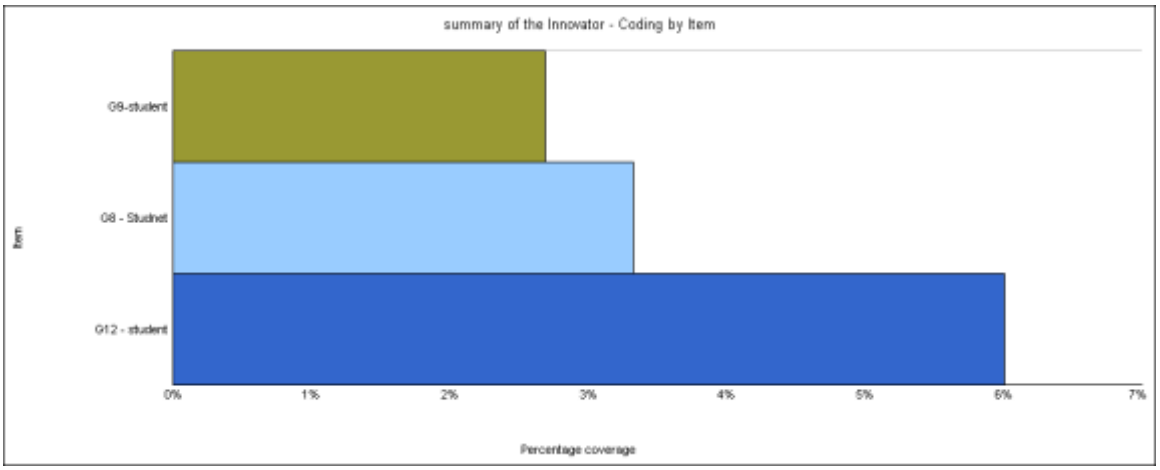
In the fragment from group 13, the supervisor reminded the student to send a copy of the new reference to the second supervisor, so he/she could know what is the next stage for the project; while in group 6, the second supervisor was not available for the meeting, and the main supervisor passed on his/her explanation to the student. Supervisors in group 13 and 6 performed the coordinator role's competency of 'managing across functions' by providing the cross-functional team with constantly undated and relevant information. The supervisor is required to perform this role when a cross-functional team exists. Cross-function teams are made up of ''specialists from different functional areas, often brought together on an ad hoc basis, to perform some organizational task in a more effective, timelier manner'' (Quinn et al., 2007, pp. 179). For the PhD supervisor, cross-function team normally exists in the form of joint supervision which includes more than one supervisor coming from different research area supervising one student, and the main supervisor has the responsibility to hold the team together to work effectively towards the task. By updating the team with relevant information, team members could have a better understanding of the situation, process, as well as other members, which add value to overall performance. Apart from managing a co-supervision, according to the literature, the supervisor also needs to manage across the various administrative units in university when needed, which is also included in this role (Vilkinas, 2008). This particular issue does not come up in this study.

5.3.2.8 The Innovator Role

Finally, let us look at the least represented managerial role in the selected most helpful moments - the Innovator role. According to the research findings, student participants from group 9, group 8 and group 12 selected their 'most helpful' part(s) of the supervision meeting covered moments when the supervisor was operating in the innovator role. The percentage coverage rages for each group is 2.69% in group9, 3.33% in group 8, and 6% in group 12(See table 5.4.2.8-1).

It is another role in the open system model, which involves the use of creativity and the management of organizational changes and transitions, as well as providing the manger with opportunities to affirm the value of individual members (Quinn et al., 2007). It is characterized by living with change, thinking creatively, and managing change. Only one of the three competencies, thinking creatively, was represented in 'the most helpful moments' selected by students participants, and is explained in details in the following part.

Table 5.4.2.8-1 summary of the Innovator Role- the most helpful moment- Coding by Item



I will now present fragments which reflect the delivery of the coordinator role by the supervisor:

'…She explored my ideas by coming up with some new ideas that I never thought before, and it kind of helpful…to brainstorm my ideas….' (Group8 student, 11/06/10)

'…So, this to me, it's very important for me to have a supervisor who doesn't say this is the only way this can be done. So it is very helpful to me, and more importantly, I can go to my supervisor with my ideas, and he is open to listen to them, and encourage me to operate on what I thought, trying out different possibilities…'(Group12 student, 03/11/09)

The student from group 8 described how his supervisor explored his ideas in the new direction by brainstorming; and a similar observation has been made during interviews with group 12 student, where the supervisor was encouraging the student to be creative in problem-solving and it is also appreciated by the student.

This reflects the performance of the innovator role's competency of 'thinking creatively'. In PhD supervisory activities, thinking creatively is generally represented in terms of associating known things or ideas into new combinations or ideas and open to new and different approaches to problems that are encountered. It is a process that involves the generation of new ideas and solutions. A comparison could be made between 'thinking creatively' and 'analyzing information with critical thinking' which situated in the Monitor role. Starts with one problem, creative thinking is imaginative, provocative, it encourage brain storming and free association, which generate numerous possibilities as a result. Whereas with critical thinking, also begin with one problem, through the process of logical and vertical thinking, normally only one solution was produced as a result. According to the interviews, PhD students found it to be helpful when their supervisor are developing creative ways of presenting the thesis and of discussing issues, looking for new and different

approaches to problems that emerged, also supported by previous research(Vilkinas, 2002).

5.4.3 Concluding Remarks on the findings of the most helpful moments

This chapter has focused on selected effective PhD supervisory moments to interpret the supervisor's behaviors from a role-performance perspective in light of the CVF. It aimed to gather rich and valuable insights into the PhD supervision practices that are perceived as effective by students in terms of what kind of managerial roles are displayed by the supervisor at these moments.

In this chapter, I have analysed the PhD students' selections of the most helpful supervision moments. Supporting a holistic view towards the understanding of PhD students, the findings reveal diverse factors which add to the overall effectiveness and satisfaction on supervision experiences (Cullen, et al., 1994). These factors range from the supervisor's effective communication skills, opportunities provided for the student's personal growth, critical feedback provided by the supervisor, to the autonomy given to students.

I then examined the supervisor's activities in delivering these effectiveness-contributing factors in light of the eight CVF managerial roles according to their competencies and functions. In terms of my data, all eight CVF roles are represented by students' selections of the most effective moments – all of the CVF roles have been performed by the supervisor to different degrees.

Special notice should be given to the facilitator role, which was argued as ''*less likely to be required in terms of PhD supervision*'' because ''*in most instances supervisors will not have a great need for the facilitator role as the focus tend to be one PhD supervisor to one student*'' (Vilkinas, 2002, p134). According to Vilkinas'

argument, this role is only likely to be required if the supervisor is supervising a cohort of research students that need to work as a team. However, the research results showed that, the facilitator's team building function is often required and adopted, and it is highly valued by the interviewed student in this research. It is because in all of the interviewed groups, individual student is working on his/her own project with no other researcher student involved, and some of them seems themselves as working closely with the supervisor as a team, where participative decision making and team building skills were highly valued.

In the next chapter, I will further explore PhD supervision particularly focusing on the least helpful moments to examine the supervisor's role performance at the moment when things go wrong. Suggestions provided by students for further improvement will also be analysed in the next chapter, to identify which managerial roles are required to be performed more often by the supervisor in the further.

Chapter 6 The Least Helpful Supervision Moments

6.1 Introduction

While the previous chapter examined PhD supervision in terms the most helpful supervision moments in light of the CVF, in this chapter I focus mostly on PhD supervision moments that are selected by the student as 'the least helpful' during the supervision. This allows me to closely analyze accounts of managerial roles performed by the supervisor, and consider the circumstances for the effective supervision behaviours by looking at supervision moments where the supervisor's behaviours are lack of compatibility with the demands of their student and perceived as 'least helpful'. In the first part of the chapter, supervisory behaviours in 'the least helpful moments' of the recorded supervision meetings will be analyzed in the same manner as 'the most helpful moments' in chapter 5. In the second part of this chapter, responses regarding 'further improvement' will be analyzed to explore the student's perceptions of effective roles performed by the supervisor.

Before presenting the result, I shall explain why it is important to examine the supervisor's behaviours in the least helpful supervision moments. Supervision effectiveness depends on the extent to which the supervision's performance of the managerial role matches the demand of the student. According to the CVF, values that reflect certain effectiveness criteria of certain managerial behaviours can become criteria of ineffectiveness if pursued unwisely. According to Quinn's concepts of 'positive zone' and 'negative zone' (see Figure3.4.2-1), underemphasized or over emphasized the managerial role can both cause ineffectiveness. For example, with regard to the open system model, Quinn (1991) argues that an overemphasis on change, innovation, adaptation, may result in 'premature responsiveness' and 'disastrous experimentation'; with regard to the rational goal model, too much emphasis on accomplishment, productivity and impact may turn into 'perpetual exertion', and 'human exhaustion'; with regard to internal process orientation, stability, control and continuity can turn into 'habitual perpetuation' and 'ironbound

tradition' if overemphasized; in human relation model, commitment, and morale could become 'extreme permissiveness' and 'uncontrolled individualism' if over-emphasized.

In PhD supervision, the appropriate use of each role requires the supervisor not to overuse or underuse any role and to match its use to the student's requirement at the time (Quinn et al., 2007; Vilkinas, 2002). The student who used to work independently may find it very annoying to work with the supervisor who give too many directions; while the student who like to have directions may struggle to work with the supervisor who do not give directions but always encourage the student to work independently. From the perspective, I will explore the various ways in which the supervisor failed to execute the operational roles appropriately.

During the IPR interviews with supervisors, the selected video clips of 'the least helpful moments' and 'the most helpful moments' were not displayed separately, they were played back to interviewees in chronological order. The supervisor participants were not informed of neither the criteria for selecting the video clip nor who selected them. First, it helps the supervisor to recall details of the meeting in the right order; second, by mixing the video chunks together, supervisors are less likely to distinguish those good moments from the 'less-good' ones and produce target-focused answers during the interview; Second, it helps to protect the student participants by reducing any potential influences the selection might have on their future supervision relationship. However, the trade-off for these advantages mentioned above is that, some of 'the least helpful moments' did not receive attention during the reviewing process, therefore litter comments were provided.

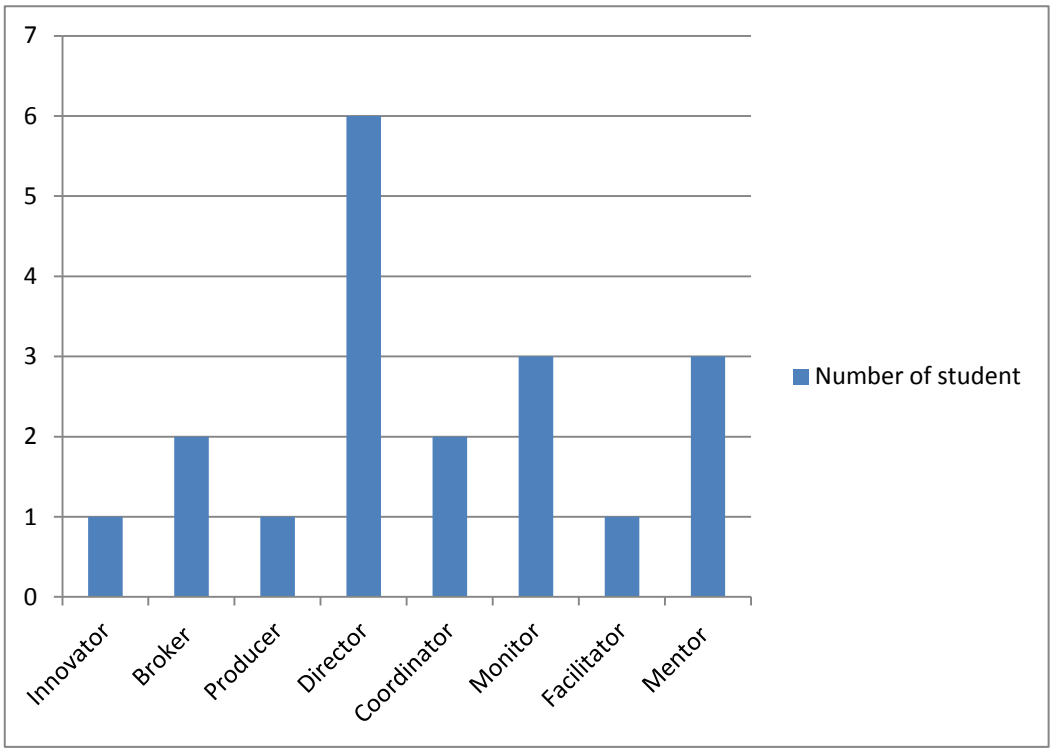
6.2 Research Findings of the least helpful supervision moments

PhD students' selections of 'the least helpful moment(s)' covered all of the eight CVF roles (See table 6.2-1). It can be learned from Table 6.2-1, the Director is the most selected role among the eight roles: 6 out of 13 PhD students' selections of 'the least helpful moments' included moments when his/her supervisor failed to operate the Director role appropriately. The Monitor and the Mentor role were represented in three students' selections, followed by the Coordinator and the Broker role, each was selected by two students. The Innovator, the Producer, and the Facilitator role are the least mentioned.

In this part, I will discuss the following:

- How each role is represented by the least helpful moment
- Why it is perceived as least helpful by the student, whether the role has been overused or underused

Table 6.2-1 CVF roles represented by the least helpful moments due to inappropriate use

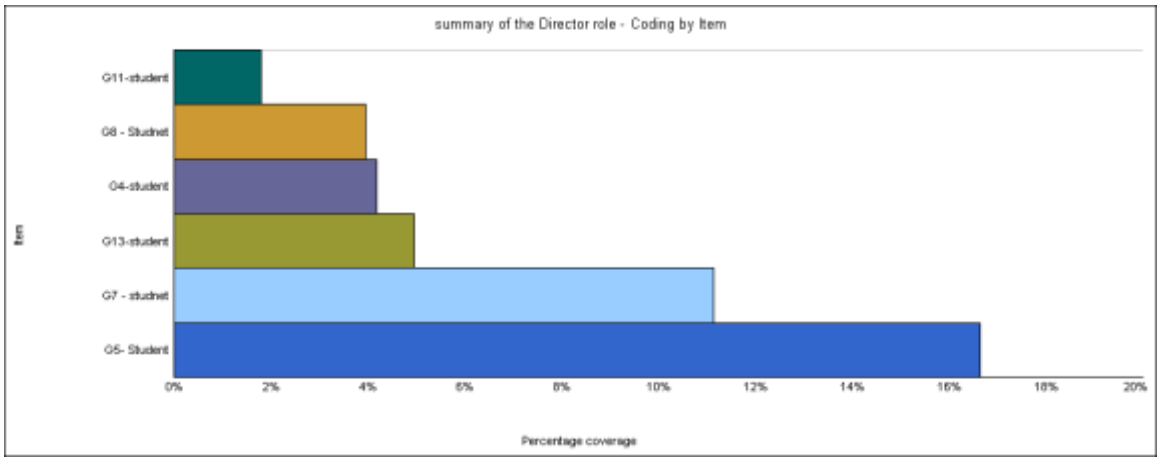


6.2.1 The Director Role

The director is the most represented role according to students' selections of the least helpful moments. According to the results, six students selected their 'least helpful' part(s) of the supervision meeting covered moments the supervisor inappropriately operated in the director role. The percentage coverage rages for each group is 1.79% in group11 to 16.63% in group 5. (See table 6.2.1-1).

It can be learned from figure 6.2.1-1, the interviewed student form group 11, group 8, group 4, group 13, group 7 and group 5 expressed the supervisor's underuse of the director role to different extent as one of the constitutions of their least helpful supervisory moments. I will now present several extracts which typify the inappropriate used of the director role which caused ineffectiveness during the supervisory interaction by the supervisor.

Table 6.2.1-1 summary of the Director Role - the least helpful moment - Coding by Item



In the first fragment, the student from group 4 complained about his supervisor being 'indecisive', and 'unorganized':

'…He (the supervisor) changed his mind quite a lot, and I don't know how to describe this, he is quite indecisive. He doesn't like to make a decision or statement things like that. Sometime I think he should be… a bit more decisive and made more decisions so I know what we wanted this way. Also, you know, you (I) want sort of … more directions. But don't get it…' (Group4 student, 02/06/09)

In this fragment, the student selected the moment when he and his supervisor were talking about what to do for the next stage of his experiment, and the supervisor offered him many suggestions but no decisions. The student selected it as one of his 'least helpful moments'. In the later on IPR interview with his supervisor who responded to this issue, and he said:

''…I had to say, I normally change my mind a bit more on the more fundamental things. I don't know. It's more in the actual writing up of the research. Such as, he had a very good draft, and I then made my comments on one draft and then he worked those comments into the next draft, and then when I saw the next draft, I changed my mind about a particular paragraph or a particular session and then

went back to the original draft. So that's what I mean by me changing my mind a little bit more often. And we have had quite a few major changes of directions, too. Well, change a complete study because of time limit. But those won't change his thesis, you know, his thesis will still be important and the experiment we are doing is still important…' (Group 4 supervisor,05/06/09)

According to the supervisor's responses, his 'changing mind' did not involve changes of the student's thesis and experiment; while the student reported time delays and problems in establishing priorities because of this 'undeceive' character of the supervisor. According to the CVF, this reflected the underuse of the director role (Quinn, et al., 2007). As discussed in the previous section, underuse of the director role can lead to ineffectiveness due to lack of direction and the manager is regarded as 'indecisive' (Quinn et al., 2007), which is the exact same word used by the student from group 4.

In the following fragments, we see two more examples from group 5 and group 7, where the student complained about how the supervisor failed to provide a clear direction for their further work, both reflected the underuse of the director role. In the first fragment, student from group 7 described how he was confused by the supervisor:

'…he does identify where a lot of trimming need to take place, and also where things do need to go in and obviously I need to take those comments and decide how to change it after that. But ... it can be hard to sort of cut down enough without losing the shape of the argument. I try to say indecisive is the wrong word, but there is a contradiction in what he said, and you are not sure how to do it…' (Group7 student, 11/06/10)

'…I guess that is not so helpful, it is confusing... as to... where I should go next or what I should do what. What is the most important thing to focus on? It is confusing

because I wasn't sure about what direction to go and what to do. My supervisor wasn't sure or very clear about what is the right thing to do either. He suggested: 'well, ok, it might be a good idea to do this, actually, no; I think we need to do that.' It is difficult for me to make a decision. He is not making his mind up about ... this important thing to focus on, this direction we should go…' (Group5 student, 09/06/09)

Explanation was provided by group 5 supervisor during the IPR interview for that particular moment, he described the situation as 'a very interesting one', he said:

''…This is an interesting one because this is the first time I have seen that form of the data. I am trying to condensing it down to a form that could be published in a paper rather than have pages and pages of very descriptive tables. So that is the faces of it. It is quite a difficult thing to get clarity on. You can see I am thinking a lot about it, and seeing the best way forward is not quite so obvious. It is not like getting a standard statistical result saying that right, this is what it means, and writes about it. This is a lot more complicated, there are several ways you could do that. So yes, we probably don't come to a clear conclusion in this clip. But, I know he is still working a bit on this, and thinking about this. So this is a middle stage actually...'' (12/06/09)

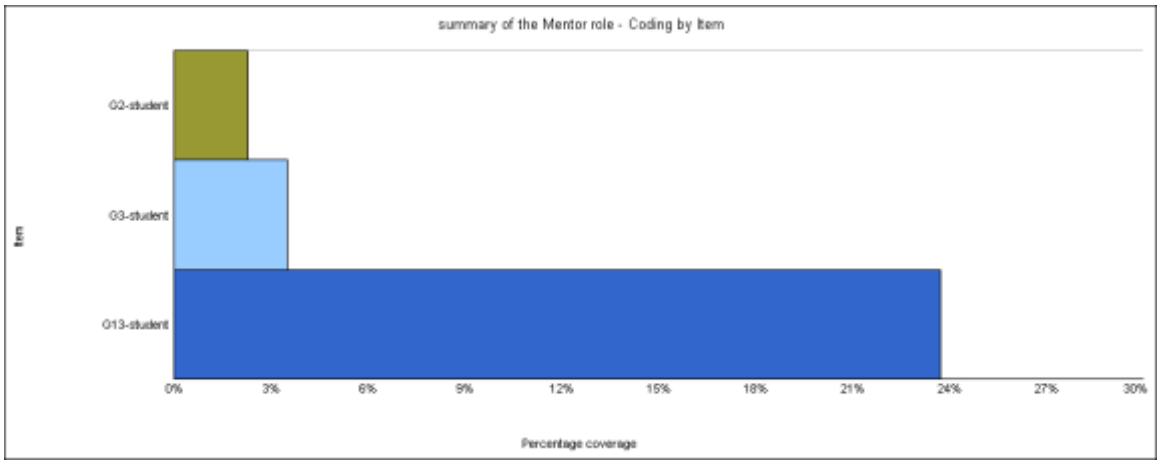
It can be learned that, it was the first time the supervisor saw that form of data, and there were several ways to present it, and he was trying to find out which is the best publishable form.

It can be learned from the examples provided above that, supervision effectiveness can be affected when insufficient direction is provided, and the supervisor can be criticized as 'indecisive', 'unorganized', 'cannot make his/her minds up'.

6.2.2 The Mentor Role

The mentor role is the next highly represented role in terms of the least helpful supervision moments. The research results indicated that, three students said their 'least helpful' part(s) of the supervision meeting included inappropriate use of this role by supervisors. The percentage coverage rages from 2.30% in Group2 to 23.71% in Group13 (See table 6.2.2-1).

Table 6.2.2-1 summary of the Mentor Role - the least helpful moment- Coding by Item



I will now present several extract which typify the inappropriate use of the mentor role in the least helpful moments. In the first fragment, the student described how she was confused by the supervisor when he said something that she cannot understand:

'…he can see things and link things really well between what we are doing now and how that could be followed up into different studies, you know, really, the way he talked about, we can do this, we can do that. Whereas I kind of, I get struggle because I don't have that much research knowledge, and to always see all these different paths and highlight my thoughts. That's the way he started to talk about things and I get confused and not quite understand what he was trying to say, and I

was kind of following him on one level but losing him a little…' (Group13 student, 12/08/10)

We see the student appreciated her supervisor's experiences in the research area; however she failed to understand the supervisor when he started to use a lot of technical words without explanation. According to the IPR interview, supervisor from group 13 told the researcher that, according to his own researcher experiences, the student's research result can make a strong argument in the further, and he tried to let the student know about it. However, he did not aware of the knowledge gap between himself and the student. Because of the student's lack of research experience, she failed to see the picture according to the supervisor's description, and got lost in the conversation.

Student from group2 and group3 also complained about the situation where they got lost because the supervisor did not make clear explanations:

'…But I didn't get it at the start, and that's why I have to ask my own questions too… kind of get out… to explain better, to clarify…' (Group2 student, 20/05/10)

'…He didn't say clearly about that before, because this concept was firstly used in computer sciences instead of product design. So I need to ask him more questions to clarify, how the concept was used in product design or something, to have a better understanding of it…' (Group3 student, 22/05/10)

According to the CVF, the fragment presented above reflected the underuse of the mentor role, where the supervisor failed to communicate effectively. Students' complains were mostly caused by the use of terminologies without adequate explanation as well as unawareness of the gaps in knowledge between the supervisor and the student. Whatever the subject was, majority of the PhD student participants reported that unfamiliar registers, professional or vocational language (Halliday, 1973), had negatively influenced their understanding of the information delivered by

supervisor. The more basic the knowledge the specialist terminology was associated with, the more possible it was that the supervisor assumed his/her student had mastered it well and the less likely they were ready to spend time on the explanation. It is a pitfall for the supervisor to communicate with student effectively: as well-established expertise in areas that they are researching, and the more PhD supervisors know about a topic, the more inclined they are to overestimate how much the student knows about it (Quinn, et al., 2007). In particular, when the imparted knowledge was unfamiliar to the student; more time was needed for students to be able to absorb the information. With these needs insufficiently attended to, difficulties in comprehension increased, and PhD students showed dissatisfaction towards such activities during the meeting. Meanwhile, the supervisor's ineffective communication skills were also blamed for causing confusion.

'…there is a lot of him thinking out loud. (I) sort of just sit there, it's not good to admit it, but I do. And then I force myself to think I need to … (concentrate). There was a whole couple of minutes there, while he was kind of… a better expression was kind of rambling around. And there is a short time just after that, were really helpful. So I think the danger of my perspective is I can lose the really helpful moments I can miss them, because at that point, I think 'oh, he was just repeating himself, he already said this' and I get a little bored now, which is not great to admit. But it does happen. And so therefore, that's why I say it's really not helpful …' (Group13 student, 27/08/09)

Interestingly, during the IPR interview with the supervisor from Group13, as soon as he saw that particular video clip contains the least helpful moment, which described by the student as him 'thinking out loud', the supervisor noticed the problem straight away. By reviewing the video clip, he also noticed that, while he was 'thinking out loud'; the student was not focused, which he did not notice during the real meeting time.

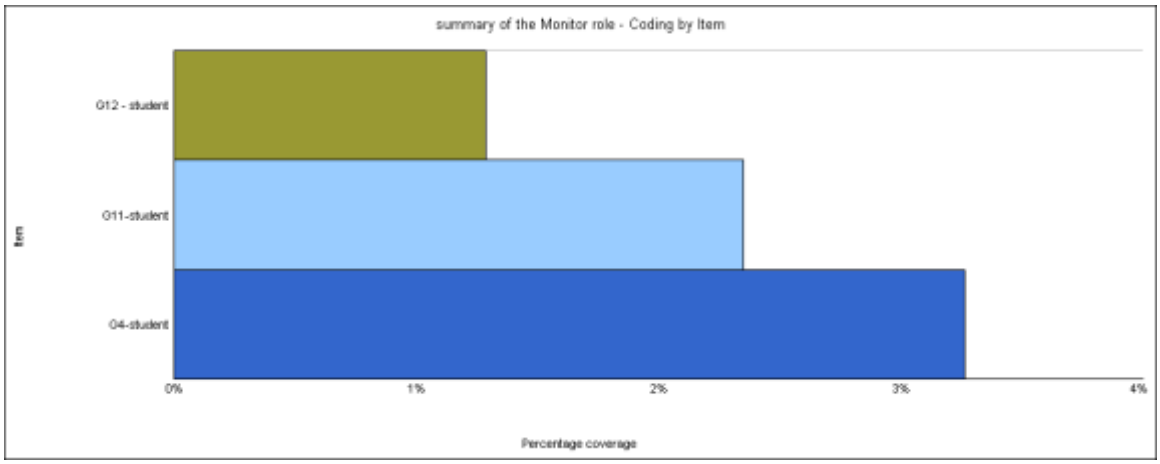
The supervisor's underuse of the mentor role was accused of causing the least helpful moment presented above. Ineffective communication, such as badly

organized conversation, which does not necessarily suggest poor preparation beforehand, but definitely troubled the student, he/she lost the track of what the supervisor wants to express and missed the important information, and reduces the overall effectiveness of the supervision.

6.2.3 The Monitor Role

According to the results, inappropriate use of the monitor role was accused of resulting the 'least helpful moments' of the supervision meeting by three students, and they are form Group 12, Group 11, and Group 4. The percentage coverage rages from 2.35% in Group12 to 3.26% in Group 4 (See table 6.2.3-1).

Table 6.2.3-1 summary of the Monitor Role - the least helpful moment- Coding by Item



Here, I want to discuss how the monitor role was inappropriately applied by the PhD supervisor in different situations. Now let us examine a fragment of narrative from group 12 student, who complained about his supervisor adding more than necessary information and possibilities that complicated the student's research focus. He said:

''…And he talked before, there are lots of great things you can look at, but you need to focus, but he seems contradictory to himself at this point by talking about all these things I could looking at…'(Group12 student,03/11/09)

According to the CVF, this can be recognized as reflecting the underuse of the monitor role in terms of 'manage information overload'. In the most effective moments, the supervisory activities are perceived as 'most effective' when the supervisor helped to reduce unnecessary information. In the fragment presented above, instead of narrowing down the research focus, the supervisor added more possibilities to the student's research, and it turned out to be one of the least effective moments. According to the literature, when people are surrounded by ideas and data that do not tell them what they need to know but that demand attention anyway, student could experience what been called 'information anxiety' (Quinn, et at., 2007; Wurman, 2001)

Now I would like to present another extract which reflects the supervisor's underuse of the monitor role in a different pattern. The student from group four told the researcher how he was annoyed when his supervisor passively participated in the conversation:

''…I know what I am talking about at this stage, but I don't like to do all the talking. He didn't really give me anything back, he just says: 'yea, yeah'. And there is never any sort of things like, 'I think this is good, because of what, or this is not good enough because of what'. It's very much…he just agrees with 'yeah, yeah' …'' (Group4 student, 02/06/09)

According to the CVF, this fragment can be recognized as the underuse of the monitor role in terms of analysing information with critical thinking' (Quinn, et al., 2007). The student was not satisfied with the supervisor's passive role as listener.

I will now show one more extract which demonstrate the overuse of the monitor role.

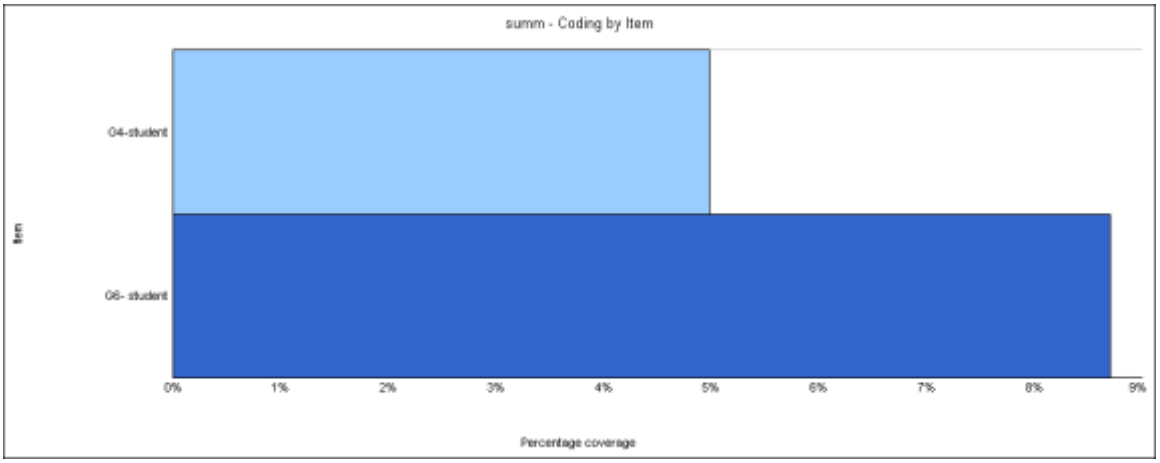
''…He paid a lot of attentions to small things like, I am not putting page numbers in my reference, but the reason is that is only my first draft, and the supervision meeting is quite time consuming, there are more important things to look at, such as my structure...'' (Group11 student, 12/08/10)

According to the CVF, this is reflecting the overuse of the monitor role, which is described by Quinn as 'Trivial rigor' in the negative zone (Quinn, et al., 2007).

6.2.4 The Coordinator Role

Here, I want to present the coordinator role, which is less presented. Student from group 4, and group 6 selected their 'least helpful' part(s) of the supervision meeting included moments when the supervisor operated in the innovator role ineffectively. The percentage coverage rages each group is: 4.98% in group 4 and 8.70% in group 6. (See table 6.2.4-1).

Table 6.2.4-1 summary of the Coordinator Role - the least helpful moment - Coding by Item



In group 4, the student talked about how the supervisor failed to develop a budget plan in advance:

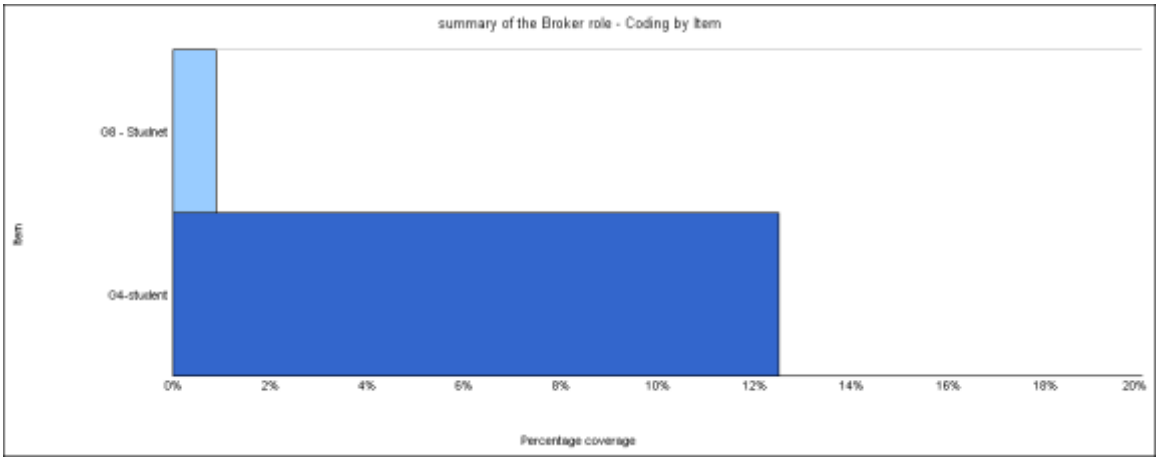
'…I said we need to know what things cost and how much we have, but he hasn't sort of come back and say what we can and can't do. I got four months to go in my thesis, but he still haven't give me an indication of what we can measure because he hasn't give me indication of what money we have or our budget, he hasn't give me indication of what he has in his budget or what we can afford to buy. So for example at the minute I taking a lot of blood samples, but I don't actually know if I am able to analyse them…' (Group4 student, 02/06/09)

According to the CVF, this can be recognized as the supervisor's underuse of the coordinator role in terms of 'managing projects' (Quinn, et al., 2007). The student argued that the supervisor should have informed him about the budget for the project. In this particular case the next stage of his project remained uncertain and his time was running out because his supervisor *''hasn't give indication of what he has in his budge or what we can afford to buy''* (Group4 student, 02/06/09).

6.2.5 The Broker Role

According to the results, two students reported their 'least helpful' part(s) of the supervision meeting included moments when the supervisor was operating in the broker role inappropriately. The percentage coverage rages from 0.89% in Group 8 to 12.51% in Group 4 (See table 6.2.5-1).

Table 6.2.5-1 summary of the Broker Role - the least helpful moment - Coding by Item



First, I will present one fragment from group 4, where the student described how his research was delayed by the supervisor's unavailability:

'…So it was quite sort of…I would say the guy who came in and he would be interested in doing it next Thursday, which is two days away, but my supervisor said he wasn't able to do it, so we had to change everything and stuff. And so it is sort of quite hard whenever you need to rely on your supervisor to be there, but you don't know when they will change their schedule. You always have to re-book with each participant, and then go back to supervisor, to say if are you free, that is quite difficult…' (Group4 student, 02/06/09)

And his supervisor explained the situation as ''*that doesn't happen that often, and it was only that occasion where it was difficult to negotiate*'' (Group4 supervisor, IPR interview, 0/06/09), after showed his full dairy to the interviewer, he said:

''…I know he did a lot of negotiating with the participants, and that's the difficult job for… any human physiologist. You know, like yourself try to time me down to come to a meeting and you have to work around my schedule. And there is no way around it. I am not worried about the delay it caused, because that is built into our time scale and scheduling, implicitly without thinking about it, it's all planned in…''(Group4 supervisor, 05/06/09)

According to the literature, the effectiveness as a broker hinges on one's level of trustworthiness. There are two essential elements of trust: 1) competency, which refers to people are capable to do what he/she said he/she would do; 2) commitment, which means he/she will actually do what he/said he/she would do(Quinn et al., 2007). In this particular case, the supervisor and the student have agreed on certain dates to take the participants' blood sample. After the student booked in all the participants, his supervisor asked him to reschedule everything. He complained that the absence of commitment from the supervisor complicated the whole process. Whereas from the supervisor's point of view, it was a difficult part for any human physiologist which cannot be avoid, and it was built into their jobs as a kind of necessary evil.

Another example of ineffective use of the broker role is where the supervisor failed to acquire sufficient resources.

''…And I am saying a lot of these samples gonna be not analysed… and they gonna be wasted, because the budget limit…'' (Group4 student, 02/06/09)

According to the literature, by performing the broker role, the PhD supervisor should be able to acquire needed resources (Vilkinas, 2002; 2005). It can be learned from the examples provided above; there is a danger for the student to encounter problems which could delay the student research progress and the quality of the research because his supervisor did not act effectively in delivering the Broker role in terms of acquiring enough funding. Similar to what Vilkinas (Vilkinas, 2002) argued, if supervisor do not perform the broker role effectively on behalf of their students, like ineffectual business managers, they will have limited influence on those who make decisions and their students will be poorly resourced.

6.2.6 The Innovator Role

The innovator role is represented by student from Group12 only as one of the 'least helpful' part of the supervision meeting.

'…he just brought these new ideas out, but I don't really want to do that, that particular aspect that somebody else can do it if they want to do it. It could lead onto that if I done my initial research, but I am doing something totally different, I would rather look at it as the current stage we don't see as much as these he talking about…'(Group12 student, 03/11/09)

And his Supervisor made responses to this issue during the followed up interview, he said:

''…I am just enjoying the conversation, and I mentioned these (new ideas) purely because of my personal interests. It might be relevant, but I won't have thought it was the central element of what he was doing…'' (Group12 supervisor, 04/11/09)

In the fragments provided above, the supervisor came up with some new ideas about the research because of his own personal interests. And the student perceived these as non-related, and selected it as one of his least helpful parts. According to the CVF, this can be recognized as the supervisor's overuse of the innovator role, in which case the supervisor introduce new ideas and asking the student to make changes to their thesis without any discernible benefit (Vilkinas, 2002). In this case, the group 12 supervisor introduced these new ideas that beyond the student's current research focus, which were perceived as unrelated and unnecessary changes.

6.2.7The Producer Role

Now let us move on to look at the Producer. According to the research findings, only one participant selected 'the least helpful moment' that represented the under-used of the producer role. The percentage coverage rages from 0.78%.

The student from group4 complained about inadequate supervisory support he received:

''…I understand, you are doing your PhD, you need, you supposed to be self-motivated, but sometime you just want a little bit of… more of… push…and I didn't get that…''(Group4 student, 02/06/09)

Regarding to this issue, his supervisor's responds:

''…I trust him to independently work at get experiment set up and running, recruiting subject and working on manuscript and papers and also his PhD thesis. Because that what he's got to do. You know, as a PhD, you are essentially to be trained to be a scientist, an independent scientist. And he is very much on the way to be that. So I have taken a step back from him, so he can forward to that independent work ethic…'' (Group4 supervisor, 02/06/09)

According to these two fragments, the PhD student complained about not receiving enough 'push' during his research process, which can be recognized as the underuse of the producer role by the supervisor (Quinn, et al., 2007; Vilkinas, 2002). According to the literature, PhD students were always seen as reflective and self-motivated, independent learners, echoed by what the supervisor said during the interview- 'I trust him to independently work at get experiment set up and running, recruiting subject and working on manuscript and papers and also his PhD thesis' (Group4 supervisor, 02/06/09). Autonomous as they are, there was still dissatisfaction associated with insufficient supervisory pressure that results in low productivity.

6.2.8 The Facilitator Role

Finally, I want to present the facilitator role, which is represent by one participant's selection of 'the least helpful moment', with 3.5% percentage coverage.

Student from group 6 talked about how he used to have difficulties in working with other people in the same office due to his unfamiliarity with the new working environment and lack of guidance from his supervisor:

''…I think because I was new to the department at that time, and I am not familiar with this place and how do they work around here...and, I am not very quiet in the office, and people complains…it was quite difficult at the beginning…'' (Group6 student, 10/06/09)

In this particular case, the student used to work in business environments. Based on his experiences in dealing with people from business organizations, he tend to be more 'active' and 'loud' in the working place, as well as a sense of humour which was not taken properly by his colleague. The accepted standards of social behaviour in business organization and academic research institution are different. As the new comer, it is normal for the student to not knowing about the academic research institution' norms, and what made the situation worse was supervisor's unawareness of this potentially problematic situation. She explained about this in the interview: *''we had a very messy kind of start because the arrangement for that supervision has changed. And other thing goes on. So with all that going on in the background, we just never managed to sort out the supervision in the formal way. And I think we really need to''* (Group6 supervisor, IPR interview, 11/06/09); the supervisor did not manage to provide essential guidance or introduction for the student at the beginning.

According to the student, he had a difficult time at the beginning of the PhD. This problem is cause by 'role ambiguity', which occurs when an *''individual does not have enough information about what he/she should be doing, what are appropriate ways of interacting with others, or what are appropriate behaviors and attitudes''* in an organization(Quinn, et al., 2007, p71). And this 'role ambiguity' was a result of his supervisor's under use of the facilitator's 'team building role', in which the managerial leader should focus on clarifying roles, help everyone in the work unit or

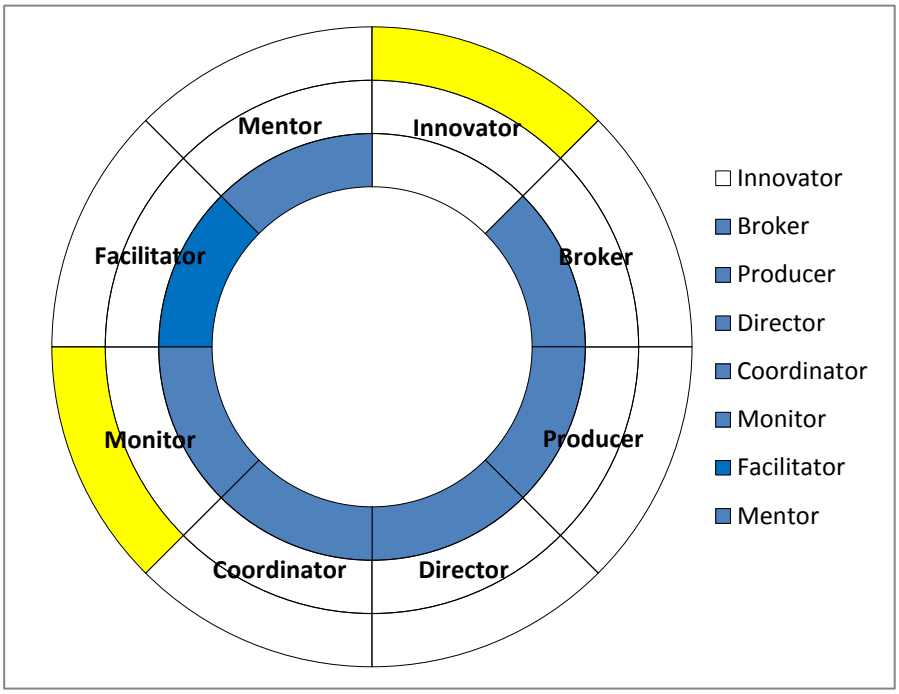
work team understand what others expect, as well as the work unit's norms and procedures.

6.2.9 Summary of 'the least helpful moments'

In this section, I have looked at the student participants' subjective experiences of 'the least helpful moments'. The findings reveals multiple, complicated and context-specific causes of the student' negative feelings in terms of supervisory activities adopted by supervisors. In line with previous arguments in the literature, the paradox in the CVF model relates to the fact that, roles should be neither under-emphasized nor over-emphasized; otherwise it will decrease performance and effectiveness (Quinn, 2007; Vilkinas, 2002).

According to the results, all the eight CVF roles are reflected by the students' selections of the least helpful moments (see figure 6.2.9-1). In figure 6.2.9-1, the middle circle in the doughnut map refers to the positive areas in the CVF, which was left blank; the area highlighted in blue means that the particular role has been selected by students as 'the least helpful moment' because their supervisor failed to deliver it when required; and the area highlighted in yellow refers to 'the least helpful moment' caused by overuse of the role.

Diagram 5.4.9-1 Overused & underused CVF role by PhD supervisors



In the next part, I will present the result findings of 'further improvement'. By analyzing the student's further improvement suggestions in light of the eight CVF roles, we will be able to identify which managerial roles the student would like their supervisors to perform more often, and which roles they would like to have less of or remains the same.

6.3 Research findings of 'further improvement'

6.3.1 Introduction

It can be learned from the last two sections, the research results of the most and least helpful moments present a very mixed picture, the eight CVF roles are all represented by PhD students' selections although varies significantly in numbers. In terms of the student's responses of 'further improvement', only the director role is represented by the results. In total, eight PhD student participants provided

comments for further improvement; and the rest of them said they were quite happy with the supervision they have received at the moment.

6.3.2 The Director role

The director role is the only role represented in terms of 'further improvement'. It has been mentioned by six students during the IPR interviews. I will now present some extracts which reflects the requirements of the director role.

''…I think sometime it will be more helpful if we can have something like: we 'gonna have a meeting to go over a few things, to plan this, plan that', so we know exactly what we are doing and have that plan organized. I think you (the supervisor) should make it more structured and bit more like, this is what we are going to do next…'' (Group4 student, 02/06/09)

Here we see the student explained what he want more from the supervisor in the further. This 'more structure' and 'what to do next' can be recognized as reflecting the director role in terms of the 'setting goals and objectives' competency, where the supervisor was required to clarify direction and to provide structure for the student (Quinn, et al., 2007; Vilkinas, 2002).

''…he is very busy, and he spend a lot of time travelling, he has plenty of things on its way, and he is doing a lot of projects, and I do hesitate sometimes, whether I should contact him about something because I don't want to hassle him, don't want to give him any more work when he is already got a lot of things to do. So that is maybe better if I probably could see him more often…' (Group5 student, 09/06/09)

In this extract, the group 5 student's comment also reflected the director's competency of 'setting goals and objective', although from a different perspective. The student explained he would like to see the supervisor more often in the further for '*feedbacks on progress*', which is an essential phase of the 'goal setting' process in

terms of providing enhancement according to the CVF (Quinn et al., 2007, p.203). In terms of PhD supervision, feedback on progress toward the desired research project is essential, when students are told how well they are performing against the expected standard regularly, they can make necessary changes on time or be more confident to carry on their work, and the source of feedback are as important as its timing. Similar comments are also provided by students from other groups.

6.3.3 Other Suggestions

Apart from the suggestions presented above, students also provided some improvement suggestions that are not supervisors related, and I would provide a quick review of these ideas here for the interests of the reader.

Student from group two, group three and group nine talked about how they were inspired by this research, and would like to record their supervision meetings in the further for self-reflections.

As described by student from group two:

''…Either this sort of audio recording or video recording is a very good idea coz you can only write so much down during a meeting, and you are thinking about what you want to cover so bits get missed, but when you get the chance to see it, to make improvement in the further… I will recommend that to any new students. Record every meeting coz that will be very helpful…' (Group2 student, 20/05/10)

Student from group three also said:

''…I just had an idea that, if necessary, every time, every meeting, I should put a camera there, so I can review it. It could be helpful to improve the meeting quality...' (Group3 student, 22/05/10)

Similar comment was again provided by student from group nine:

''…I found that quite useful to listening back to it, and picking out moments that I wouldn't have picked out previously. Maybe that is something I will do more often.

Just to give me more insight. Coz sometime you miss something…'' (Group9 student, 24/06/10)

6.3.4 Summary of 'Further improvement'

In this section, PhD students' suggestions for further improvement have been addressed. Apart from participants who claimed to be happy with the supervision they have received, six students provided suggestions for further improvement mainly reflected the director role.

Chapter 7 Conclusion and Discussion

The aim of this thesis has been to utilise Competing Values Framework and Interpersonal Process Recall to examine the supervision interactions between PhD supervisors and their students, and in particular to explore supervisor's behaviours that are perceived as effective by the student from the role-performance perspective. This concluding chapter will accomplish the flowing:

- Provide an overview of the two analytical chapters of the thesis and bring together the insights derived from these chapters;
- Review and reflect on the applied methodology;
- Explore the contributions of this thesis
- Discuss suggestions for further research

7.1 Conclusion

This thesis has explored effective PhD supervision interactions, and in particular has focussed on analysing managerial roles performed by PhD supervisors during the student's selections of the most effective supervision moments in order to identify what kind of managerial roles adopted by the supervisor are more likely to be rewarded by the target receiver and contribute to the overall supervision effectiveness. Although PhD supervision is receiving widespread attention from observers, there is an absence within existing literature on the performance of the supervisor role during effective supervision interactions, and how different roles adopted by the supervisor are perceived differently from a student-centred perspective.

The study aimed to examine how supervisors deliver PhD supervision to their students in terms of what managerial roles are adopted during the interaction. This involved exploring:

- What kind of managerial roles are displayed by the supervisor during the most helpful supervision moments
- What kind of managerial roles are performed by the supervisor during the least helpful supervision moments
- What kind of managerial roles are required more of by the student in the future

Taking a student-centred perspective, this study approached PhD supervision effectiveness not as an objective criteria which focus on completion rates and completion time but as a subjective construct that is decided by the perceived satisfaction of the student with the supervisory process and practices he/she received (for example, do they believe they have grown and learned? Are they happy with their experience?).

The first analytic chapter (5) focused on investigating CVF managerial roles represented by the most helpful supervision moments selected by the student, starting with the most represented CVF roles, and moving on to the least represented ones. For each CVF role, I provided a wide range of data extracts from different student interviewees to demonstrate a clear pattern of performance.

According to competencies of the CVF roles, supervisory behaviours that are rewarded by the student represented the performance of all the eight managerial roles with the producer and the director role occupying the dominant position among the eight roles. This is in line with Quinn's statement that effective managerial leaders are unlikely to perform only one role, but a mix of the eight, with some roles emerging as the dominant ones (Quinn, et al., 2007). In this research, all eight CVF roles are valued and represented by the student's selections, and the most effective supervision moments generally tend to gravitate towards an emphasis on the lower right quadrant – the rational goal management model and its two managerial roles- the producer role and the director role. According to the CVF, the two managerial

roles in the rational goal management model both focus on productive outcomes by providing clear directions and aggressive strategies, and the major task for managerial figures in this model is to help to achieve goals and targets (Cameron & Quinn, 2006). In terms of PhD supervision, all interviewed students claimed that they find it very helpful when the supervisor focuses on their PhD productivity (thesis and successful completion), which reflected supervisors' performance of the producer role and the director role. It is evident in my data that all of the PhD student's selections of the most effective moments include moments where supervisor's behaviours represented competencies of the producer and the director role (see session 5.3.2.1, extracts of interviews with student from Group 7, Group 12, Group 5, and Group 2, Group 10, Group 11, Group 6; and session 5.3.2.2, extracts of interviews with student from Group 8, Group12, Group 2, and Group 3, Group 10, Group 6 and Group 1). Therefore, the producer and the director role can be recognized as the dominant supervisory roles in terms of effective supervision moments, among the eight CVF roles.

Compared to the rational goal management model, the human relation model which consisted of the mentor and the facilitator role, received relatively less attention from the PhD student in terms of the most helpful moments. As the second most-emphasized model, it is represented by about half of the interviewees and its basic assumptions and values - commitment, cohesion and morale, are also recognized by the students as an important component part of effective PhD supervision (see session 5.3.2.5, extracts from interviews with student from Group 1, and Group 13, Group 3, Group 5, and Group 8; and session 5.3.2.4, extracts from interviews with student from Group 1, Group 9 and Group 7, Group 3, and Group 6). This demonstrated the importance of the mentor and facilitator role to overall supervision effectiveness, and is supported by previous literature which suggested that managers who are perceived as 'effective' tend to have high scores in the human relation model (Cameron & Quinn, 2006).

The open system management model is the least represented model. This is in line with the argument in Cameron and Quinn's (2006) book which suggested that, the open system model is generally rated the lowest on average, and fewer top organizational managers are dominated by this model than are dominated by each of the other three models. Limited credit was given to the supervisor for performing in this model, the innovator role in particular (see session sessions 5.3.2.8, extracts from interviews with student from Group 8 and Group 12).

According to the results, the internal process model is the second least represented management model. PhD supervisors operating in this model are recognized as adopting the monitor or/and the coordinator role, with their focus placed on stability and continuity (see session 5.3.2.3, extracts from interviews with student from Group 12, Group 1, Group 7, Group 2, Group 11; and session 5.3.2.7, extract from interview with student from Group 8, Group 6, and Group 13).

The second analytic chapter (six) continued the examination of PhD supervision, looking at which managerial roles are adopted by the supervisor during the least helpful moments. I consider previous literature on 'negative zones' of the CVF (e.g. Quinn, 1991; Vilkinas, 2002) and closely examined how 'negative zones' were reflected within my own data corpus. I showed how ineffectiveness is related to inadequate use of the managerial roles by the supervisor with a 'donut map' (see figure 6.2.9-1). According to the results, I found that, in line with previous literature, PhD supervisors' inadequate use, including both overuse and underuse of CVF roles are in relation to the least effective supervisory moments (Vilkinas, 2002). All eight CVF roles have been reported as being 'overused' or/and 'underused' by the supervisor during the least helpful moments.

I identified similar results in the second analytic chapter: first, the most represented management model for least helpful moments is also the rational management model: with over half of the interviewed students' selections of their

least helpful moment represented the supervisor's underuse of the two managerial roles (the producer role and the director role) in this model (see session 5.4.2, extracts from interviews with student from Group 4, Group 5, and Group 7). Second, as in the most helpful moments, the least represented model is the open system management model in the least effective moments, too (see sessions 5.4.6, extracts from interview with student from Group 4 and 12); and the internal process (see sessions 5.4.4, extracts from interviews with student from Group 12, Group 4, and Group 11) and human relation model (see sessions 5.4.3, extracts from interviews with student from Group 2, Group 3 and Group 11)are still occupying the middle place.

In the same chapter (six), I then examined students' responses for 'further improvements' to identify what managerial roles are preferred by the student. I found that the rational goal model is the most represented one according to students' statements. Half of the interviewed PhD students suggested that it could be more helpful if their supervisor can provide them more directions, structures, and on-progress feedback for their research/thesis. These statements indicate the requirements of the supervisor's performance of the director and the producer role, which implies that, according to the students' understanding, PhD supervisors are needed to adopt the rational goal management model more often in the future in order to enhance the overall supervision effectiveness.

7.2 Discussion

7.2.1 Discussion

Based on research findings presented in chapter five and six, I identified considerable alignment between results of the most helpful supervision activities, the least helpful supervision activities, and preferred supervision activities in the future that allow for discussion. The most preferred supervision activities indicated that PhD student perceiving the supervision practices to be more effective when

operating in the lower right quadrant (the rational goal management model), in agreement with this result, the results of the least effective supervision practices also indicates that, most of the negative feedbacks were caused by supervisors' underuse of CVF roles in the rational goal model; and this is further supported by the results of future improvements, which indicates that PhD students want their supervisor to put more emphasis on the rational goal management model in their further supervision practices by adopting the producer role and director roles more often. In contrast, the open system management model received limited attention in all three groups of results.

This alignment found in my data can be related to existing literature that analyse effective supervision from a socio-cultural context (see chapter 2, session 2.3.2), taking into account ideas of how PhD supervision is affected by political, social, and academic cultural changes (Becher &Kogan, 1992; Bergquist, 1992; Clark, 1998; Clark & Neave, 1992; Ylijoki, 2008). Here I argue that, current PhD students' views on PhD supervision practices are reflecting the influence of market-orientation and manageralism on research students within higher education institutions as more attention have been placed on productivity (thesis and completion of the degree) rather than the traditional core elements of PhD supervision activities such as authentic learning with intrinsic purposes (Waghid, 2006; Ylijoki, 2008).

According to previous research on influences of the application of market-orientation and manageralism to universities (Clark, 1998; Gill, 2009; Green & Powell,2005; Malfroy & Yates, 2003; Ylijoki, 2008), the UK government embarked on a programme of economic rationalization, in which government funding was cut, and competitive market and management principles were applied to universities (Nagy & Robb, 2008). Responding to this policy change, the funding patterns and management styles of higher education institutions have seen profound transformations. Universities are encouraged to seek external sources of income as well as to participate in entrepreneurial activities (Slaughter & Leslie, 1997; Ylijoki,

2008) in order to handle the conflict between their increased student populations and progressively reduced mainline funding. University education and their academic research are increasingly evaluated from economic perspective and a growing number of links between universities and industries have been developed, intertwined with the application of the new public management that bring values such as accountability, efficiency, productivity, into higher education institutions (Clark, 1998; Clark & Neave, 1992; Ylijoki, 2008). As stronger market–oriented and managerial perspectives are widely applied into universities to fuse traditional academic values, academic research achievements are increasingly evaluated from an economic perspective in terms of accountability, efficiency, cost-effectiveness and productivity (Clark, 1998; Clark & Neave, 1992; Nagy & Robb, 2008; Sanderson, 2006; Ylijoki, 2008).

These changes in universities, initiated and continuingly supported by the state, affect the internal function of academia, including practices at the basic unit and individual levels (Becher & Kogan, 1992). Researchers argued that the external pressures caused by the transformations, such as economic constraints and the increasing market-orientation, have shifted the balance between the traditional academic culture and managerial culture (Bergquist, 1992; McNay, 1995; Ramsden, 1998). The conventions of academic freedom, which is defined by Berdahl as 'the freedom of the individual scholar in his/her teaching and research to pursue truth wherever it seems to lead without external pressures' (Berdahl, 1990, p.60) is eroded by values introduced with the new public management to universities (Berdahl, 1990; Clark, 1992; Henkel, 2007; Levin, 2006) as higher education institutions and academics are required to justify their use of resources and performance in terms of these three Es: 1) economic use of resources; 2) efficiency in using the resources; and 3) effectiveness in terms of institutional and individual task completion through successful strategies and plans (Clark & Neave, 1992). Academic freedom has become, in Clark and Neave's words (1992), 'conditional' with a 'zone of negotiation', as the outside's intervention increases or decreases; it can be enhanced or reduced (Clark & Neave, 1992; Henkel, 2007).

As one of the individual levels of practices, PhD supervision is affected by changes happened in its external environment. PhD supervisors have to adjust their values and approaches to better meet the needs of the current supervisory requirements in terms of the three Es: Delamont's research showed that, PhD supervisors need to work through the balance 'between autonomy and accountability, between professionalism and managerialism, between research productivity and creativity' (Delamont et al., 2000, p.151); other studies also found that there is increasing pressure for PhD supervisors to produce a qualified PhD thesis rather than the ideal PhD as the personal journal of exploration without external constraints (Cribb & Gewirtz, 2006; Henkel, 2000; Ylijoki, 2005).

PhD students are found to be affected by external pressures as well. According to this thesis, aspects of supervision that PhD students emphasised on can be recognized as reflecting the same influence that affects PhD supervisors; all of the interviewed students tend to put more focus on productive outcomes rather than creativity; they highly valued the supervisor's adaptation of the rational goal model and rewarded supervisory activities that focus on their thesis and successful completion, while the open system management model which focus on creativity and innovation is pretty much ignored. This is echoed by Ylijoki(2008) and Cribb and Gewirtz's (2006) research on professional doctoral students, in which they found that, students are more interested in finishing their PhD sooner than later, and those who undertake doctoral study purely for 'intrinsic purpose' are disadvantaged.

Overall, this thesis showed that effective PhD supervision requires an unbalanced supervisory model in which attention needs to be placed on all of the four CVF managerial types, with the rational goal model occupying the dominant position. The PhD supervisor is required to adopt the producer and director role more than the other roles during the supervisory interaction. Compared to Cameron's (1986) research in the 1980s, in which he argue that, higher education institutions have high score in the upper right quadrant (the open system model) and emphasised

innovation and change; this research presents a different and updated picture. It showed that the open system model received only limited attention from current PhD students; and the supervisor's adaptation of the innovator and the broker role are the least likely to be recognized and rewarded. This difference could be interpreted as influenced by the political, social, and academic cultural changes in higher education institutions in the last decades which brought market–oriented perspectives into universities and influenced traditional academic values. By drawing on the interplay of ideas between PhD supervision activities and competing values framework, I argue that PhD students' view on supervision responds to the external changes in the institutional environments in terms of shifting traditional academic emphasis toward market-oriented values. This is reflected by the student's emphasis on productive outcomes and measurement in preferred supervisory activities as well as in their selections of the most effective supervision moments, which is echoed by previous literature on influences of the application of market-orientation and manageralism into universities (Nagy & Robb, 2008). However, it is important to make a few things clear here: apart from the influences of marketization, there are different reasons for PhD student's emphasis on completion which are not discussed in this thesis. For example, current policies could be one of the reasons for some students to care about completion because extensions are difficult to obtain in some disciplines; whereas in the past, students did not have to obtain an extension until year 7. Apart from policy changes, financial pressure, job opportunities, cultural contexts can also be reasons for the student's focus on completion.

7.2.2 How this thesis contributes to research

My thesis makes a valuable contribution to the growing body of PhD supervision research by adopting a student-centred view to look at supervisor's behaviours from a role performance perspective in light of competing values framework.

This thesis will add to Vilkinas' work on supervisory behaviours (Vilkinas, 2002; 2008, who has used the CVF to explore the managerial role of the PhD supervisor and how various roles are applied by analyzing a group of PhD supervisors' reviews) by examining selected PhD supervision moments and identifying how different CVF roles are evaluated from the PhD student's point of view. Through there has been a small amount of CVF studies in recent years, this thesis provides a different slant by looking at supervisor's role performance using a student-centred perspective. This thesis contributes to the CVF research on 'supervision effectiveness' with a student-centred analysis which examined how supervisory effectiveness can be affected by the adaptation of the supervisor's role.

As well as addressing the lack of CVF research in supervisory research, this thesis also adds to Paré's work by adopting a different visual research method. The implication of IPR is the extension of Paré's research method on PhD supervision. Prior to this thesis, visual methods used for analyzing PhD supervision was somewhat limited and had tended to focus on voice recording (Paré, 2011; 2010). Building on the prior work, this thesis has demonstrated that video-recording is highly effective in educational supervisory research in terms of uncovering the real-time supervision interaction as well as reducing the possibilities of 'narrative smooth' during the interviews.

This research has not only demonstrated how IPR is successfully used in examining the private PhD supervisory interactions, but also build on existing PhD supervision literature with rich observation data. PhD supervision has always been seen as a private act (Lee, 2008), and there is only limited observation data available in the literature. By adopting a visual research method, 13 supervision meetings were made open to observation. I understand this could raise hackles as well as ethical issues; however it *can* provide us with very helpful data when handled properly. Also, I hope this research can further bolstered IPR's interest in the potential uses in high education research as there is a need for a wide variety of methodological

approaches to investigate educational phenomena to ‘‘bridge the gap that has developed between qualitative and quantitative’’ approaches (Lee, 2008, p.268).

In terms of topic, this thesis demonstrated a qualitative analysis of two groups of specific supervisory moments (the most helpful moments and the least helpful moments) and focuses on the effectiveness of supervisor’s role adaptation by closely examining these moments. This is the major difference between my work and Delamont’s research on PhD supervision. Instead of examining effectiveness of PhD supervisory activities according to the student/supervisor’s reflection and overall evaluation of the supervision activities they experienced, this thesis, however, video-records and explores PhD supervision in terms of significant moments that would be classed by the receiver (PhD student) as the most helpful moments/the least helpful moments. It differs from the majority of existing PhD supervision research in that it uses two-dimensional managerial behaviour framework to study selected supervisory activities and supervisory roles in great detail. I have demonstrated that supervisory activities and supervisory roles that contribute to the overall effectiveness are complex and contradictory, which has been previously suggested by researchers (Earwaker, 1992; Hockey, 1994; Vilkinas, 2002). Through focused and detailed exploration of the recorded supervision moments I have shown what and how different supervisory roles are adopted and performed by the supervisor, and explicated the patterns and functions of each role. This thesis therefore adds to our understanding of effectiveness of PhD supervision and the supervisor’s role.

7.3 Reflections on methodology

Having provided an overview of the analytic findings of this thesis, I now would like to briefly reflect upon my chosen methodology.

Overall, the choice to use *Internal Process Recall* and *Competing Values Framework* to examine existing PhD supervision activities enabled rich insights. The methodology chapter (4) demonstrated the procedure of interpersonal process recall and how I applied it in this research in details, including how to edit the recorded video, when is the right time to interview people, and what questions to ask them. Generally speaking, IPR is proved to be effective in providing rich and detailed insights by video-recording supervision meetings to assist individual interviews; on the other hand, the disadvantage of using it is that it is very time consuming, especially for the video editing stage. At the beginning of my research, by using a window media player, I have to constantly go back to the recorded student's interviews and then replay the video of their supervision meeting to find out the right place to split the video to cover the particular moment the student selected. Regarding this issue, I developed the 'timer form' for the student participants for the rest of the IPR interviews, and it proved to be helpful in assisting video editing as students were asked to note a start-time and end-time for each moment they selected in the 'timer form'. The timing they provided is not always accurate but helps to save time. I understand it is only possible to use such forms with participants who are not only happy to offer extra time for the interview, but also able to fill the form. If dealing with participants who are unable to do this, the latest version of NVivo can be considered as it has the new function of inserting transcripts into video/audio files with accurate timing (Edhlund, 2011). For example, the researchers can have the recorded supervision meeting video with their transcripts and accurate timings on the side in the same window, which will help to locate the particular moment that the student mentioned during the followed up interview without replaying the video every time a supervisory moment was selected. I did not try it out in this research as the updated version of the software only came out quite recently. Competing Values Framework was used extensively in chapters 5 and 6, (where I examined supervisor's activities in the most helpful moments, the least helpful moments and the further suggestions) and these chapters have demonstrated how many important insights we can obtain form analysing the PhD supervision from a role-performance perspective in light of the CVF.

While this thesis made some important contributions to knowledge, there were also some limitations. First, the research has been primarily focused on supervision practices selected by students, and it is important to make it clear that not all supervision moments have been covered. Some interesting supervision moments noticed by the researcher did not receive attention from the interviewees, and therefore were not able to be included. Second, this thesis has focused on using the CVF to interpret supervision moments, and it is also necessary to recognize that not all supervision moments can fit neatly into one of the eight CVF categories. Third, due to the small sample size, it is extremely difficult for this work to explore supervision effectiveness in terms of different PhD stages and disciplines. It may be particularly useful to extend the research to a larger and a more diverse student population, in terms of PhD stage, class, race, age, sexuality and disciplines.

7.4 Implication for further research

This thesis has explored different managerial roles social science supervisors employ during interactions with PhD candidates. It may be interesting to ask whether the findings are specific for those within social science disciplines, or would similar results be derived from their colleagues in natural science departments as well? I consider this question as particularly interesting and relevant topics for further research. First, PhD supervision style in the natural science is suggested to be different from the social sciences due to disciplinary difference, which is one of the core dimensions for differentiation of a specific set of values (Becher, 1981). Second, according to the literature, natural science disciplines are less likely to experience turbulence followed recent transformations and changes in the higher education institutions, particularly the market-oriented values and new public management policies. This is because their teaching/research are more likely to involved experimental development that is aiming at producing new products, materials or devices (Bergquist, 1992; Biglan, 1973; Clark & Neave, 1992; Ylijoki, 2008;), and the introduction of market-oriented values by the state fit in well with the hard-applied

dimension disciplinary values and practices (Becher, 1981; Clark & Neave, 1992), while more likely to cause change and turbulence in the social science disciplines. It would be relevant to explore whether similar accounts are made by those from natural sciences, and whether the accountability work salient in the social science candidates I have analysed is also prevalent in other disciplines.

It would be also interesting to carry out another research with professional doctoral students to see how different supervisory roles are employed and evaluated. It is interesting because for the traditional PhD candidates, presumably, the supervisor has greater knowledge of the research area or/and the research process, and therefore, there is an unequal power relationship between the supervisor and the student (Lee, 2008). For Professional Doctorates, the power relationship is less straightforward, as it is likely that the students know more than their supervisors do (Brennan, 1995; Maxwell & Shanahan, 1997), especially in cross-disciplinary projects (Adkins, 2009). Their supervisory relationship can be more complex, and this is another area that deserves further study.

In conclusion, I would like to end this chapter with the consideration that future research in the area of PhD supervision would benefit from taking a CVF and /or IPR approach, as I hope this thesis has demonstrated.

Appendix One Participant consent form

PARTICIPANT CONSENT FORM

Researcher: Xin Wang

Supervisor: Professor Duncan Cramer

Contact Address: Social Sciences Department, Loughborough University, UK

Email: x.wang3@lboro.ac.uk; D.Cramer@lboro.ac.uk

Research Title: PhD supervision activities

This research is part of my PhD project in the Social Sciences department at Loughborough University. The aim of the study is to gain an understanding of what takes place in PhD supervision through analysing voice recorded interviews. Please feel free to ask me any questions you may have about this study.

All voice recorded interview data will only be used for this study. All information and data gather will be held and treated in confidence. Recorded video clips will be destroyed after the interview. The information collected from the interview will be recorded only in the form of statistical summaries. Participants will be identified in all study outputs only with a code number; access to their records, contributions and comments in the study will be protected and accessible only to the researcher. Permission will be explicitly sought if the researcher wishes to quote them directly or share their contributions and views with anyone else or any other body.

If you choose to participate in this study you have the right to withdraw at any time without explanation, in that event, any data already obtained from you will be destroyed/ deleted.

If you have any concerns at all about participating in this interview then please contact us.

I agree/ understand that:

- The purpose and procedure of the study has been explained to me.
- I have no obligation to take part and I may withdraw at any time.
- I have had the opportunity to ask questions.
- That the interview will be voice recorded.
- All data will be anonymous and kept securely.
- I have read and understood this consent form.

Signed……..….. (Participant) Date……..

Signed……..... (Researcher) Date…….....

Appendix Two Transcripts from Group 2 student and supervisor

Group 2 – IPR interview with student

Sam-Student

Lisa-Researcher

This interview was taken two hours after the supervision session. The student reviewed the video and stop at the most helpful and least helpful moments.

Lisa Basically, I want you to identify the most and least helpful moment or event, it could be more than one. Stop the video when you see the moment.

SamI see.

(Video playing)

Samcan you stop it there?

Lisa Yes.

Sam It's, errr, it is odd actually, because most of what Mark has said is helpful, errr, the first part there was about… him …identifying a few points in something that the work that I have gave to him to read, err, he was just driving at or pointing to some subtleties, some very small points in something at the beginning of this writing. Hmm, I found that helpful.

Lisa [So you think him pointing out the small things that you didn't …]

Sam [Yeah, it is …] that evaluate pretty much most of what he says. He is really good at picking out the very small points, you know, err, especially in writing that he has previously read, I gave him to read. Do you want to carry on?

Lisa Yes, So do you think this kind of picking out little things is the quality you expected form him as being a supervisor?

Sam I supposed it's something can be disregarded or ignored by supervisors, you know. The point is what he is doing, you know, errr, he is not asking me to look at the literature, he is trying to look at the particular argument I am making, and try to make that better or coherent, and that does not necessary have to detail everything that you can find in the literature, it's about just being able to tell a good story in a piece of writing. And not been saturated by the literature, you know. Hmm, that's a very general point, but it seems to come out in everything he says, you know , he is really not too concerned about how what I am writing related to the big literature, its more about the small things.

Lisa OK. Shall we carry on?

(Video showing…)

Sam There is no need to stop this, but it's the small things again, he is picking up on the very very small things, I don't know, maybe it's a sort of generic staff all supervisors do but, you know, he focuses on the sort of individual words, or, a lot, just another detail.

Lisa OK.

(Video showing…)

Sam You can move forward slightly,

Lisa OK.

Sam Yeah, I am having a point here, hmm, I don't know, I get a very strong sense... that Mark is…very… has a very clear picture of where my work is going, and that's why it is so interesting to pay attention to his small comments. Because he has in mind this large picture of the… of where this work is being driven, where it's going to end up. Sometime better than I do. Because I tend to focus on a very small piece of work, and lose the bigger picture, where this work is going to go, what kind of questions this piece of work trying to address, so , it's a … I know suppose it's a kind of normal job of supervisors, but it's … it's comforting, it's very nice to know that he knows the larger picture, you know, the overall story of the thesis, so he provides good supports, you know, when he has a such good idea of the, the arguments, the debates, that I am covering in the work.

Lisa So are you saying that he is really good as being a director of your research?

Sam Yeah, I guess that's it. I think it is just a very keen, a very good sense of what I am trying to do. You know, and those sorts of things I am trying to answer and work with, and seem to dried out a lot, it's very implited coz its sort of he just knows. But that helps much more so than err… I don't know, just some sort of arberchally sort of pose questions or something, you know, the stuff he says is informed, I think that's it.

Lisa so you think although you know where your research is going, you still feel more secured or, can I say comfortable, when you know your supervisor have a better big picture of your research?

Sam Yea, that's it. He seems to balance it very well, the very detailed stuff and how that related to the larger work as a whole.

(video showing…)

Sam Maybe you can go forwards a small bit.

(video showing…)

Sam Yes, there is something I want to say. This is I, it wasn't such a moment of revolutionary then, but it is, kind of now, looking back on it. And just the way he was pointing out more subtleties in something, in an argument I have made, kind of teasing out, or sort of unpacking something else that was in their value that should be pointed to or made relevant. Er, I don't know, am I repeating myself?

Lisa [no]

Sam Coz it’s quite a general state, you know, you have particular examples series, you know, it’s quite sort of general, just … just really focusing on the detail, the small things, to sharpen, or to make a point of an argument stronger.

Lisa And what do you think he is trying to do?

Sam I would hope that it’s… he is trying to satisfy himself, you know, his own interests in this topic, he is just trying to explore that, and hopefully, I am kind of following or he is following me, and allowing that to guide the meetings but also the project as a

whole. And not being afraid to ask his own questions as supposed to be driven or guide by the literature. You know, it's very much an empirical adventure.

Lisa Why do you think this is helpful?

Sam It is helpful because err, it's allows you to engage in the topic. In an interesting way, you don't have to know a whole body of knowledge or to have read a whole bunch of books … before you can do this, before you can do the study. What he saying, what he recommending is you just start the study, and you read bits as you go along, so its driven by being sensitive to… you know, themes, topics, phenomena, as they arrive as you doing, and allowing that to inform the decision you make, where do you go. So in a way, it's kind of separated from the traditional way of doing things, which is, you know, you read about something first, and then you do it, or you know, you read about your topic and then you introduce your thesis after that. It's a… I don't know how far you can take that distinction, or separation, but it's helpful sometimes. So you don't have to do all the readings first, whatever that might mean, but you can just start with the questions and sort of go from there.

Lisa Right.

(video playing…)

Sam Yeah, I have got another point. Err… I can talk about this for the rest of the day, it's … I don't know, I suppose it's repeating but he… he is very much interested in the shape of an argument or a piece of work,

Lisa what do you mean by the shape?

Sam how it looks, how it organized, but … in how that should organized and drive the piece of work, you know…it's not about… its identity or relationship with something, you know, something large like a big argument in a set of books or something, it has to be kind of adequate to itself, you know, how it's sort of internally organized, you know, the particular argument, it just came back to the sort of small details, trying to prepare and produce a piece of work that is, that is satisfying to read…isn't satisfying because it points to everything else or you know, all of the literatures, but because it, it gets its adequacy from itself, you know, its own lineament, the stuff that it's producing as alone, it's more … I don't know… I don't know, it's a little bit hard to explain I suppose, does it make any sense?

Lisa yes, sure.

Sam yeah.

Lisa So you think this is something you expected from him, and his feedback is quite satisfactory?

Sam yes, I definitely have no complains. I don't know if I expected it. I was surprised when I received it. It like what we have talking about before, it's like the… the…piece of work as being a performance. In order to understand that performance you don't need to read everything else on the topic you know, you can allow that performance to take you there, you can allow the writing to take you somewhere. And not have, you know, being training or receive prior information something from lots of reading, you know, whatever this topic means, you should allow the thesis to take you there, and allow that to tell you what it means.

Lisa So this is a better approach?

Sam yes.

Lisa It sounds more nature, like you do something, and then you realised what you need more, [and you go there, and you get some ideas about it…]

Sam [Yeah, that's it, it's you …] you pick up what is necessary to get you to the next stage as opposite to kind of big flood by too much … by a lot of stuff that won't be relevant, so you only need to use what you need.

Lisa or read what you need?

Sam yes.

Lisa OK.

(video showing…)

Sam further on…

Lisa here?

Sam Yes, stop it there. Yeah, the other thing is … errr…because of his own unfamiliarity with some area of this topic, he is asking good questions. Because I have done some of the reading, I can… allows me to focus on particular parts of that reading, and again, because he has the larger picture in mind, so he is asking me these questions in terms of that, so allows me to filter out, you know, much of the stuff that I don't need. But it's all driven by, it's not anything that … sort of…it's just a nature curiosity. It's a question of being posed because…you have confusion about something; you

want to get to the next stage. You know, it's all local, it's all very much … err… sort of…act hot, sort of, it happens… it wasn't planned, it's not like everything is planned, it's sort of turns up on the way.

Lisa so you mean your supervisor is quite close related to your area, so he can point out where there has a potential to explore more?

Sam The opposite actually, it's not a primary research interests of his but the way I am going about researching it or studying it is interested to him. And that's varied. So it's not necessarily the topic but it's how I am looking at it is … relevant interested to him. And that is what driving his questions and his enquires.

Lisa OK. So I remember you said he is familiar with the area? And what is this area?

Sam his main interest is in science, looking at how science is produced, and disseminated. But obviously when I am looking at something else which is self-help, it's not science. But he is approaching self-help in the same way that he would approach science. And that's where we kind of meet.

Lisa OK

(Video playing…)

Sam There is no need to stop this, but it's the same thing, he is kind of…sort of….aaasking his questions, you know, just as things turned up. It's sort of neutral really, I have done some background reading which he would not be familiar with, but he would be the overall picture of my work, and so he kind of … like I said… reduces the

amount down so it's more manageable. Just by a curiosity you know, aabout the topic that just arise up the stuff I brought in last time.

Lisa So you think it's very important your supervisor is interested in what you are doing?

Sam yes. It's very important. What seems really good is… to, to, to maintain that interests, which is done through reading your work when you submitted to your supervisor, and never to lose the sight of that, the detail, and the small details.

(Video playing…)

Sam You can stop there. It's like a Mark's own… sort of insight…you know… just … just …a sprigged to mind, err, that interests me. Coz it's stuff that wasn't planned again, it's stuff he just thought about, the stuff that just emerged through what we have just talked about. That's setting up or allowing…er… another opening to …or allowing somewhere else to take this or develop the writing. You know, just through the meeting, you know, I might just produce a thesis through the meeting, you know.

Lisa So this is something you did not expect?

Sam Yes, it's not that it's unusual I suppose, it shows how important the meetings are, as an opportunity to speak about a topic in this way. Because the speaking is part of the whole process you know, allows me to sort of play around with the topic, sort of engaged in different ways.

Lisa I know, I think, from my experience, while you having supervision with your supervisor discussing about something is another process for you to re-think about your ideas and stuff.

Sam yes, it’s like what I was saying before; it’s very much a driver that drives forward your thinking. You know, it’s not being afraid to abundant other ways of thinking, or pieces of writing, allows your super questions to, err, you know, unfold…to follow…

(Video playing…)

SamStop at there, one thing is, I don't know, its small pieces of extra support you get, like, errr,

Lisa extra support?

Samyes, EXTRA, like additional, you know, it can be something small like, I don't think it will take as long as to write your next page as taken for the introduction.

Lisa Does that make you feel more confident about your own work?

SamYeah, ittt, I don't know, it’s just a very very small thing but it kind of motivating strategy…

Lisa emotional support?

Samhmmm, yes, I suppose so.

Lisa so you think you really appreciate…

SamYeah, it does happen quite frequently where hmm, Mark just say ‘this is good, you can do it quite quickly, or it shouldn't take as long, or you have done that well’, you know, it’s this little, sort of displays of encouragement that aside from the practical task, or doing work, it's the recognition of something been done well.

(video playing…)

SamMove forward, please.

Sam Yeah, there is no need to stop there, it’s the same thing, the small bits of encouragement, that keep you on the road.

(Video playing…)

Sam that's all about it, I think. Can you go back to the first piece, the very beginning of that.

(Video playing…)

Sam No, that's ok. Is it possible you can send me those?

Lisa Sure.

Sam Because this is something I began doing at the start, was kind of writing up a review of each meeting, things like, what have we covered, what do I need to do for the next meeting, and that kind of stopped after a while. Either this sort of audio recording or video recording is sort of a very good idea coz you can only write so much down during a meeting, and you are thinking about what you want to cover so bits get missed, but when you get the chance to see it, you can…

Lisa [Recall your memery…]

Sam [yeah] I will recommend that to any new students. Record every meeting coz that will be very helpful.

Lisa Well, so do you want to tell me what do you think is the least helpful moment or moments?

(Sam reviewing the video again takes control this time.)

Sam That's a very difficult one actually, the …the… there was only … I don't know if you could….

(Sam fast playing the video)

Sam yeah, that was there, err, it's not that it was unhelpful, I didn't immediately understand his comment, so it kind of what means to be slightly unhelpful became very helpful, simply by asking him more questions or more fully explain his points, it became more relevant. I don't know, I don't know if I can see something as unhelpful, err, no. Because if something was unhelpful, I'd either ask for clarification for something to be clearer or just move on to something else, you know the next quarter of business. Another …no, I don't know, I don't know if I can answer that. There isn't really any sort of particular aspects of meetings that I find unhelpful. You know, I guess it just came down to the interests and familiarity you supervisor has with your topic. And that, if, both of the things are present, whatever your supervisor has to say, and this is the case of me, and it will remain on track, you know, it will remain relevant and helpful. So it never really steers off, in an unnecessary direction.

Lisa so about that particular point, you said you didn't really get what he is talking about...

Sam [It's just the start. He mention something about, some work I haven't included in my writing] and he had picked it out,

Lisa why do you think he is doing this?

Sam Errr, just details, he is curious about what is written, and it's all about he is trying to make something very sharp, make an argument very clear. It's about, you know, something is ambiguous or unclear, and that's about all he is trying to do actually. But I didn't get it at the start, and that's why I have to ask my own questions toooo… kind of get out… to explain better, to, to, errr…clarify.

Lisa OK and my final question is what would have make supervision more helpful?

Sam hmmm… (5 secs)…

Lisa like, something you want?

Sam I don't know, that's another hard one. Our best meetings are when I have previously send through quite a well draft a piece of work, something that's almost finished, so I am very familiar with it, and that allows Mark to really get into the detail, but it's kind of … draw it altogether, because at the moment, this is still very much sort of incomplete, there's lots of more work to do, so it's difficult to consult his sort of points with all of the extra work that I have to do. You know, if I send through something that is almost finished, and he makes points, I can see those points in terms of my own work coz most of them are in place already. Hmmm, yes. The reverse is that if I send something through that is incomplete, then the meeting is very unhelpful, they are not, they are still helpful, but it's … I don't know… maybe it come back to the sort of encouragement side of thing. You know, if you have something that is almost complete, your supervisor's questions are coming to an end, you know, that means there's not much more you can do, which means you are

pretty much done and you can move on to the next thing. So it's kind of …er… a motivational thing, like you spend an amount of time on this piece of work or a chapter, it's no long being commented on, like it was at the start, so your supervisor would say things like what you could do now, or he is basically say, this is good, ok, everything is addressed, now you can move on… I don't know, maybe that's it.

Lisa OK, it sounds like it works better if both of you has a good preparation like… you have a pretty clear finishing version of your work, and you know where you are going to and your supervisor knows the big picture as well, so you can bring your own questions and he bring his own ideas, so you can make it better?

Sam Yeah, that's it. It's sort of neutrally region a point where you can just move on, coz all of the earlier questions, all of my writings, my work have… sort of paid off, you have produced something and that was all worthwhile. The questions and earlier enquires.

Lisa Right. Here is one more thing, I remember you said you quite like the way he come up with some ideas while talking to you, something just come up his mind, and you have also said it will be more helpful if you both have kind of preparation?

Sam Yes, kind of contradictory…. Well, they don't have to be in tension. One can complement the other. So they can be preparation there, sort of prior work has taken place, and everybody is familiar with what is happening, but also, that can be supplemented or developed further by the … the stuff that hasn't been planned, you know, prior to doing it now, so you hand on to it with new questions, the stuff isn't been planned. And soooo… you bring them both together… the stuff you know already and you sort of attach these new stuff or these new questions to that.

Lisa So you think the preparation is to a good foundation for the other to build on?

Sam They both need to be in place. You can't arrive entirely with sort of nothing there, and you can't know everything before head. You know, that's the point of supervision. You know, the stuff that has to come out of the meeting that wasn't there before. And the stuff you arranged or the stuff you are familiar with is just a context…to explore the new questions.

Lisa Yes. OK, good. Is there anything else you want to add to?

Sam No.

Lisa OK, Thank you very much for your time.

Group 2 -- IPR Interview with supervisor

Mike-Supervisor

Lisa-Researcher

The video chunks were reviewed altogether instead of one by one, no stop in between. Questions were asked afterwards.

Lisa Shall we start?

Mark Yeah, yeah.

Lisa What do you think about this?

Mark what do I think about it? hmm, ask me more specific questions.

Lisa Like, what do you think he is trying to get form you, and why did you make that response?

Mark I missed what he said.

Lisa He was coming up with some ideas, and you said that is good, and he said it was a last minute idea, and you gave him comments on that.

Mark ok. It was the thing about that kind of academic criticism of self-help books, er, the references was about, you might not get that, that was something Sam started a long time ago, probably at the start of his research. Er, just a book called – one hundred self-help clusters, can't remember, and the author's reason for doing that is sort of, apologises for that, producing this book, was because

people thought the self-help journals were rubbish, and he though it should be, the press should be improved, so he cluster self-help books, including the bible, books of that quality.

So I was suggesting to Sam that, the idea that Journe was low quality was understood from within, not just the outside academic critics. Yeah, and you could demonstrated that by talking about the clusters. So that's what I was doing reminding him about this, how we might bring this in at this point.

Lisa What kind of role are you playing here?

Mark What kind of role am I playing? Probably an informer?

(Video showing for 7 minutes, chunk 3-9)

Lisa Let's start from the last chunk so it’s easier for you to review them…

Mike ok.

Lisa In the last two parts, Sam asked about, not ask, he is telling you he is moving on to next chapter, and he said he supposed it won't take too long; and you said: sure, it definitely won’t take too long. Do you remember that part?

Mike yes.

Lisa so what do you think you are trying to do by responding that way?

Mike Hmm, well, I was being supportive… and agree with him, because that's what I thought was the case. Hmm, in this chapter we have been discussing, he was introducing a great deal sort of new material that was happened

to …er… he had used it before. And the final chapter, he wouldn't be …er… confronted with that problem, therefore the time that would take to write that chapter will probably going to be less. I just making that point or, agreeing with Sam who is making that point. We both have a interest of having this done as quick as possible within the construction that as good as possible, and, so you know, in an agreement of next thing you are going to do is… gonna less problematic than the last thing you have done, is a good thing to say.

Lisa Do you think being supportive in this way is…

Mark (Yeah, you can say I am being supportive.)

Lisa Do you think that's important for supervising a PhD student?

Mark To be supportive?

Lisa yeah,

Mark well, if the opposite is being unsupportive, definitely yes. Hahaha

Lisa hehe.

Mark of course it is. I mean I have no idea how other folks go about, doing supervision, other people. You have, you have. Errr, but the way I do it is … a version of…my experiences of being supervised of my PhD. And in which the job of the supervisor is to be the person who knows almost as much about the work as the person who is actually writing it. It is if I am … a kind of … co-author who doesn't have the job, thank god, of actually writing it. You know. But I do have the job of being involved with the material. Being aware of the trajectory of, being jointly responsible for the

production of the ideas have been formulated, and ,err, made real, as it's the word, by Sam's mind and labour. And yeah, that's how I see it. It's a matter of talking mostly on the intellectual level that the thesis is at, talking around those issues, and I have given a texture to producing my criticism of it and suggestions of how it might be improved, and so on, you know, which can be like an art work, and it is not my work, the thesis. So when it works well as it does, Sam always does it well, it's a very enjoyable process, it's like academic life should be.

Lisa Sorry, did you just said- an enjoyable friendship?

Mark Yes, absolutely, very enjoyable. You know, for it to be enjoyable, you need a couple of things, you need: the topic, you know the material to be something that can engage in, that you might, possibly choose the right about it, you know. And you need the confidence that the student can do it, in the way that you hope he or she can, and after a while of course you get evidence of that, in this case, a draft Sam produced, you know, Sam designed and 90% finished, you know. I am sure there will be no disasters or problems in the viva or anything like that, I think, he will be absolutely fine. I really hoping he will get a job (laughing).

Lisa Sure.

Mark That is the other thing of course, you increasingly, I just do, really recently, you know, I currently got three students, two of them are at the very final lap, Sam and Phil, both of them now are extremely worried about getting a job. And my worries there is they gonna be so worried about this, so they might kind of give up- possibly before they finish.

Lisa What do you mean by give up?

Mark Well, I mean stop fining doing PhD is an enjoyable, interesting, and engageable process. Because they are too worried about maybe this is a waste of time, nobody will get a job anyway.

Lisa so you are worried about they were getting too worried about getting a job?

Mark yeah, it's not huge at the moment, because I asked them about it, you know, it will be the amount of work both of them got left to do, to complete a good , you know, PhD.

(original data lost due to technical fault-recorder stop working. Memo was taken instead as soon as the problem was realised)

Lisa Since you said you are worried about the job thing, do you think you will actually help them with it?

Mark That's the point. The role of a supervisor is outside of the production of their career. I can give advice, or help them sending CVs, but you don't know how many problems there will be.

Lisa You mentioned something about friendship before, does that mean you see your students as friends?

Mark Yes. In a way, I mean ,maybe outside of this room (laughing).

Lisa Do you mean you have other activities together?

Mark Yes, we have coffee, drinks, and we don't talk about the research I think it potential more like friendship, that's what my own relationship with my supervisor's like.

Lisa Do you think your supervisory style was influenced by your own experience?

Mark Yes, definitely. I had the best experience ever with my supervisor. We could spend hours talking about my work. And I don't think I can supervise someone I don't like.

Lisa what do you mean by you don't like?

Mark I don't know. Haven't had anyone like that.

(About the details correction)

Mark that's just my style of reading, and also I think pointing out the small things, like grammatical mistakes, also display a fact that I have read his work…. hahaha. And, of course, this is the first draft, I shouldn't do that, but that's the way I get to know the stuff. And I used to have some international students, one from Japan, and that's the work I suppose to do as their supervisor.

(The End)

Appendix three: Transcripts from Group 3 student and supervisor

Group 3 – IPR interview with student

Jim-Student

Lisa-Researcher

This interview was taken two hours after the supervision session. The student reviewed the video and stop at the most helpful moments.

Lisa So we are going to review your supervision session, and I want you to identify the most and least helpful moment, or moment by stopping the video, ok?

Jim I see. Can I start?

Lisa Sure.

(Video showing…)

Jim here.

Lisa OK.

Jim When my supervisor talk about the MULE BUCK, it is a kind of software used to simulate the real object.

Lisa ok, why do you think that was helpful?

Jim hmm, because the MULE, I haven't done much research about how does MULE work, and before that, he also mentioned about that, the feature and function of the software. And I didn't realise that could be very useful to simulate

the real object. So now I need to do more research on MULE this week … to know more about it.

Lisa OK. So you think this is something could be helpful for your project but you didn't really think about it before, so your supervisor is suggesting a good stuff or tool for your project here?

Jim yes. I didn't know this software before, I never heard about it before. But when I talked with him about my project, my idea, and he told me: ok, you have got your ideas, I think this software might be helpful for your project. That's why I think it's quite helpful.

Lisaso how much information do you think he was giving you about this software? Was it like – this is something you can do, [go and find information about it…]

Jim It's quite general feature of the software … because… hmm, I need to rethink about the link between the software and my project. So he just gave me some general idea, but it's enough, it's enough for me… toooo…realise if it is particular useful for my project.

Lisa so you think it's good to know something that could be helpful is out there?

Jim yes. Sure.

(Video playing…)

Jim do you want to stop here?

Lisa yes.

Jim hmmm… within this several mins, we were all talking about the same topic, about the scenario, if this scenario I am going to make is for my further work. You can see my supervisor gave me the overview of how the scenario will look like. So I also think this part is very useful. He has gave me a direction of how to use motorbike, how to use Photo Shop, I can refer to my previous work and practice to make the scenario. Yes, he won't give me a lot of details, but he does give me over line, sooo I can get direction, I know what I am going to do by myself.

Lisa I am not sure if I get this right, you mentioned something like how to use Photo Shop, do you mean how to use the software?

Jim no. I am quite good at using Photo Shop, but … actually before this meeting, we talked about it, my supervisor doesn't use Photo Shop a lot, I showed my work, and he think it's good, it's a good tool to simulate the idea. So it's a communication. It's something like, my supervisor has his own research focus, sometimes, for some software, maybe I am better than him, so we can communicate, exchange information, so…

Lisa so you are saying basically this part focus on, correct me if I am wrong, he is proving your project with a big picture of what it looks like in the further. [So in a way he is taking control of your project by generally showing the direction of where it is going to], so why do you think this is particularly helpful?

Jim [yeah… yeah… yeah…], I think it is helpful… I think this is… one of the major job of supervision. Why it was called supervision, one of the main job is to control direction of the research. The research is to develop a new area of science or anything, so the

direction could be anywhere. Could be lead to anywhere. So the supervisor's job should as seem… should direct the student to the right way.

Lisa so do you have a picture in your mind of this project when you start doing this PhD?

Jim yes, we always agree on the direction. Sometimes he also gives me some ideas about direction before. We had some trials with chairs, before that he suggested me to do trial with motorbikes, but I re-thought about his suggestion, and I thought, in (at) the beginning, that was in the first year, I thought it was too complex to make a *prototype* of motorbike, it will cost a lot of time and money, so I don't think it's a good idea. So I talked to him, and he agreed with me, then we modified the direction again. Generally, I agree with his suggestion about directions, the big picture, but sometime if something is wrong, I will tell him, and we can modify…

Lisa so you are saying you have ideas about where the project is going to, and you want him to control of the big picture in case if there is something you are not sure about?

Jim hmm, I don't think it is real control, that's another kind of thing that your supervisor tells you – you must do that, you can't do something else, it's not like that. It's a kind of communication. Because the main part of the journal paper is a *prototype* method, the method was proposed by myself, not by him, but I told him my idea, and he understood my idea, and he will, naturally, link my idea to his knowledge… after that… the mix of my idea and his knowledge will develop more ideas… so , communicate … I will also get my ideas from his knowledge, he can get ideas from my suggestions. It's communication, I don't think it's about rule or control…

Lisa so you think about him being, more knowledgeable, so he can provides you some idea or suggestions on what you basically build up, [so you can better…]

Jim it's something like … like… I tell him some ideas, I will ask him how I can achieve my… hmm… I just have an initial idea, but I don't know in practice, it will work or not, so I need his suggestions, I need his ideas, coz he knows more in some areas, more than me. So he will give me some suggestions.

Lisa ok.

(Video showing…)

Jim I need to mention here. Because, you can see, the thing is, firstly, he gave me some tasks; one task is to find out the first time the *virtual prototyping* was used in product design. He didn't say clearly about that before, because this concept was firstly used in computer sciences instead of product design. So I need to question him, to ask him if this concept…what you task really is… should I find out the first time the concept was used in product design or something. So… I just want to say…this…

Lisa OK, when you say he gave you some tasks, why do you think that could be helpful?

Jim hmmm…. This is…. I think it's not helpful or not, this sort of task… for supervisor and research student, most of them are adult already, the research student, they are not real student, but from another point of view, they are student, supervisor is also a teacher, the relationship for some is just student and teacher… because my supervisor, every supervisor … another lecture in our department, I think their relationship is more like a … two staff… two researchers who work together… but for

me, I think, because I didn't do much about this area…can't say didn't do much…hmmm… just some concepts, some particular concepts, I am not clear, in this situation, my supervisor gave me some task to make it clear. I think this the task...

Lisa so you think it's good for him to set up some milestones for you to reach at the particular time so you can know you are on the right track. Is that what you mean?

Jim yes.

(Video showing…)

Jim I made some mistakes in my paper, and my supervisor found it,

Lisa what is it?

Jim It's not a mistake… I didn't clearly state that in the paper… I did 100 questionnaires, but the responses are only 17, good responses. I only said how many questionnaires I have done, but I didn't mention how many responses I got. Obviously, it is…

Jim he is modifying my journal paper. And for journal paper, I usually sent a draft to him, he will help to modify…

Lisa why do you think this detail mistake correction is helpful?

Jim it is helpful. Because the original paper… it is very hard to award if you have some mistakes, and I think this is… if you review it yourself, you couldn't find it… but to modify your journal paper, I think it's also a task of supervisor. And you should use him to help you, because it's more effective, and also save time.

(Video showing…)

Jim here is … the whole part is all about the paper modification. What he does mention is something… confusion about... why the sensor has no response to the movement, the physical mocar. Yeah, I need to explain the reason, why it is not…but I had no idea about that… I need to do more work to make it clear. OK… this is the supervisor finding the problem…

Lisa what do you think he is trying to do?

Jim hmm… he was modifying the journal paper, he want to make sure all details are clear, all your (my) theory is explained very well.

Lisa so this is about him helping you to make your work better in terms of organizing your ideas and the way you express yourself?

Jim here is not about organizing my ideas, hmm… I think he is helpful… help me to improve myself….

Lisa there could be two situations: you have your own ideas, and your supervisor think they could be better by adding more theories or using another method…another situation is, you got your ideas, and your supervisor think they are good enough, the only thing is how you present them… do you know what I mean?

Jim yeah, here is not about the idea, the idea is clear, here is a technical problem… is how to explain…

Lisa is about to explain yourself more clearly so people could understand?

Jim yes, yes.

(Video showing…)

Jim this is the part from the … the… journal paper… marking the undergraduate's assignments. I don't know if it is helpful…

Lisa [so you are marking…]

Jim yes, I am helping my supervisor to do some marking… this was allowed by the head of this department. This is good for research student to get some experience in teaching, I have demonstrated software to master students… it is good for me to improve my knowledge in software and experience in demonstrating and teaching students… I think it is a good part of PhD lives. Not just research, you can do some teaching activities to the under or postgraduates.

Lisa so you think variety kinds of activities make your supervision more effective?

Jim yeah. It's not about your research, it's … it's not research activities… it's good for you to get some experiences, and make your life not so boring. Because PhD lives… and I think it's also good for your relationship with your supervisors. Your supervisor provides some chance for you to develop your personal ability and this is quite good. I really appreciate it.

Lisa so you think this kind of extra non-academic activities could improve your relationship?

Jim sure. Otherwise your relationship with your supervisor will be very…not so close… your supervisor could give you more opportunities to get more knowledge, you could appreciate it very much. It's very good to develop your relationship.

Lisa do you think it is important to have a close relationship with your supervisor?

Jim yes, sure.

Lisa and how close? In what ways?

Jim hmmm… how close… I think it's very important. Coz for master student, or undergraduate students, you have a lot of classmates, but for PhD student, the relationship is really just you and your supervisor. Not you, you classmates, and several lecturers. If you are master students, or undergraduates, you have several lecturers; you have a lot of classmates, so the relationship with one particular person was not so strong. But for PhD students, 95% of their research life is spend with their supervisor or related to your supervisor. So it's very important to have a close relationship with your supervisor. And, coz… it could help you to communicate with each other, communication is very important. Hmm, I heard from some PhD students who complains that, her, it's a girl, her supervisor can't understand her, and she can't understand her supervisor. It's a big problem.

Lisa when you say 'understand', do you mean literately or?

Jim literately, yeah, because she has some ideas, but she said her supervisor was confused about her idea, and her supervisor questioned her 'why do you think it's necessary to do that', and it's not good, and I think this will delay your research very much… because…it's a quite big conflict with your supervisor.

Lisa so what do you think could improve the relationship? Make it closer or stronger connected?

Jim for me, I…I… asked for the opportunity myself, my supervisor didn't offer it, I asked him could I have some opportunities to demonstrate teaching or do some work in

our department. I got paid… I got paid…but I said payment is not important, you know, the thing I concern, I just want to get some experiences, and for the supervisor, I think, they also like the student, not just talk about their research, they also have their own thinking, at least, ok, the supervisor's like, ok, this student is also thinking, thinking by himself…to do something else, not research, but academic activities, I think PhD student should be positive, not just listen to their supervisor, not just try to conflict with your supervisor…

Lisa so you think if you have some requests, [you should just ask…]

Jim [yeah, you should ask…]

(Video showing…)

Jim here is… I ask questions…this is regarding suggestions. Sometimes, the supervisor is positive…

Lisa what do you mean by positive?

Jim it means… he… he… give you suggestions, but you didn't ask by yourself, but he think you need them, so he tells you. And sometimes, you think, ok, I need suggestion, and you ask for it. So there are two directions, I think, you ask for direction vs. he gives you direction.

Lisa so this is he provides direction?

Jim no, here is I ask for direction. I asked him, here are some questions, I need you suggestion: if we should put it here or not. But sometimes, when he goes through

the journal paper, he could have some suggestions, and he will tell you (me) his suggestions.

Lisa why do you think this is helpful?

Jim when I went to see two directions…not just sit here, never think … and that's ok… just ask your supervisor- ask me to do that, ask me to do that, and if he don't tell me to do that, I don't know what to do. Not like that, it's not just listening; I know some students … was like 'I don't think that's a good idea, I think I should do that', they never listen to their supervisor's suggestions. Some just listen, but don't think.

Lisa so you think it's important for students themselves to have a kind of responsibility or ownership of their project?

Jim yes, the ownership of their project. I didn't do it very well, but I do think it's necessary for yourself (student) to think, to have their own ideas, to have sort of…control of your project. The project is … you do the main job, I think the project is you and your supervisor's, not just one.

Lisa so this is where you think you are asking him some questions, what kind of role he is playing here, do you think?

Jim I do hope he could give me some suggestions, explain why he think this is necessary. Not just like : ok, you want suggestions, you just do that….

Lisa why do you think the 'why' is important?

Jim I … I always want to know the reason. Because the reason… you can deeply know the cause of something, the root of it, I think this is research activities; you want to know the origin, the cause, and the reason. I think this is.

Lisa so you won't be happy with your supervisor just telling you what to do?

Jim no.

Lisa ok.

(Video showing…)

Jim he is typing where do I need reference…

Lisa That's it. So how do you feel about watching this? Have you done anything like this before? Like recording your supervision session?

Jim no. this is the first time. It feels weird….(laughing…)

Lisa do you find it helpful in some way?

Jim yes, I just had a idea that, if necessary, every time, every meeting, I should put a camera there, so I can review it. It could be helpful to improve the meeting quality. And if you can get access to other supervisors' meeting with their students, it could be very helpful. I think. This is very valuable.

Lisa is there anything you missed in the supervision but pick it up during our reviewing?

Jim yes. It's the same way as we do literature review. Every time you read it, you will get a new idea. I think it's similar. If you review….

Lisa any particular thing you found interesting in this session?

Jim …not really.

Lisa ok, fine. Anything else you would like to say?

Jim no.

Lisa thanks a lot.

Group 3 – IPR interview with the supervisor

Ian-Supervisor

Lisa-Researcher

This interview was taken three days after the supervision session. Video clips have been reviewed one after the other and commented were provided for each single chunk.

Lisa Now we are going to play back some video clips I cut from the last recorded supervision session you had, and I want you to review them, and tell me why do you make that response.

Ian ok.

Lisa let's start.

<u>Video 1</u>

Lisa OK. That's the first part. Could you tell me something about it? Such as why do you make that response? I remember you mentioned some new kind of software … MUR…I don't really understand…

Ian Right. We use the term MUR, ok? which is a term that he (the student) might remember, I hope he remember, we had a presentation on it from trail and motorcycles. They used something called- MUR- which is a very strange term, which is like a model of motorcycles, which lined all the demotions to move. And, but it's not a real, it not a real motorbike, its just a model. So I was really to get him to think about the same… the same procedure that trials motorcycles gone through for their design. I was wanting him to try… and replicate that procedure within his design. That's really what I was doing. I also used the term MU and I also use the term BUK, which came to think he may not understand that, but in the car industry, when they made a model like that, they call it BUK. I don't know why they call it

BUK, I don't know why they call it MU, but that's just the traditional term. Emm, I know he should understand what the MUR means, but using the word BUK, actually I hope I didn't confused him… but… (Laugh…) he may not hear that term before.

Lisa you are trying to help him recall something you think he should know?

Ian Yeah, certainly the MUR he should recognize that term from the presentation we both went to… from trails and motorcycles.

Lisa Is this important for his research?

Ian yes. We went to the presentation, immediately afterwards, the next time I saw him (the student), I said maybe we should contact trails to get one of their MURS, and we did. Actually I emailed them, and they said no, they are totally confidential, when they finish with them, they throw them away. so there is no way… But I ask the person from Trails and motorcycles to explain to me and get more about how MUR works. Once he did that it became clear that the same techniques would be very useful for this aspect of his (the student) work.

Lisa ok.

<u>Video 2</u>

Ian I used the term BUK again…

Lisa yes… so what are you trying to do in this part?

Ian well, there, what I was doing … he has produced some previous work that was…hmm, I guess, able to explain … what I was thinking more easily than my own words. I used my hands quite a lot, BUT, what was useful there to have access to some of his previous work, which in this case was, images from a journal paper that he has been writing. So there, I found him here to refer him to his own work rather external work or to my own thoughts. So

I guess, it illustrates that whenever I am working with student, I do like to have access to anything they have done before, and I am always on my computer when I run tutorial, very often I will click back into either works they have done before or perhaps works that I have done before, and I will try to show them on screen what I am thinking, coz that can sometimes be more helpful than trying to describe in words. Because they say a picture paints a thousand words or whatever… that's what I am doing there, make the use of path record, especially in this case visual record, but sometime it can be probably texture record as well.

Lisa And also I remember in this part, he is trying to ask you how to present his ideas in journal paper without using animations, you were suggesting some other options?

Ian yes, what I was doing there, he was worried about: ok, I can't do animations. But actually, in a previous piece of work, he had, I guess tried to show a … what do you call it, not simulation, but a … what's the word…a representation of animation where he showed something in three different positions to give the impression of movement. So he had already done that previously, but maybe hadn't quite made that link that, you know, that's what he might be able to do on this occasion as well. I really showed him you already done it once; you just have to use the same principal in a different application.

Lisa I see, and what kind of role do you think you are playing here?

Ian woo…I guess somewhere I am acting as his memory…. Haha (laughing) but, I think more precisely, I am also trying to give him some confidence that you know, he had already been able to do this, so it wasn't going to be a problem with him doing it again. So in that way I guess I am being a bit like a coach almost, trying to encourage someone that you are able to do this task, it might sounds difficult but actually you have the skills, you have the knowledge, you are ready to do it.

Lisa that's interesting.

Video 3

Ian ok, there, a couple of things. He had already presented me with some work, previously. I was referring to that. But I also asked him to make use of a standard tool, the M search Engine in the Library, and that's something we ask all of our research student to come familiar with, and they will go on a training course to tell them how they can best make use of that. And, so really there, I guess I am …almost acting as a reference for him to let him know that there are various tools which he needs to be making use of as part of his research standard tools. Saying that, I can imagine he has already, well, I would hope he has already made use of that for the search coz I know he will, have done other searches previously. So in some ways I guess I am not really telling him anything new, and maybe just confirming to him that these are the type of tools he need to be using. Reinforcing it.

Lisa so in this part, are you trying to set up some tasks for him, like this is something you should know, and this is something could be helpful you need to check it [out…]

Ian that's right.

Lisa do you think is it necessary for a supervisor to tell the student something specific tasks, like setting up stages for him?

Ian Well, it is certainly the way I work. I don't know if you know but when I was looking at the screen sometimes, I was actually looking at a… a record of past tutorial, because I asked all of my students to write just one page record of the tutorial that we had together, as a memory aid to them, but also a memory aid to me because when I got three or four students, one comes to me I cannot always remember the last thing we talked about. So I would put off the record, there will be a list of what we talked about together with a list of tasks that they should now be addressing. So it works too ways: it works as a memory aid to

me, and perhaps to them, but also works as a progress checker, because we can look at the task that we set last time, and we can see what sort of progress has been made, again it fits one of those. So certainly from the way I work, I see that has been a important part of a supervisor's job through to set specific tasks, sometimes also with time scales. And then to check with the student is progressing against these scales. And if not, then I would expect some sort of explanations for why the progress hasn't happened.

Lisa Right. I don't know if you heard about this, generally, supervisors has two tasks: one is to let the student do their own work, it's like a hands-off approach; and another one is how to keep the student on the right track, help them to set up mile stones, so they can get there at the right time, it's like a hands-on approach. Do you think it is hard to balance the freedom and control?

Ian Oh, yes, you can say that there is a conflict because what you would like to be happening in a way especially the student progresses through the research, you would like the student to be able to identify what the next tasks are and make their own task and decide also… hmm, and I do this probably from quite early on. I ask them to make a estimate of how long it's going to take and set their time scale accordingly, so rather me say 'you will do this in two weeks'. I ask them ' ok, how long do you think this is going to take you?' so they began to get the …they began to get used to understanding their own piece of work, understanding how long things would take and therefore being able to create a work schedule ahead of time. But yes, there is a conflict there. Because in a way I could be very prescriptive, and I know actually some supervisors who work this way and they are very prescriptive, and they say 'this is the next thing you gonna do, this is the next thing you gonna do'. 17: 53 providely fall that, at the end you should get your PhD ok. Other people perhaps let students almost set their own tasks, and maybe even sometimes you could imagining they would allowing the group down a sort of… of blind alley, and then they learned from that experience. But

because PhD is so short, really, I wouldn't go the other extreme, and I will try to stop my students going down a blind alley. So, I guess I am thinking I am somewhere in the middle of that range. I tend to set most of the tasks, and these top level tasks, and the students may then have to decide, ok I am going to achieve that, and what must I do beforehand to make things fall in the place. But, yeah, coz it's a important part of research that you learn what are the necessary tasks to get you to the next stage.

Lisa right.

Video 4

Lisa here you are correcting some small mistakes…

Ian yes, I guess the impression he had was that's if you send out a hundred questionnaires, the important thing is… he actually send out a hundred, but actually, really in terms of the research, I put, what he has achieved, is the responses that come back, they are important. A lot might sounds better—oh yeah, I emailed a hundred people, you know, really, that's not, that's not the important aspect, that's how many responded. I guess to be completely, could have said, because the response rate was 70 out of 100 or whatever, but, yeah, I suppose in a way I am quite surprised that he didn't write, he didn't tell me in the paper how many responses are aware because … I was thinking it's quite obvious that's what's the important aspect.

Lisa do you think it is important for supervisors to pick out these little important things?

Ian when it comes to external publications, which is here, and mine name is going to be [on the publication as well], then I think it's actually very important that the member stuff goes through and checks all the details, which is time-consuming, but really, if the paper goes out, with my name on it, hasn't been written very well, that contains errors(21:22) or whatever, I think that's quite badly on the university, even when it has been reviewed. But it actually

goes into publication, and something that's not quite right… that reflects even worse on the university. So I think once something goes to external, I think it's very important that every single aspects is …is …… done. (21:36)

Lisa [right.]

Ian if it's just a internal report, a progress report, then actually what I might do was I mark up something isn't quite right, but I wouldn't necessarily expect the student to to … to make that change to the formal submission. I might say : ok, we know there's a problem here, maybe next time you can make sure you don't do this thing again. But, yeah, I think for external publications, it is really very important. It's always important to tell the student if there is a problem like that, but actually … telling them how exactly that should be corrected, sometime I would leave it up to them. If they are writing a thesis, I might say, ok, you haven't given me enough explanation here, but I won't tell them how to explain it, I will let them decide for themselves.

Lisa yes.

Video 5

Ian Right. That's something which we very keen on in … well, in this department, even for undergraduate, especially for postgraduate, anything you do, anything you write, it must be what we will call 'evidence-driven'. So you must be sure of a reason for it, or be able to explain it. If you can't explain it, then either you got to be honest and say: we don't yet know this. Or, if it's not an essential part of the research, then just don't mention it, because all its doing is adding confusions into the research and destruction. So in this case, he has written something, which, I guess, in a way could have been very interesting but wasn't an essential part of the research, because he hadn't really dell deep into it, he couldn't give explanation. In this case, the best solution is to remove it. If it has been something that was

really a critical part of the research, I would have said to him that you got to go back and find out why is this happening, and because you can't just make a statement and not understand why that statement is true of false or whatever. So… and that's something coming to writing his thesis, I would be very keen he makes sure he doesn't write anything unless he understands why that is the case.

Video 6

Lisa what do you think about this part?

Ian Well, this is something that is not research-related issue. Because he has expressed an interest for future career or perhaps coming in academia, so he sees not just research but other academic experiences like teaching, demonstrating, even marking been an important part of that. So he asked to get involved. So here I guess it's… I am not been a supervisor there in a way, because that's not part of his research. I am almost been like a manager in a way, he wants to do something, and I am trying to explain to him, you know, the time-scale. Coz here, unlike the research where in a way he setting his own time-scale, this is something that externally post, deadline. So the work must be done by then. And again, I was referring to external information.

Lisa do you think it is important or helpful for students and supervisors do some other tasks together which is not really related to their research to improve their relationship? Do you think this helps you to have a closer relationship with your student?

Ian ahha, yeah [up], yeah [up], I never thought that way, but yeah [up], it's… it's… certainly from a way of … if the student does want to become academic, then, at the moment, if they are just doing research, the only thing they see me as been as a supervisor, they might think that's all I do, ok, as my undergraduate just seen me as a teacher, they don't know I do research and paper, most of them don't know and don't care. So I think it is important from

that aspect that him (the student) or anyone else begin to see the other tasks that I might be involved in. so teaching, marking, and administration, and so on. Yeah, and I think, then almost I became rather a supervisor, became more like a mentor, because he want to grows in like a academia, then, it's useful, you know, when I first became a academia, I have a mentor who showing me the road, explaining to me what the job involved, and this could be a useful way of … it's beyond PhD supervision, but if we want to develop our PhD research students into academic, then it could be a useful additional task or additional load, for supervisors.

Lisa does he asked for this? Or who do you think should take the action? Will you offer them or you prefer wait for them to ask?

Ian Right, you know, for me it depends on the student. If the student is a student who I know, is actually having, maybe fall a little bit behind of the research, all I want him to do is get him finished. Then I wouldn't, I will never offer them any work, ok? Others who I know maybe doing very well, got good experience, then I might, especially we had a recognized need within the department, I might then ask them but in most cases, I wait for the students to show an interest, in that area. Then I try to response to that. Because sometimes, the only person who will know if they are, have been working very hard for the research is themselves, ok, if they know they were too busy, I don't expect them to be asked for extra work. So, I guess it's a mixture, but mainly I wait until the student has shown an interest.

Lisa ok.

<u>Video 7</u>

Ian So there, I guess, I am illustrating or explaining to him a fairly, for a experienced researcher for the standard where I working, he was referred to his previous work, no, previous publication, sorry, and that's something which he won't have needed to do before because

he only have a couple of conference publications and they were quite independent. So I guess there I was almost trying to, well, explaining to him fairly standard academic practice. But obviously he was unsure …about whether or not he has to replicate all the detail in this one paper. So I guess I was trying to show him you know, if you already have published information, you don't have to keep repeating the same information over and over again. It's all became a sort of…, it's already in published demy so you can refer to it whatever you need to.

Lisa ok. Thank you very much. That's all. Do you normally review your supervision activities or is this your first time?

Ian reviews them with myself or with my student?

Lisa either, with yourself or your student?

Ian hmm, no. in fact that's quite a good point I mean, well, if a student was unhappy, with how I was supervising, they would go to their director of research to transfer to … the problem of the student is of course they have probably no one to compare to, so how do they compare my supervision to another member of staff? I know they will talk with the other researchers, and they will get an idea, but still it will be impossible to do a direct comparison. And on the other hand, how do I compare myself with other supervisors? I think when I am… answering your questionnaires, I mentioned that, it's very difficult for me to objectively you know, analyse my supervision quality or techniques. Because apart from my own supervisor back in Nottingham University, and maybe I am a part of a joint supervision team, it's actually quite difficult for me to compare myself with anyone else. So, it makes review quite tricky, because what is the benchmark? What is the comparison made to? I guess because of the one to one relationship, that's always quite tricky. So this is a quite useful process.

Lisa I see. Thank you very much for your help.(the end)

Appendix Four Transcripts from Group 4 student and supervisor

Group 4 – IPR interview with student

Simon - Student

Lisa - Researcher

This interview was taken two days after the supervision session. The student reviewed the video and stop at the most helpful moments.

Lisa I will playback the supervision session you had on… last Friday, and I want you to identify the most helpful moment or event, it could be more than one, and also the least helpful ones, when you see the moment, you can just press stop, and then we can talk about it.

Simon OK. It sounds very difficult.

(Video Part 1)

Simon can I pause it here?

Lisa yes.

Simon hmmm, ok, that was probably quite helpful. Hmm. In the fact that, it was this question I had for a while regards to my last study. It was sort of … I have been sort of … to get the decision made, and this have been through … taken a while, to get that… that was when actually we finally got the decision on exactly what we gonna do for the thesis. Because we were planning doing was take samples, but wouldn't probably have the money to do everything,

Lisa what is everything?

Simon hmm, basically we are looking to measure different things in the blood, and we are talking about each part cost a certain amount of money, and, we are doing four different trials, we are doing four different types of exercise. What I was saying was we only need to do two types of exercise because that was done in the other study, and I would like to keep it similar. So we go…the thesis will be sort of … quite similar. And, Roy would want everything … to test all the different trials, but I was say, well, that's really not gonna make any sense coz I am not going to say why have you done that. You know … ask question 'what does that come from' in my thesis so I want to keep it bit more simpler so it gonna run smoother. But … I know we are going to next bit in a min, and I know that is probably the least helpful bit… I kind of remember what he said next… hmmm, so it was helpful in the fact that we finally had a decision made on exactly what we were planning doing.

Lisa Why do you think it takes so long for you guys to have a final decision?

Simon hmmm, probably because Roy changes his mind quite a lot.

Lisa do you know why he keeps changing his mind?

Simon not really, no, it's just, very, sort of… I don't know how to describe this, quite indecisive? He doesn't like to make a decision or statement things like that. For example, I would go away and maybe read something else, he would say, right, let's do this; and I will go away and read something and say, no , that wouldn't be right, that would work. And then we change. Because, but… I found it vary… I have known myself, he didn't really give me anything back, I am doing all the talking and he just

agrees. And there is never any sort of like, you should do this, you should try that, it's a bit… it's very much…he agrees 'yeah, yeah,' and you know when you go in to have a meeting with somebody, and if you feel strongly about something you know the chances are you gonna maybe get what you want, you know, push the certain direction because he will more than likely to agree. I don't know why, I don't know whether or not, he doesn't know this specific area enough, or…er…. Just trusts me because I am in final year I know what I am sort of talking about at this stage, I don't know. But I feel sometime, I am sort of, even from …of that, I am done all the talking.

Lisa Are you saying you expect him to prove more feedback, not just agreeing and say yes?

Simon A little bit. Yeah. Er… I suppose… I think it depends. Depends on what we are talking about because this lot of stuff we are talking about recently was like 'we just need to buy this, we need to buy that' and he just agreed and say 'yes, we need to buy this and we need to buy that', so suppose this is nothing really you can say. And in that situation, err… but even there, we were saying about doing one or two different types of the different training programs, and I was saying we only need to do one or two, but he's like 'but we will just do your four anyway', just for the sake of doing them. And I am saying a lot of these samples gonna be not analysed… and they gonna be wasted, he was like 'well, we will leave them there, and we will see how things going, if we get more money in the further'. That's just like, it's sort of… I don't know… it's strange…sort of… sometime I think he should be … a bit more decisive and made more decisions so I know we wanted this way.

Lisa do you mean you want more directions?

Simon a little bit, yes and no. I suppose I am at my final year, so if I can't direct it at this stage and no one will be able to direct it. You know, maybe we'll be … all I am saying is just suppose, in my opinion, that is the way he has always been, I am at my stage of 'don't want any more directions, don't need it', but maybe a year or so ago, he could probably done that more, do you know that sort of way? That's probably not really gonna be more effective now anyway because I have done all of my reading and no work need to do, you know, no where need to go. So, I am happy enough to sort of take the lead on it, I am saying 'this is what we need to do' and he agreed. So I suppose… I am just happy that we got the decision (smiling).

Lisa so that's the fact that makes you think this moment is helpful?

Simon yes.

Lisa coz you finally reach that point?

Simon we finally got the decision made.

<u>(Video Part 2)</u>

Simon Just a moment before that. I found that… was quite… least effective?

Lisa yes?

Simon because we are at the stage of… we have… I got four months to go in my thesis, and we have planned a study, and we have decided what we were doing, and Roy agreed too. But we still, he still haven't give me an indication of what we can measure because he hasn't give me indication of what money we have or our budget, so for

example at the minute I taking a lot of blood samples, but I don't actually know if I am able to analyse them.

Lisa why?

Simon Because it cost a certain amount of money as I said earlier, he hasn't give me indication of what he has in his budget or what … we can afford to buy. And as I said I asked him at the earlier stage and he says ‘oh, I will have a look and let you know’ and again, I haven’t find out and I don't know what is happening and when we will find that. It could be one of these things that come and we end up doing this study, and I find out at the end overall I will only be able to analyse one thing, which is a kind of waste of time for my thesis coz that makes it very short time depend, I would just like to have a decision. If not then, since then, there is still, there is nothing there, he sort of say ‘this is what we gonna measure’. This is why because I said I have given everything in front of him of what things cost, how much we have, but he hasn't sort of come back and say what we can and can’t do. That why I sort of find that the least effective coz he left another question, a big questions unanswered. Sort of thing.

Lisa according to what you have said, it seems that Roy is not really well-organized or well planned [about the big picture of…]

Simon are you sure this isn’t gonna going to him?

Lisa I am sure.

Simon I would agree with you. Hmm, he is quite unorganized, we won’t have meetings a lot of time unless I go to him to discuss something. So some time we meet for 5 mins for a couple of weeks or months, not sure.

Lisa [you don't have a regular…]

Simon we don't have a regular meeting. We do have one I think there is a sort of thing we have to have one every certain amount of time, we have to write details down, but we have more like sort of catch-up, I just come up and ask him a few questions, and just go and say something 'we gonna do this' sort of… we gonna try… we wouldn't have regularly sit down and say 'what we do next'. We would now and then, but as I said, most of time is me go to him, rather than …

Lisa he organize it?

Simon yeah.

Lisa so do you think it could be more helpful if you have a regular routine of meeting each other or … do you prefer, sometime, him to set up a time for a meeting …

Simon I think sometime it will be helpful if we just… you know, ok, we gonna have a meeting on XXX time, to go over a few things, to plan this, plan that, so we know exactly what we are doing before we go to the meeting, so we have that plan organized. And… again as I said earlier, it's probably the point that will be counterproductive, at the stage, because it's nearly over. And again, maybe a year ago, when I began my PhD, if we done that, then would be different. But I think it probably got out of the stage of counterproductive, because I am so far in, I have got so… I haven't got lots to do, I only got four months to go, so I just basically working and send him stuff as regular as I can, and then have meetings about certain things that are important for the last study and for the write up. And that would only be really when I get things done and send to him. So there is no point of organizing

meetings because he may say ‘let’s have a meeting next Friday about such and such’ but I will be test always, so I won’t have time to… do you know that…sort of way… so, at this stage, probably you know, kind of productive, but before, it could be more helpful.

Lisa so how do you feel about his ‘no well-organized character’?

Simon I find it quite hard to work at times, it’s… you have benefits… in one sense, I am quite independent, so I like that, I am able to go out and do me own things, if I need help I go and ask him. But there’s a lot of times, I go for help and he can't help me, so … he doesn't answer my questions, so… pretty annoying at that times. Ok, I understand, you are doing your PhD, you need, you suppose to be self-thinking, you suppose to be on your back, but sometime you just want a little bit of… more of… push, or a little bit, more help. And… but, I said, sometimes, it’s good. Most of the time I am fine, coz I prefer being independent. I prefer set everything up, and I just go to him when I need him, rather than him… coz sometime I just think, we could have meetings that just waste of time, coz I see other people they have meetings all the time, but they don't really get anywhere. Because they just have meetings for the sake of having meetings. You know, they organize a meeting every week, and, to talk about the same things. Because they are all busy in that week, and they just talk about the same things in the meetings because they haven’t got what planned done.

Lisa right.

Simon so there is a little bit of that involved. So I am happy. On the other side, also, you have… you do go on and you do want sort of … more directions. You want to have a bit more input. But… sometime, you don't get it. So…it is a bit mixed by… really.

Lisa since you talked about this freedom like, he did not say too much about your work, you have the opportunity to do what you want to, and on the other hand, it's like you want some more directions, what do you think the balance between them should be?

Simon hmmm…… it's hard to know. I think you need, I said I think when you come to your final year, the balance should be more on the side of … the PhD student. PhD students should take the lead coz they got more control… not control over everything, but they got more control… it's up to them to organize a meeting or something organized… it's down to them… because by the time you are in your final year, you should know where your thesis is going, you should know what you want from it, coz this is your piece of work. And, your supervisor is there to help supervise and give a bit advice; they are not there to do it for you. So I would say the balance is… probably start off quite…in the early days with a lot of… not meetings every week but quite…scheduled meetings in the first year, year and half, until you get your first few studies, I said from our point of view, we do many studies, you get your first few studies out of the way, and then you progress, coz what you don't want to do, you don't want people to check upon you all the time, you know, so you don't want that either. You want them to just gradually … you still have regular meeting, so it's just not… all the time…and just for sake of having them. And there isn't actually enough time between for you actually get anything done. If you are developing a test, if you

have a meeting plan for every week or every two weeks, and you are in the period of testing people, 9-5 everyday, you got… there is no point of having a meeting for a couple of weeks, because you are not get anything else done apart from your test. You constantly doing your test, and you are doing your analysis afterword, so you don't have to do any reading or do any writing, you know, in those periods, so I think the balance was sort of start of quite structured just to give you know, you have meeting for your literature review, and the way of plan for your thesis, coz again as I said, the problem are, you can have a whole plan, you can have a whole structure, and once you start it, you can just send that out of water, and you have to go different route, but at least you have that structure, you have that plan, if something does happen, you should be able to understand everything, what's going on, why that's happen. If it is not the result you want, you should still be able to understand because of that, you go that direction. You should have that enough area interests, or enough background of that area. So I think you should be more structured at the beginning of your PhD. And move towards more, the PhD student take more freedom as a result. Because as I said, at the end of the PhD, there should be sort of independent of the PhD do a lot of patterns, and move on to employment themselves, coz there is not going to be anyone tell them what to do. That is probably the balance.

Lisa ok, good. Shall we continue?

Simon ok.

(Video Part 3)

Simon This is sort of quite helpful. This is sort of … decision made. And sometime I was sort of arguing with myself. Sort of say, no, we will do this, no, we will do this, and my supervisor just says 'yeah'. I don't know. It is hard to say exactly what…. It is helpful because it is decision made, but it … sort of…something I could done on my own. I need to say to him so we can get the correct quantity of things ordered for them. But I had in my head that they gonna be between 15 and 20. That was just sort of making him say that he is agreed. That was it. Do you know what I mean? So it was good in that coz we got an answer. So it is helpful, but it was like that biggest thing.

Lisa what do you think about this? I mean you made your own decision and he didn't provide…any suggestions or what can I say, feedback? What kind of role do you think he is playing?

Simon I don't know. I don't know. Sometime I was wandering that myself. Hmm… I really don't know. Sometime I think it is like, i can just do it, and then he will come and say, why do you do that？ and I will say coz that's the way.

Lisa so you are looking for confirmation?

Simon For that, yes. Because of the fact that it was money decision for example. The number that we use was dependent on how many we order. So I could say, let's do 15 for example, and then realize that why do you do that, that is stupid. The reason I need to ask him that was because I need to find out how many we had and how many more we could order. So that is the only reason why I ask him. If we already had them, we didn't have to worry about buying them. I wouldn't have worried. Because they were there anyway, I could just put them in. So it was a decision we

have to make. It was an order we need to put in and he has to sign on it. So he will look at why do we have this and I have to explain it to him. So that's why.

(Video part 4)

Simon that is quite not too helpful.

Lisa ok.

Simon as we said, I tried to get people booked in, and we tried to get the study running, and we take blood samples in the morning, and I was practice my blood sample techniques, and after this we will sign off and S will take blood samples but someone has to be there supervise all the time. So he has to be around. And we try to book it this week but he wasn't around at all. So it was quite sort of…I would say the guy who came in and he would be interested in doing it next Thursday, which is two days away, but my supervisor wasn't able to do it, so we had to change everything and stuff. And so … it is sort of… quite hard whenever you need to rely on your supervisor to be there to start your analysis, do you blood sample, but you don't know when they are gonna be around. You always have to book with the participant, and then go back to supervisor to say when are you free, that is quite difficult. And some time you have to go back and change everything coz my supervisor's got something on coz I have not aware of what he is doing. And you know what I mean, I don't mean I have to know what he is doing all the time, but I know…maybe not here, but I heard other places where the supervisor actually have their diary on line. So you can actually log into it, so you can book a meeting with them. Or you can see when they are in a lecture. You are able to book things around. Basically they just

put folder 'lecture under this time' and when they are free. So you can sort of start …if you want to book a meeting, you can book a meeting. If you want to book a test session you can do that. It is a lot easier to do. So that was bit difficult we tried to book a time, and he was not in, any days.

Lisa what do you do with the blood test then? Why does he have to be there?

Simon it is our system regulation here. So for example, we will put a needle into the arm, basically we took blood into a tube, and then we took our samples. While we do exercise, or take samples, in case if anything goes wrong, there are two people there. Nothing should go wrong, but it is just a safety regulation.

Lisa does it has to be your supervisor?

Simon it doesn't, it has to be one of the senior member, or staff. For example, if my supervisor is not available, we should either try, say, another member of staff. Because another thing is we are only allowed to have two attempts at the vens, if you missed the ven, and you are confident, you can have one more go again. And if missed twice, you are not allowed to go again. So you are consistently go at someone's arm. The other person should be trained they should be able to get it the first time. Because sometime it could be difficult to find the ven. So it's things like that, in case things goes wrong, and you missed, someone else will do it, or they made the decision we will stop and do the trial again. That's why you need someone there.

Lisa ok. So your supervisor knows that because he is not here, and you have to re-negotiate with your participants and probably delay your research?

Simon yes, he knows.

Lisa ok.

Simon so this is one of these … he knows for example, from now on, I will be test every morning, and if he is not available, then, there is nothing I can do, it got to be delayed. So he knows we will be testing for the next two weeks, and he needs to be available.

Lisa ok. You would hope that your supervisor could be more accessible?

Simon well, I know that was kind of short notice coz that guy only come in that morning, and I tried to book him in a week later. But I just sort of hope that he could be free. Coz it doesn't need to be the first thing in the morning for half an hour. But he was available. So it was sort of, I know it was short notice, but I hope he can be free for just half an hour or you can move something by coz it will make the research important…coz we work with old people as well, otherwise I have to re-negotiate with them, and old people are very busy.

(Video part 5)

Simon again, sorry, I found that quite unhelpful. Because we tried to get the study set up and running, and my supervisor thinks about other things, he thinks … let's just do it anyway. I don't like … I want him to say, this is what we do, and this is what we need to do, coz at this stage we don't have much time. Because we can do extra people, we can use them in other paper in a year's time. But I finish in 4 months; all I worried about is getting my thesis finished. And I am not really interested in doing extra work for the sake of just doing it. That chance was we will never ever get to analyse them.

At this stage we are looking at 8 people and he sends a few extra, so we do 10 people. Who do you make the decision on and who do you leave out when you actually come to the analysis of your thesis? You know, you can't really do that in my opinion. So I was sort of …just like, I am not going to do it, there is no point. Because it is not very … it doesn't help me… it is not very …anything to do with my thesis. Everything I focus on is to have my work done. So I am not going to do extra stuff that is not relevant to what I am doing.

Lisa then why do you think he wants you to do more?

Simon I don't know. I think it is just …for the sake of having them. Perhaps he gets money in the further. He can then maybe analyse some stuff. And then there will be another paper. But … it is pointless in my opinion.

Lisa it is not helpful for your thesis?

Simon no, it is just …think wow; it will be nice if we could do more people. But we don't have enough money to do the people we have. So why try adding another 3 or 4 weeks on? Coz this study takes … a week for each person, so you add another, you know a couple of weeks on if I add another 3 or 4 people. So I don't see any benefit from that whatsoever. So I am not doing it.

<u>(Part 6)</u>

Lisa he provides you some feedback, and what do you think about the feedback he gives you? Are they helpful?

Simon Sometimes. We do have disagreements on certain things what we should put in and the way we say things in papers maybe we write things, but I think that is normal because two people… you know, one people like to write in this style and another person likes to write in another style, you know. So it is always gonna be a little disagreement there. There're some disagreement sometimes on why we haven't include this or why we have include that. And, we normally sort out, and get the similar type of thing. But sometimes we don't, and at the matter, one of us has to make a decision.

(General questions)

Lisa ok, tell me how would you describe your relationship with him?

Simon hoho… this is a hard one. I don't know. I don't really… as a supervisor I think he is great; I managed to learn how to work with him. So managed to understand what I need to do to get through my PhD. It is not the way I would treat someone if I were supervisor.

Lisa like?

Simon like …hmm…you know try to get some more direction, bit more input…coz I think it make a great deal of help. And, so I think… I am happy because I got my own independent, so I got to do my own things. Sometime you just need a little bit push to say: you got a deadline, you got to get that done till that date. Because sometime it is difficult for me, say, no deadlines. My deadline is 31/09. So sometime it is helpful to have a little push.

Lisa Ok. like you said, you don't think he is very great supervisor in terms of providing support, so what do you think he is good at ? as being a colleague? Or friend? Or?

Simon not really, I am not sure to be honest. Oh, this is terrible. Hmm, I don't know. I think, I really don't know. We have a lot of problems, issues like money issues, it is quite …I know it is the way research is, but he is always try to … it will be better he is more open like let you know how things going and what things are going on, so you can make more decisions, I think, sort of more helpful. Again, like I said in the other university, what they do, they let PhD students run some of the budgets, because you know, so you know the budget as such as such, and design your research within that. Coz we design our research with no indication of budget, and then it came to an end like, ohh, I won't be able to do that. If I know that at the beginning, I would design a better study that would match more our budget which would then … the problem we had is we can do a study, and think we should get the budget for it, in fact we don't, it is pointless, coz you are not going to measure what you want to measure, and you are not doing anything you need. So my relationship with him was ok. I think my supervisor might think it is better that what it is. I got to the point that, I know not to expect a great deal. So I just go in and say what I need to say. And I go. And I get the answer, I get the specific things, and I go. I work on myself. I don't sort of worry about … so he probably think I am quite happy with it. I am happy because I want to get over and done with it. But as I said I wouldn't sort of … it wouldn't be the way I would do it personally.

Lisa so what do you think you will do if you are the supervisor?

Simon I think I will just … I have no problem let the PhD student take more responsibilities, but at the beginning, make it more structured and bit more this is what we are doing and this is why we are doing it. Get them deadlines, and you know, just set them little things, at the beginning you know, your time isn't that important, just make sure they understand things. Give them some questions to answer, write something, just so you know they understand… the worries could be, you go through things, but they don't really understand. Because you can do the study, no problem, that is easy. And, so just making sure that both of us are on the same length. so I think structure a bit more.

Lisa ok, thank you for your time!!!

(Video part -1 0042)

Lisa

We are going to review some video chunks from the last supervision meeting we recorded. And after each part, I would like to ask you some questions.

Lisa

Ok, that's the first part. What do you think about it?

Roy

Hmmm, do you have any specific questions? Coz I don't know, I don't have anything specific to say about it, it's a difficult scenario that we have got with what I was talking about that… the samples in terms of … we have a limited budget, the limited amount of money and experiment will … if we wanted to do all the analysis we haven't got enough money to do the analysis, so that's why I am… we discussing about the two select part of the samples to analyse which will than go into his PhD thesis rather than analyse the whole sample collection. So that's the issue.

Lisa

Does he aware of this?

Roy

Yes, oh, yes.

Lisa

So you have the budge limited before your start the research?

Roy

Before we start this experiment.

Lisa

Have you negotiated about the sample size or…before you actually doing it?

Roy

With?

Lisa

Simon.

Roy

Oh, yes. Basically, we have … we need to do the optomore experiment, so to do the best experiment, we have to take all the samples with the outcome, the main outcome been a research paper. Ok, but we will have to do… we might have to do some of the analysis will fit into that paper after Simon has finished his PhD thesis. So his PhD thesis comes first but we need to plan a little bit further ahead in that to get the publication. So that's the kind of strategy I am working on this occasion.

Lisa

So, correct me if I am wrong, this is the sample size of the research paper, and the thesis might use some of them?

Roy

Yes, exactly. Because of the financial issue.

Lisa

So what do you think about your own feedback to Simon in this part?

Roy

I think it was ok. Haha. That's one snap shot of the series of discussions about this issue of how many samples we should take and what we should analyse and how much money we have got, and this kind of discussion. So that's not the first time we have that debate, we just have to finalise it in that meeting there.

Lisa

When you say it’s not the first time for the debate, do you mean this issue or this kind of negotiating?

Roy

This exactly issue about those… the number of sample for that experiment that we are staring on Monday in fact.

Lisa

Ok. Then, why does it take this long to negotiate?

Roy

I don't know… I don't know really. It’s just the… partly because Simon was costing the experiment, so we had … again we had our optmore plan of taking…let say 200 samples, and we gonna analyse so many printings in these 200 samples. So he has to cost that because it's a technique that we doing by chemistry lab. So he was doing by finding prices for the stuff. And so depending on how much things cost, we can either increase or decrease so, by that time we had that meeting, he had a better idea of exactly how much the analysis would cost. So we can then narrow things down.

Lisa

Ok. I see. Generally, when you were talking about this kind of negotiating thing, like exactly how big the sample size should be, as such, do you think it take long for you to have an agreement?

Roy

No, I think … once we had almost a … final value of how much the analysis would cost, we can make a decision now and then.

Lisa

Ok, so basically you are talking about the financial stuff, like how much it will cost exactly, the evaluation, which kind of influence how long it will take…

Roy

And it took really … probably two weeks,

Lisa

Ok

(Video part 2-- 0749)

Lisa

In that part, I think [you are still negotiating about…]

Roy

Again, it's a … the negotiation is over, what I was consider… not trail matters but just very specific about the how much plasmer, how much substube we would ported in a tube for storage, and subsequence analysis. So … there is not really, you know, it's a very specific scientific discussion about a method. Hmm, and it's not that important for the whole steam of Simon's PhD, so that was a quick five minute debate and discussion, you know, we came to an agreement on quite quickly. Hmm, subsequence that we have changed it again, we had a little chat yesterday, just passing in the corridor, and again, he thought about it again with changes that the number of tubes, he used 10, so it's a very dynamic and influential thing, so it's not that important thing.

Lisa

Does Simon change his mind often?

Roy

Hmm, it's probably me change my mind more. Although I didn't change my mind on this specific issue, Simon thought about it a little bit more, maybe did a few sams a little bit paper and changed his mind, but I had to say, I normally change my mind a bit more on the more fundamental things.

Lisa

Can I ask why? Is it because of the research progressing?

Roy

I don't know. hmm… I am try to think of a specific example, but to be honest I can't. It's more in the actual writing up of the research. We have currently been writing a research paper that will be part of his thesis, which will be a chapter of his thesis. But we submitted it to a journal for publication and you know, Simon had a very good draft of that, and I then re… not rewrote it but made my comments on one draft and then he worked those comments into the next draft, and then when I saw the next draft, I changed my mind about a particular paragraph or a particular session and then went back to the original draft. So that's what I mean by …me changing my mind a little bit more often than him perhaps coz maybe I didn't like that session that I put in and he kept it…

Lisa

He changed your idea a little bit?

Roy

No, it's not like that, it's just the shape of it.

Lisa

So expect the paper, is there anything else you changed your mind about?

Roy

Hmm, I can't… no… I don't know.

Lisa

So it's just the paper?

Roy

Yeah.

Lisa

Ok. And do you think this is good for… the project?

Roy

Me changing my mind?

Lisa

I mean, both of you are working on this project, and I assuming you are following a certain routing to carry on, and you said sometime you changed you mind about a piece of writing, and what do you think this could affect the whole process?

Roy

No, I doubt it. No. I mean have said that, we have had quite a few major change of directions…

Lisa

What do you mean by major directions?

Roy

Well, change a complete study.

Lisa

Ok

Roy

So, hmmm, we had … coz … for his last study, basically Simon's PhD will be four experiments, you know, we have done the first three, ok; now we have been negotiating, discussing, and debating the last study. We started doing that discussion, I don't know, before x'mas perhaps, no, maybe after x'mas. The original plan was to do a longer tutional training study, ok, which was quite a big undertaking, but when it became evident that, you know, time was running out for Simon, and training studies where we recruiter all the people coz that's his thesis are extremely time

consuming, and it might take nine month just to do the study from the day that we start. So if we'd only be able to start the experiment, say March, that would take us to X'mas, and Simon has to finish in September. So having wanted to do this training study, in probably February, we changed our mind, or Simon changed his mind, saying –I am really out of time, we can't do a training study, we need to do a short study. And he came to me with that, and I agreed. It was just a little chat about it, but that was a major.

Lisa

So you have big changes about research, Simon come up with his ideas,

Roy

Oh yes, yes, and it won't change his thesis, you know, his thesis will still be important, hmm, you know, the experiment we are doing is still important, but you know, it's just a shame we could do a training study.

Lisa

I know, it's quite time-consuming when you doing a PhD.

Roy

Yes,

Lisa

It's a short period; you can't really do a big project.

Roy

Yes.

(Video part 3- 1657)

Roy

Don't know what we were talking about there… hehe…

Lisa

That's almost the final part of the meeting,

Roy

I think it was about … hmmm…again it was specific … piece of analysis he has done in one of his first experiments, we tried to get it published in the journal… so… this will be one of his chapters as I was saying earlier, but we had comments back from the referees, from the journal, and they want us to make quite significant changes. So Simon has been working through the comments from the referees and you know, working at these changes to the manuscript, and that was a short discussion about this specific piece of data that we have analysed or he has analysed, so again, it was simple, he did the analysis really well, and I can't specifically remember what we were talking about from that clip, but, yeah, he done what was needed to do, it is now in the paper, and it will be in his thesis.

Lisa

So Simon is at his final stage of his PhD, from what you have said, do you trust him? Like what he is capable of and lead his own research?

Roy

Yeah, absolutely. You know, he has got four month to go of his PhD, so he is very experienced in collecting data and working on the subject and participants, have working through this manuscript together, which again was submitted to the journal, we had quite a lot feedback that he is been dealing with, you know, he is very … getting experience … at that as well. Yeah, in terms of trust, I trust him to independently work at get experiment set up and running, recruiting subject and working on manuscript and papers and also his PhD thesis. Yeah, coz that what he's got to do. You know, we are essentially, I don't know what's your thoughts of a PhD, you are essentially to be trained to be a scientist. And an independent scientist. And Simon is very much on the way to… being that. So I have taken my …taken a step back from him, so he can forward to that independent work ethic.

Lisa

Was he independent research student or capable of leading his own research from the beginning?

Roy

No, no, he has developed it. He was a good student, you know, he did his master's, so he had that extra experience in terms of his first degree. But you know, things like any first year PhD students, for the first year they need encouragement and a lot more interactions and feedback and…you know, holding their hand in a wrong word, but I am trying to think…

Lisa

Hands on?

Roy

Hands on, yes, hands on supervision, where gradually over the last 18 months, I have not needed to do that, he developed his own independent way of work.

Lisa

Can I say that you have observing him developing?

Roy

Yes, absolutely, I have done very much. And especially he is really developed in terms of scientific knowledge as well. That is the background to the study that we doing, and I will hold my hands up and say, he knows a lot more about some of the specific aspects of the science than I do because he's had the time and ability to really dive 潜水 into the literature and keep it up a little bit more than I, which is nice… good for me to say that.

Lisa

So at his final stage, Simon is pretty ok to work independently on his research and instead of taking a hands on approach at the beginning, it is pretty much hands off now, let him lead his own research?

Roy

Yes.

Lisa

What do you think about the balance between these two approaches? That hands on and hands off during the whole PhD process？

Roy

Hmm, the balance in terms of what?

Lisa

Like how much each of them should be weighted?

Roy

So, at the start of his PhD, let’s say … hmmm, 75 to 80 % hands on, whereas now, it would be

25% hands on, so its 75% hands off now. So our only interaction now apart from these meetings, is when we were in the lab, and I need to be there because I am a part of conducting the experiment, and that's only for health and safety point of view, regulations, Simon can do it himself, but we have to have two people there when we were taking blood samples and so on. So yeah, you know, it completely swopted.转换。From about 75% from the start to 25% now.

Lisa

In terms of activities, what does ‘hands on’ supervision include?

Roy

Training him in the techniques, you know, showing him how to calculate the subject, showing him the assays, you know, and the bi-chemical assays that we will be using, and taking him on an almost step by step approach through writing and reviewing a research paper, or the chapter of the thesis that we were working on. So that will be the hands on. Coz for the nature of our work, it has to be hands on, coz we are working with human participants, human patients. So I have to be there, or I have to be in my office. Mostly cases, we are both in there together. Because one of our experiments, Simon couldn't do the actual techniques, and only I am allowed to do it, as a student he is not allowed to do it, but as an academic I am, I have to be there. There are some more perceived procedures; he is not allowed to do.

Lisa

At the beginning of Simon's PhD, do you normally have a regular meeting schedule?

Roy

Probably not. Again I would imagine it's different to the social sciences PhD, we would have more regular meetings, but I don't have the … the kind of way of doing it like 'ok, let's meet every Tuesday, 2pm', I don't work like that. I have the open door policy, and Simon want to come and see me, he will knock on the door, and if I am available, I will say 'come in'; and maybe I want to see him, so I will go downstairs, say 'Simon, let's go for coffee, quick chat'. So that's how I work, rather than a schedule time table approach.

Lisa

Ok, can you remember how often do you meet at the beginning?

Roy

Sometime it was everyday, because we are in such close property, you know. When we moved here, he is just downstairs there. I walk passed him, maybe we will go for a coffee or with a few colleagues, I will say ' come on Simon, let's go for a coffee, we will talk some science, some social things as well, so it's the … just the

dynamic I have ,and I think many of my colleagues have as well, rather than this more, I don't know, formal, scheduled supervisor- student relationship. It's a bit kind of distanced. We are kind of … much closer. And not too close obviously. Hehe.

Lisa

Ok, that's very good. I like the open door policy.

Roy

Oh, yeah, I like that with everybody, with students, with undergraduates, with member of staff, so … yeah, and you of course. He he…

Lisa

Sure. How do you feel about it? some supervisors might concern about leaving their door open all the time, coz the student might come to ask you questions, or advice, or just want to talk to you, if have a lot of student come during the day, that might take a lot of your time, distract you from your work, research, and so on. Do you worried about this?

Roy

I do, when it comes to … say hmmm… giving feedback to MSc students, they might have a piece of work they might submitted and I would have more scheduled timetable for students to come in for 5mins to have their feedback for their piece of work. but I think, because I have only got one PhD student at the moment, I might be getting another one when Simon finishes, and maybe another one in a year's time, so dealing with only two PhD students, I hardly gonna be in a day… that with a lot of questions in a day, and persistent questions and so on, you know. so when necessary, I am able to develop that more scheduled timetable, but I don't think that's necessary at this stage because I don't have that many students. Does that make sense?

Lisa

Yes, definitely. And also, about the open door policy, it's feels like you give more power to the student, so they can come to you when they want to, do you feel comfortable with this?

Roy

Yes, if the student hasn't come to me for about … maybe two months, this never happened before, then maybe I would worry and then I would go for them, or email them and say 'come and see me'. But because I haven't had that experience yet with Simon and my last PhD student, so I don't have to deal with that.

Lisa

So if they don't come to see you for a week or two, you won't go for them, that doesn't mean you forget about them, but you think they are fine?

Roy

Yeah, absolutely.

(Video part 4 2933)

3102

Lisa

So that's the [budget…]

Roy

[That's the budget issue.] Essentially we could measure a lot of things in each of the blood samples. But the budget is… well, obviously you don't want to measure everything because there is something no point of measuring because you need the hypothesis and the reason to measure it. But certainly the four main big things that we want to measure are very important and we need to work the budget and the finances around that.

Lisa

The four main things?

Roy

Yeah, the pouting, the substances, and the marks of the magnesium that we are interested in, in the muscle.

Lisa

Will they be in Simon's thesis?

Roy

So they are, probably you won't understand, but they are pretty important things that we need to analyse.

Lisa

Do you have enough budgets for all these?

Roy

The way we will work it is… we will still measure all four of them, ok, but we measuring them under four different conditions, but we… in the first place, we will only measure them under two but those four conditions.

Lisa

Ok,

Roy

So that's kind of how we working it.

Lisa

Ok. I see.

(Video part 5 3309)

Lisa

You are Simon are negotiating a date for meeting here,

Roy

Yes,

Lisa

Do you find it sometimes, bit difficult to set up a date with your student?

Roy

Hmm, no, it was just difficult that week, which was this week, hmm, because there is a lot of things on that as I said I was away, in Warwick for two days, then in Leicester on the Wednesday morning. So that doesn't happen that often. So it was only that occasion where it was difficult to negotiate. I mean what we are trying to do there is start book in participants to come into the lab, to doing experiment, so we were… since then, we negotiated and Simon comes to me with dates, and subject that are available. And I put them in a diary, you know, already the diary is filling up… (showing me the diary) with subjects coming into the lab for experiment.

Lisa

So you have to be there while Simon doing the experiment?

Roy

I have to be. So on days I am not there when I am not available, like I think … next … following Monday, I am not available, we can't do the experiment. So I told Simon that, and he had to postpone one of these subjects. Because I am the responsible academic that … is responsible for the safety in the lab, for Simon and the subject. Coz we are doing it in casive procedure, we taking blood samples from the participants which Simon has been trained to do, still has to have an academic in the lab … or close to hand… for health and safety reasons.

Lisa

So if any of you can't fit in the schedule, the project has to be postponed?

Roy

Yes. Simon has to be there, and the participant has to be there. A lot of negotiating, that Simon does with the participants, so he is always on the phone with his dairy on his hand, asking 'when can you come in' and they are all man, they have got busy life, you know, they doing things like playing golf or whatever, so we trying to negotiating with them and then they can come into the lab. That's the difficult job for… any human physiologist. You know, like yourself try to time me down to come to a meeting and you have to … YOU have to work around my schedule. So that's the exactly the same thing.

Lisa

To be honest, it's not easy. Hehe.

Roy

It's only when we were dealing participants as the subjects, once they have gone, and then the next part of experiment is doing analysis. Simon can do that himself… without me being there. So it's just when we have the subject in the laboratory… I have to be there.

Lisa

Do you think is there anything can make this more efficiency?

Roy

No. There is no way around it. As you said, there has to be three person. Subject, Simon, myself. If one of them disappears, on holiday, or they got meetings, then that particular experiment is delayed by… maybe a day, or two or three hours. I might be available later in the afternoon then it's ok, but it always happens.

Lisa

Does that worry you?

Roy

No. that's built in to our time scale and scheduling. So we know … so we have to do eight subjects, who will come in five times, so you can plan that, but you then, plus a contingency six weeks. Hehe.

Lisa

So that's all under-control?

Roy

Yes, always planed. Even … what's the word, implicitly without thinking about it, it's all planned in.

Lisa

Ok, I see.

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Roy

I am trying to remember what it is about… I can't really remember exactly what is it about. We had a little joke, after that, and I said 'cut this part' ... haha… which I think you have done. hahaha, it wasn't serious, it was kind of a joke, kind of comments in terms of the ethics. Hmmm, again, I can't remember what it is. Again, we have just got to, you know, when we say it is… hmmm… analysing or taking blood samples to a subject, we only analyse and take the blood samples for what we said we would do, ethically, and legally, you are not allow to start analyse other substances or take other blood samples or do anything else like that. So I think that's the kind of issue that we were talking about then.

Lisa

Does Simon have some idea about what to analyse about the blood samples?

Roy

Yes. All the analysis we will be doing was planned and decided by Simon. Yes, he knows the literature very very well, he knows his hypothesis, so he has … his plan to

measure these particular substances. Hmmm, you know, one of them, is so called HSP protein, I don't think we mentioned it then, but that particular protein is we not sure about is the debate about … in the literature is about whether it's important of not. And what he's been doing is reading the literature, speaking with colleagues to decide whether it is important or not. And I have left that to him. And he's been working on it, we will negotiate whether it is important of not but he will have the final say because he knows the literature about it.

Lisa

So are you happy with Simon as your PhD student? Do you think he displayed the right quality to meet your expectations?

Roy

Yes,

Lisa

How would you describe your relationship with Simon?

Roy

I think it's friendly,

Lisa

Do you mean you are like friend?

Roy

Yeah, it is professional when necessary. And … but I think we had a good friendly relationship, I wouldn't say he is a friend, ok, because we don't socialize or anything like that, which I have don't in the past with my PhD supervisor, we become very good friends since then, but at this stage at the moment, Simon and I wouldn't say we are friends, but we had a friendly collegial professional relationship.

Lisa

You mentioned about your own PhD supervisor, do you think it's good to be friend with your supervisor? Does that influence your own supervision style?

Roy

We weren't friends during supervision, certainly for the first 18 months of my PhD, I found it very difficult with my PhD supervisor.

Lisa

Why?

Roy

Just because he has a very … strange… hmmm… way of interacting. Hehe…

Lisa

Sorry, what do you mean by strange? I don't really understand?

Roy

Hehe, no, you don't want to, but it doesn't matter, over time, I got used to his method of supervision, and I think he calm down a bit,

Lisa

Calm down?

Roy

Hehe, it was just… he is very… what the best way of saying it… he was try to be a bit step back… very much step back… be very formal. But I think he moved away from that, and I got used to that, and we kind of meet … half way in terms of our supervisory relationship. But also became good friends over that period of time.

Lisa

I see. Why does he want to keep the relationship very formal at the beginning? What do you think?

Roy

That was his experience.

Lisa

Can we talk about it?

Roy

Yeah, his PhD supervisor was again … has a very professional position as a professional barrier, and when necessary was very hard, and very demanding, and that rupted up but then they formed a good bond, a good friendship, a good relationship as the PhD progresses.

Lisa

I see.

Roy

So I think it's kind of being transmitted from supervisor to supervisor. I think… it's… it's… kind of … you know, you can only develop on your own experiences. No one's ever trained to be a PhD supervisor. There is no formal training. There are a few little courses you can go to start if you are a probationary lecture, you go to 'how to be a supervisor course'.

Lisa

What do you think about the course?

Roy

Well, they are a day long, you kind of learn some basic behaviour or psychology perhaps which you know, with a few tips, but that's never gonna prepare you for a three year PhD supervisor period. So you can only… this is my point of view, you can only go on your own personal experiences as having been a PhD student, what your PhD supervisor was like, so I was kind of taken my experiences with my supervisor in

some way put my own stamp on it, but still have those methods and techniques of supervising.

Lisa

You mentioned about the supervisor training courses, you said there isn't any course like that. Do you think it is essential or, will it make a big different if people provide these kind of courses?

Roy

I don't know. Maybe. Again, you know, you will need to almost do a whole degree course in supervisory or being a supervisor or, you know, a lecture, or whatever, they tried to cramp too much in one or two days course, they might be also just give you a … a very young lecture a quick idea of what been a supervisor is like, and type of things you should do. But there is no substitute for experiences, I think.

Lisa

Is there anything you can think about that might help the supervisor to learn some techniques or make supervision more effective?

Roy

I don't know. That's a very good question. A philosophy question. But I really don't know… I don't know… OK. Let's take it from another side of the coin, whenever I was at the previous institute, where there were courses, CPD course, and they run courses of how to be a good researcher, how to be a good lecture, and I think there is a PhD supervisory one. And I spend as much time try to avoid going on them, because they take four days out of your week, I think it was a three and a half day course, out of your week when you are very busy, to kind of listen to… other people giving their experiences how to supervise and some basic interacting psychology techniques of how to supervise. I didn't get much out of it for a quite big input of time. So I am sure they are useful, but it's about pitchy them right. Getting the right content and getting the right message across. Does that make any sense? I am not

giving a very good answer because I don't know the answer. Yes they will be useful it depends on what they consists of. I think it's my final answer.

Lisa

OK. And also, about your own supervisor we talked about before, you mentioned about some professional berries that he set up between you two at the very beginning. And as a supervisor now, you have this very friendly open door policy for your students, comparing to your supervisor, you seems adopted a totally different supervision style?

Roy

You are right, yeah, you are right, I … maybe not the same extent of my PhD supervisor, maybe when necessary I provide that professional barrier, in the first, maybe you know in the first maybe 6 to 8 months, and as that kind of friendship open door policy developed, that get pushed off aside.

Lisa

Do you think the student prefer the open door policy more?

Roy

I think it depend on the students, I think … I would perhaps make that judgement subconsciously as we progress through the first … you know 6, 12 month, and maybe with a completely different student. Simon is approachable, he is a friendly person anyway, and I kind of work on that. But if there was a completely different type of student, then maybe my supervisory techniques might be different.

Lisa

When you say different type of student, could you clarify that? like personality or academic quality…?

Roy

Yes, whether they are friendly, whether they open themselves, whether they are more...(phone call)

Lisa

So you are talking more about personalities?

Roy

Yeah, it might, I can’t say whether it would because I haven’t… my previous PhD students have been like Simon anyway, and we always develop this good working relationship, professional, it was always professional but friendly.

Lisa

Ok.

Roy

You know, I keep in touch with my last PhD student occasionally. So, yeah, I think it would be depend on the student as well.

Lisa

OK. I see. I think that's all my questions.

Roy

Great, Hope that will was ok for you.

Lisa

They are very helpful. Thank you very much for your time.

Reference

Acker, S., & Hill, T. & Black, E. (1994). Thesis supervision in the social sciences: Managed or negotiated? *Higher Education, 28*, 483-498.

Adkins, B. (2009). PhD pedagogy and the changing knowledge landscapes of universities. *Higher Education Research & Development, 28*(2), 165-177.

Aléx, L., & Hammarström, A. (2008). Shift in power during an interview situation: Methodological reflections inspired by Foucault and Bourdieu. *Nursing Inquiry, 15*(2), 169-176.

Anderson, J. (1988). *The supervisory process in speech language pathology and audiology*. Boston: College Hill Press and Little Brown.

Anderson, R. (1990). *Fundamentals of educational research*. London: The Falmer Press.

Angen, M. J. (2000). Evaluating interpretive inquiry: Reviewing the validity debate and opening the dialogue. *Qualitative Health Research, 10*, 378-395.

Arts and Humanities Research Council. (2009). Funding opportunity: Collaborative doctoral awards. Retrieved 11/01, 2011, from http://www.ahrc.ac.uk/Funding-Opportunities/Pages/Collaborative-Doctoral-Awards.aspx

Astin, A. (1993). *What matters in college? four critical years revised*. San Francisco: Jossey-Bass.

Barker, C. (1985). Interpersonal process recall in clinical training and research. In F. N. Watts (Ed.), *New development in clinical psychology* (1st ed., pp. 154-169) The British Psychological Society.

Bass, B. M. (1990). *Bass and stodgill's handbook of leadership*. New York: Free Press.

Bazeley, P. (2007). *Qualitative data analysis with NVivo*. London: SAGE.

Beasley, N. (1999). Staff development to support research supervision. In G. &. S. Wisker N. (Ed.), *Good practice in postgraduate supervision* () Staff and Educational Development Association.

Becher, T. & Kogan, M. (1992). *Process and structure in higher education*. London: Routledge.

Becher, T. (1981). Towards a definition of disciplinary cultures. *Studies in Higher Education, 6*, 109-122.

Becher, T., Henkel, M., & Kogan, M. (1994). *Graduate education in Britain*. London: Jessica Kingsley.

Bell, J. (1992). *Doing your research project*. Buckingham: Open University Press.

Bennett, R., & Knibbs, J. (1986). Researching for a higher degree: The role(s) of the supervisor. *Management Education and Development, 17*(2), 137-145.

Berg, B. L. (2007). *Qualitative research methods for the social sciences*. London: Pearson Education.

Biglan, A. (1973). The characteristics of subject matter in different academic areas. *Journal of Applied Psychology, 57*(3), 195-203.

Blumberg, A. (1974). *Supervisors and teachers. A private cold war.* . Berkeley: McCutchan Publishing Corporation.

Bolman, L. G., & Deal, T. E. (1997). *Reframing organizations: Artistry, choice and leadership.* San Francisco: Jossey Bass.

Borg, W., Gall, J., & Gall, M. (1993). *Applying educational research*. New York: Longman.

Brennan, M. (1995). Education doctorates: Reconstructing professional partnerships around research. *Australian Universities Review, 38*(2), 20-22.

Brew, A., & Peseta, T. (2004). Changing postgraduate supervision practice: A programme to encourage learning through reflection and feedback. *Innovations in Education and Teaching International, 41*(1), 5-22.

British Psychology Society (2009). Code of ethics and conduct. Retrieved 12/2010, from http://www.bps.org.uk/what-we-do/ethics-standards/ethics-standards

Brown, G., & Atkins, M. (1988). *Effective teaching in higher education*. London: Routledge.

Calma, A. (2007). Postgraduate supervision in the Philippines: Setting the research agenda. *The Asia-Pacific Education Researcher, 16*(1), 91-100.

Cameron, K. S. (1984). Organizational adaptation and higher education. *Journal of Higher Education, 55*(2), 122-144.

Cameron, K. S. (1986). Effectiveness as paradox: Consensus and conflict in conceptions of organizational effectiveness. *Management Science, 32*, 539-553.

Cameron, K. S., & Ettington, D. R. (1988). The conceptual foundations of organizational culture. In J. Smart (Ed.), *Higher education handbook of theory and research* (pp. 356-396). New York: Agathon Press.

Cameron, K. S., & Freeman, S. J. (1991). Cultural congruence, strength, and type: Relationships to effectiveness. *Research in Organizational Change and Development, 5*, 23-58.

Cameron, K. S., & Quinn, R. E. (2006). *Diagnosing and changing organizational culture* John Wiley & Sons, Inc.

Cameron, K. S., Quinn, R. E., DeGraff, J., & Thakor, A. V. (2006). *Competing values leadership: Creating value in organizations.* London: Edward Elgar.

Cameron, K., & Quinn, R. E. (1999). *Diagnosing and changing organizational culture*. San Francisco: Jossey-Bass.

Cantor, L. (2006). *Loughborough University, the first 40 years 1966-2006.* Loughborough University.

Carr, S., Lhussier, M., & Chandler, C. (2010). The supervision of professional doctorates: Methodological insights. *Nurse Education Today, 30*, 279-284.

Charmaz, K. (2000). Grounded theory: Objectivist and constructivist methods. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 509-536). Thousand Oaks: SAGE.

Christians, C. (2000). Ethics and politics in qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 133-155). London: SAGE.

Clark, B. (1998). *Creating entrepreneurial universities: Organizational pathways of transformation.* Emerald Group Publishing Limited.

Clark, B., & Neave, G. (1992). *The encyclopedia of higher education* Pergamon Press.

Cohen, L., & Manion, L. (1994). *Research methods in education* (4th ed.). London: Routledge.

Creswell, J. W. (2003). *Research design: Qualitative, quantitative, and mixed methods approaches* (2nd ed.). Thousand Oaks: Sage.

Creswell, J. W. (2005). *Educational research: Planning, conducting, and evaluating quantitative and qualitative research* (2nd ed.). Upper Saddle River: Merrill.

Creswell, J. W. (2007). *Qualitative inquiry & research design: Choosing among five approaches* (2nd ed.). Thousand Oaks: Sage.

Cribb, A. & Gewirtz, S. (2006). Doctoral student supervision in a managerial climate. *International Studies in Sociology of Education, 16*(3), 223-236.

Crotty, M. (1998). *The foundations of social research: Meaning and perspective in the research process*. London: SAGE.

Cryer, P. (1997). Helping students to identify and capitalise on the skills which they develop naturally in the process of their research development programs. In P. Cryer (Ed.), *Developing postgraduate key skills: Issues in postgraduate supervision, teaching and management: A series of consultative guides no.3.* (pp. 10-13). London: Society for Research in Higher Education.

Cullen, D. & Allen, M.P. (1993). Quality and 'efficiency and effectiveness'. In D. Cullen (Ed.), *Quality in PhD education* (pp. 99-112). Canberra: The Center for Educational Development and Academic Methods and The Graduate School, The Australian National University.

Cullen, D., Pearson, M., Saha, L. J., & Spear, R. H. (1994). *Establishing effective PhD supervision*. Canberra: AGPS.

Davies, B., & Harré, R. (1990). Positioning: The discursive production of selves. *Journal for the Theory of Social Behaviour, 20*(1), 43.

Degeneffe, C. E. (2006). Clinical supervision in the helping professions: A practical guide. *Rehabilitation Counselling Bulletin, 50*(1), 59-60.

Delamont, S., Atkinson, P., & Parry, O. (1997). Critical mass and doctoral research: Reflections on the Harris report. *Studies in Higher Education, 22*(3), 319-331.

Delamont, S., Atkinson, P., & Parry, O. (2000). *The doctoral experience: Success and failure in graduate school*. London: Falmer Press.

Delamont, S., Parry, O., & Atkinson, P. (1998). Creating a delicate balance: The doctoral supervisor's dilemmas. *Teaching in Higher Education, 3*(2), 157-172.

Denison, D. R., & Mishra, A. K. (1995). Towards a theory of organizational cultural and effectiveness. *Organizational Science, 6*(2), 204-223.

Denison, D. R., Hoorjberg, R., & Quinn, R. E. (1995). Paradox and performance: A theory of behavioural complexity in leadership. *Organization Science, 6*(5), 524-541.

Denzin, N. K., & Lincoln, Y. S. (2011). Introduction: The discipline and practice of qualitative research. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Qualitative research* (4th ed., pp. 1-20). London: SAGE.

Earwaker, J. (1992). *Helping and support students*. Milton Keynes: Open University Press.

Economic and Social Research Council (ESRC). (1991). *Postgraduate training: Guidelines on the provision of research training for postgraduate research students in the social sciences.* (). Swindon: ESRC.

Economic and Social Research Council (ESRC). (1996). *Postgraduate training: Guidelines.* (). Swindon: ESRC.

Edhlund, B. (2011). *NVivo 9 essentials*, Lulu.com.

Elliott, R. (1984). A discovery orientated approach to significant change events in psychotherapy: Interpersonal process recall and comprehensive process analysis. In L. N. Rice, & L. S. Greenberg (Eds.), *Patterns of change: Intensive analysis of psychotherapy process*. New York: Guilford Press.

Elliott, R. (1986). Interpersonal process recall (IPR) as a psychotherapy process research method. In L. S. Greenberg, & W. M. Pinsof (Eds.), *The psychotherapeutic process: A research handbook* (). New York: Guilford Press.

Etherington, K. (2004). *Becoming a reflexive researcher*. London: Jessica Kingsley Publishers.

Fielding, N., & Thomas, H. (2001). Qualitative interviewing. In N. Gilbert (Ed.), *Researching social life* (pp. 123-144). London: SAGE.

Fielding, N., & Thomas, H. (2001). Qualitative interviewing'. In N. Gilbert (Ed.), *Researching social life* (2nd ed., pp. 123-144). London: SAGE.

Fine, M., Weis, L., Weseen, S., & Wong, L. (2000). For whom? qualitative research, representations, and social responsibilities. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 107-132). London: Sage.

Fraser, R., & Mathews, A. (1999). An evaluation of the desirable characteristics of a supervisor. *Australian Universities' Review, 42*(1), 5-7.

Friedmann, J. (1987). *Planning in the public domain: From knowledge to action.* Princeton: Princeton University Press.

Galbraith, J. R. (1995). *Designing organizations*. San Francisco: Jossey-Bass.

Galliher, R. V., Welsh, D. P., Rostosky, S. S., & Kawaguchi, M. C. (2004). Interaction and relationship quality in late adolescent romantic couples. *Journal of Social and Personal Relationships, 21*, 203-216.

Gatfield, T. (2005). An investigation into PhD supervisory management styles: Development of a dynamic conceptual model and its managerial implications. *Journal of Higher Education Policy and Management, 27*(3), 311.

Gay, L. (1996). *Educational research: Competencies for analysis and application* (5th ed.). Upper Saddle: Merrill.

Gibbs, G. R., Friese, S., & Managaberia, W. C. (2002). The use of new technology in qualitative research. Introduction to Issue 3(2) of Forum: Qualitative Social Research.

Gill, J. (2009, 26/Feburary). *Professional Doctorates,* 30-35.

Goddard, A. (1998). Facing up to market force. *Times Higher Education Supplement, 13*(November), 6-7.

Goode, J. (2010). Perhaps I should be more proactive in changing my own supervisions? Student agency in 'doing supervision'. In Walker, M. & Thomson, P. (Ed.), *The Routledge doctoral supervisor's companion: Supporting effective research in education and the social sciences* (pp. 38-50). New York: Routledge.

Gordon, N. (1998). Critical reflection on the dynamics and processes of qualitative research interviews. *Nurse Researcher, 5*, 72-81.

Grant, B. (2010). Challenging issues: Doctoral supervision in post-colonial sites. *Act Academic Supplementum, 1*, 103-129.

Grant, B. M. (2010). Negotiating the layered relations of supervision. In M. &. T. Walker P. (Ed.), *The Routledge doctoral student's companion.* (pp. 88-105). London: Routledge.

Green, H., & Powell, S. (2005). *Doctoral study in contemporary higher education* Society for Research into Higher Education & Open University Press.

Gurr, G. M. (2001). Negotiating the "rackety bridge" A dynamic model for aligning supervisory style with research student development. *Higher Education Research & Development, 20*(1), 81.

Halford, W. K., & Sanders, M. R. (1990). The relationship of cognition and behaviour during marital interaction. *Journal of Social and Clinical Psychology, 9*, 489-510.

Halliday, M. A. K. (1973). *Explorations in the functions of language*. London: Edward Arnold.

Hammer, M., Leonard, D., & Davenport, T. (2004). Why don't we know more about knowledge? *MIT Sloan Management Review, 45*(4), 14-18.

Harman, G. (2002). Producing PhD graduates in Australia for the knowledge economy. *Higher Education Research & Development, 21*, 179-190.

Hart, S. L., & Quinn, R. E. (1993). Roles executives play: CEOs, behavioural complexity, and firm performance. *Human Relations, 46*(5), 543-574.

Hartnell, C. A., Ou, A. Y., & Kinicki, A. (2011). Organizational culture and organizational effectiveness: A meta-analytic investigation of the competing values framework's theoretical suppositions. *Journal of Applied Psychology, 96*, 677-694.

Health, T. (2002). A qualitative analysis of PhD students' views of supervision. *Higher Education Research & Development, 21*(1), 41-53.

HEFCE. (2005). *PhD research degrees: Entry and completion*. London: Higher Education Funding Council for England.

HEFCE. (2007). *PhD research degree update: Entry and completion.* London: Higher Education Funding Council for England.

Henkel, M. (2000). *Academic identities and policy change in higher education*. London: Jessica Kingsley.

Henkel, M. (2007). Can academic autonomy survive in the knowledge society? A perspective from Britain. *Higher Education Research & Development, 26*(1), 87-99.

HESA (the Higher Education Statistics Agency). (2010). *Students and qualifiers data tables 1996/97 to 2006/06*. Cheltenham: Higher Education Statistics Angency.

Hockey, J. (1994). New territory: Problems of adjusting to the first year of a social science PhD. *Studies in Higher Education, 19*(2), 177-190.

Hockey, J. (1995). Change and the social science PhD: Supervisors' responses. *Oxford Review of Education. 21*(2), 195.

Hockey, J. (1995). Getting too close: A problem and possible solution in social science PhD supervision. *British Journal of Guidance and Counselling, 23*(2), 199-210.

Hockey, J. (1996). Strategies and tactics in the supervision of UK social science PhD students. *International Journal of Qualitative Studies in Education: QSE., 9*(4), 481.

Hockey, J. (1997). A complex craft: United kingdom PhD supervision in the social sciences. *Research in Post-Compulsory Education, 2*(1), 45-70.

Holligan, C. (2005). Fact and fiction: A case history of doctoral supervision. *Educational Research, 47*(3), 267-278.

Hollway, W. (1989). *Subjectivity and method in psychology*. London: Sage.

Hooijberg, R. (1992). *Behavioural complexity and managerial effectiveness: A new perspective on managerial leadership.* (Unpublished Doctoral Dissertation). University of Michigan, Michigan.

Hooijberg, R. (1996). A multidirectional approach toward leadership: An extension of the concept of behavioural complexity. *Human Relations, 49*(7), 917-947.

Hooijberg, R., & Quinn, R. E. (1992). Behavioural complexity and the development of effective leaders. In R. L. Philips, & J. G. Hunt (Eds.), *Strategic management: A multiorganizational-level perspective* (pp. 161-176). New York: Quorum.

Hooijberg, R., Bullis, R. C., & Hunt, J. G. (2004). Behavioral complexity and the development of military leadership for the twenty-first century. In J. G. Hunt, & L. Wong (Eds.), *Out-of-the-box leadership: Transforming the 21st army and other top-performing organizations* (pp. 111-130). Westport: JAI Press.

Howard, L. W. (1998). Validating the competing values model as a representation of organizational cultures. *International Journal of Organizational Analysis, 6*(3), 231-250.

Hunt, J. G., Stelluto, G. E., & Hooijberg, G. (2004). Toward new-wave organization creativity: Beyond romance and analogy in the leadership between orchestra-conductor leadership and musician creativity. *The Leadership Quarterly, 15*(1), 145-162.

Huysman, M., &de Wit, D. (2004). Practise of managing knowledge sharing : Towards a second wave of knowledge management.. *Knowledge and Process Management, 11*(2), 81-92.

Ives, G. & Rowley, G. (2005). Supervisor selection or allocation and continuity of supervision: PhD students' progress and outcomes. *Studies in Higher Education, 30*(5), 535-555.

Jakubik, M. (2007). Exploring the knowledge landscape: Four emerging views of knowledge. *Journal of Knowledge Management, 11*(4), 6-19.

Janesick, V. J. (2000). The choreography of qualitative research design: Minutes, improvisations, and crystallization. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 379-400). London: SAGE.

Jenesick, V. J. (2000). The choreography of qualitative research design. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 379-399). Thousand Oaks: SAGE.

Johnson, L., & Lee, A. & Green, B. (2000). The PhD and the autonomous self: Gender, rationality and postgraduate pedagogy. *Studies in Higher Education, 25*(2), 135-147.

Kalliath, T. J., Bluedorn, A. C., & Gillespie, D. F. (1999). A confirmatory factor analysis of the competing values instrument. *Educational and Psychological Measurement, 59,* 143-159.

Kam, B. H. (1997). Style and quality in research supervision: The supervisor dependency factor. *Higher Education, 34,* 81-103.

Kanstrup, A. M. (2002). Picture the practice-using photography to explore use of technology within teachers' work practices. Forum Qualitative Social Research, 3 (2).

King, N. (1998). Template analysis. In G. Symon, & C. Cassell (Eds.), *Qualitative methods and analysis in organizational research: A practical guide* (pp. 118-134). London: SAGE.

King, N. (2004). Using templates in the thematic analysis of text. In C. Cassell, & G. Symon (Eds.), *Essential guide to qualitative methods in organizational research* (pp. 256-270). London: SAGE.

Kouzes, J. M., & Posner, B. Z. (1995). *The leadership challenge: How to keep getting extraordinary things done in organizations*. San Francisco: Jossey-Bass.

Kralik, D., Warren, J., Price, K., Koch, T., & Pignone, G. (2005). The ethics of research using electronic mail discussion groups. *Journal of Advanced Nursing, 52*(5), 537-545.

Kyvick, S. (1991). Graduate research training in the Nordic countries. In D. Wied (Ed.), *Postgraduate research training today: Emerging structures for a changing Europe.* (pp. 93-116). Netherlands: Ministry of Education and Sciences.

Lamond, D. (2003). The value of Quinn's competing values model in an Australian context. *Journal of Managerial Psychology, 18*(1/2), 46-59.

Langridge, D. (2004). *Introduction to research methods and data analysis in psychology*. Harlow: Prentice Hall.

Larsen, D., Flesaker, K., & Stege, R. (2008). Qualitative interviewing using interpersonal process recall: Investigating internal experiences during professional-client conversations. *International Journal of Qualitative Methods, 7*(1), 18-37.

Lather, P. (1993). Fertile obsession: Validity after poststructuralism. *Sociological Quarterly, 34*, 673-693.

Lee, A. (2008). How are doctoral students supervised? Concepts of doctoral research supervision. *Studies in Higher Education, 33*(3), 267-281.

Lee, A., & Williams, C. (1999). Forged in fire: Narratives of trauma in PhD supervision pedagogy. *Southern Review, 32*(1), 6-26.

Lee, N. J. (2009). Professional doctorate supervision: Exploring student and supervisor experiences. *Nurse Education Today, 29*, 641-648.

Leonard, D. (2010). The doctorate in the life course. In Walker, M. & Thomson, P. (Ed.), *The Routledge doctoral supervisor's companion: Supporting effective research in education and the social sciences* (pp. 171-184). New York: Routledge.

Leonard, D., Metcalfe, J., & Becker, R. & Evans, J. (2006). *Review of the literature on the doctoral experience.* (). York: HE Academy.

Lincoln, Y. S., & Guba, E. G. (2000). Paradigmatic controversies, contradictions, and emerging confluences. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 163-188). Thousand Oaks: SAGE.

Lippitt, G. L. (1982). Managing conflict in today's organizations. *Training and Development Journal, 36*(7), 67-74.

Loughborough University.Loughborough University's code of practice on research degree programmes. Retrieved 10/08, 2011, from http://www.lboro.ac.uk/students/welcome/research/codes-of-practice/supervision/

Malfroy, J. & Yates, L. (2003). Knowledge in action: Doctoral programmes forging new identities. *Journal of Higher Education Policy and Management, 25*(2), 119-129.

Manathunga, C. & Goozée, J. (2007). Challenging the dual assumption of the 'always/already' autonomous student and effective supervisor. *Teaching in Higher Education, 12*(3), 309-322.

Marsh, W., & Rowe, J. & Martin, A. (2002). PhD students' evaluations of research supervision. *The Journal of Higher Education, 73*(3), 313-348.

Marshall, C. R., & Rossman, G. B. (1989). *Designing qualitative research*. Newbury Park: SAGE.

Maslowski, R. (2001). *School culture and school performance: An explorative study into the organizational culture of secondary school and their effects.* (Unpublished Doctoral dissertation). University Twente, Netherlands.

Mason, J. (2002). *Qualitative research* (2nd ed.). London: SAGE.

Maxwell, J. (1992). Understanding and validity in qualitative research. *Harvard Educational Review, 62*(3), 279-300.

Maxwell, T. W., & Shanahan, P. J. (1997). Towards a reconceptualisation of the doctorate: Issues arising from comparative data relating to the EdD in Australia. *Studies in Higher Education, 22*(2), 133-150.

McCall, M. (2000). *Performance ethnography*. In N. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed,). London: SAGE.

McNay, I. (1995). From the collegial academy to corporate enterprise: The changing cultures of universities. In T. Schuller (Ed.), *The changing university* (pp. 105-115). Buckingham: The Society for Research into Higher Education and Open University Press.

Mertens, D. M. (1998). *Research methods in education and psychology: Integrating diversity with quantitative and qualitative approaches*. Thousand Oaks: SAGE. .

Murphy, N. W. (2004). *Orientations to research higher degree supervision: The interrelatedness of beliefs about supervision, research, teaching and learning.* (Unpublished Doctor of Philosophy). Griffith University, Griffith University.

Murphy, N., & Bain, J. D. & Conrad, L. (2007). Orientations to research higher degree supervision. *Higher Education, 53*(2), 209-234.

Nagy, J., & Robb, A. (2008). Can universities be good corporate citizens. *Critical Perspectives on Accounting, 19*, 1414-1430.

Nair, K. (1994). *A higher standard of leadership: Lessons from the life of gandhi*. San Francisco: Berrett-Koehler Publishers.

Neuman, W. L. (2000). *Social research methods: Qualitative and quantitative approaches* (4th ed.). Boston: Allyn & Bacon.

Neuman, W. L. (2006). *Social research methods: Quantitative and quantitative approaches* (6th ed.). Boston: Pearson.

New Route PhD. Retrieved 12/10, 2012, from www.newroutephd.ac.uk

Noble, K. (1994). *Changing doctoral degrees: An international perspective.* . Buckingham: The Society for Research into Higher Education and Open University Press.

Nonaka, I., & Konno, N. (1998). The concept of 'Ba': Building foundation for knowledge creation. *California Management Review, 40*(3), 40-54.

Nonaka, I., & Takeuchi, H. (1995). *The knowledge-creating company, how Japanese companies create the dynamics of innovation*. Oxford: Oxford University Press.

Nunkoosing, K. (2005). The problems with interviews. *Qualitative Health Research, 15*(5), 698-706.

Olesen, V. L. (2000). Feminisms and qualitative research at and into the millennium. In N. K. Denzin, & Y. S. Lincoln (Eds.), *Handbook of qualitative research* (2nd ed., pp. 215-256). London: SAGE.

Oliver, P. (1994). *The student's guide to research ethics*. Maidenhead: Open University Press.

O'Neil, R. M., & Quinn, R. E. (1993). Editor's note: Applications of the competing values framework. *Human Resource Management, 32*(1), 1-7.

Pare, A. (2010). Making sense of supervision: deciphering feedback. In the Routledge Doctoral Student's Companion: Getting to Grips with Research in Education and the Social Sciences. P. Thomson & M. Walker (Eds.). London, U.K.: Routledge.

Park, C. (2005). Levelling the playing field: Towards best practice in the doctoral viva. *Higher Education Review, 36*(1), 24-44.

Parsons, T., Bales, R., & Shils, E. (1953). *Working papers in the theory of action*. Glencoe: Free Press.

Pauchant, T. (1991). Transferential leadership towards a more complex understanding of charisma in organizations. *Organization Studies, 12*(4), 507-527.

Pearson, M. & Brew, A. (2002). Research training and supervision development. *Studies in Higher Education, 27*(2), 135-150.

Pearson, M. (1999). The changing environment for doctoral education in Australia: Implications for quality management, improvement and innovation. *Higher Education and Research and Development, 18*(3), 269-287.

Pearson, M., & Kayrooz, C. (2004). Enabling critical reflection on research supervisory practice. *International Journal for Academic Development, 9*(1), 99.

Petrides, L. A., & Nguyen, L. (2006). Knowledge management trends: Challenges and opportunities for educational institutions In A. Metcalfe (Ed.), *Knowledge Management and higher education: A critical analysis* () Information Science Publishing.

Poland, B. (2001). Transcription quality. In J. Gubrium, & J. Holstein (Eds.), *Handbook of interview research* (pp. 629-649). Thousand Oaks: SAGE.

Polanyi, M. (1966). *The tacit dimension.* New York: Doubleday.

Polanyi, M. (1969). In Grene M. (Ed.), *Knowing and being: Essays by Michael Polanyi*. Chicago: University of Chicago Press.

Pole, C., Sprokkereef, A., & Burgess, R. & Lakin, E. (1997). Supervision of doctoral students in the natural sciences: Expectations and experiences. *Assessment & Evaluation in Higher Education, 22*(1), 49-63.

Powers, S. I., Welsh, D. P., & Wright, V. (1994). Affect in families of adolescents: Investigating the meaning of behaviour. *Journal of Research on Adolescence, 4*(585), 600.

Prelesnik, M. (2008). *A study of middle school athletic coaching using the competing values framework* (Lightning Source Incorporated ed.)

Quality Assurance Agency for Higher Education. (2004). *Code of practice for the assurance of quality and standards in higher education section 4: External examine.* Gloucester: QAA.