

**Research Supervision:  
an ‘agreed’ view of metaphors and conceptual model**

**Kevin Grant**

London South Bank University, UK  
[kevin.grant@lsbu.ac.uk](mailto:kevin.grant@lsbu.ac.uk)

**Ray Hackney**

Brunel University, UK  
[ray.hackney@brunel.ac.uk](mailto:ray.hackney@brunel.ac.uk)

**David Edgar**

Glasgow Caledonian University, UK  
[d.a.edgar@gcu.ac.uk](mailto:d.a.edgar@gcu.ac.uk)

**Abstract**

The motivation and objectives of this paper is to consider critical issues in relation to professional research supervision. We initially undertake a literature review, derived through historical research, of debates followed by a thoughtful policy document analysis of ‘guidelines’ from both UK and Australian universities. This is supplemented through primary data collection of supervisor perceptions of their role and opportunities for more valid and effective approaches to supervision. We identify three metaphors for research supervision perspectives relating to a ‘machine’, ‘coach’ and ‘journey’. Further, an original conceptual model for research supervision is proposed derived through a Soft Systems Methodology approach. It is believed that the research provides an ‘agreed’ view of aspects on quality supervision which would benefit, although currently generic, IS faculty and students.

**Introduction**

This paper seeks to unpack the issues of what makes a ‘good’ post graduate research supervisor. The research was undertaken to address the perceived gap in the knowledge base relating to the supervision of research students by examining staff experiences and determining what, in their view constitutes ‘good project supervision’ by attempting to clarify normally unarticulated assumptions within natural conditions and settings to yield insights into the area, from the viewpoint of the supervisor.

We provide an *agreed* view of what makes a good research supervisor. However, the paper does not offer a complete solution, but more a deconstruction of practice, which presents solutions not final outcomes (Stronach and MacLure, 1997). It is anticipated that this insight will help faculty to reflect upon their own professional practice and move some way towards ensuring that students receive a consistent, yet focused learning experience. Hammersley (2002) suggests that practical enquiry (research supervision) has the immediate audience of policy makers and others who have a specific interest in the particular issue, and the goal is to provide information that is needed by those stakeholders to bring about valid and improved intervention.

A literature review was undertaken along with the use of policy document analysis, to help frame the problem and to identify relevant concepts, knowledge, facts and methods that related to this subject area. The literature surrounding this area is known for its paucity.

**Literature Review & Policy Document Analysis**

Siddle (2001) put forward the view that the education and training of postgraduate students is one of the most important functions of any university. He posits that this task is deceptively simple; to train successive generations of students and researchers who are capable of innovative and pragmatic research across the spectrum from fundamental to applied research in a variety of educational, research and development, commercial and industry contexts (Siddle, 2001). However, the actual process and mechanics of research supervision is not unequivocal. On the contrary, research supervision is more complex.

Supervision practices are not simply prescribed by institutional policies. Research supervision is fluid and is determined by continuity and change. How the individual supervisor inherits and reproduces what is considered good research practice for that discipline is dependent on that discipline's traditions, customs, and practices. This is further compounded by the fact that supervisors will interpret these traditions, customs, and practices based on their own ontological, political, epistemological, and ideological baggage. More often than not, supervisors tend to bring their own particular slant on how they interpret both the institutional rhetoric and the hidden assumptions contained within their own cognate area, or, as Lave and Wenger suggest, supervisors learn and interpret that knowledge base for that community of practice if they are to be accepted as a member of that community (Lave and Wenger, 1991).

To date, the experience and body of knowledge relating to the learning and teaching on taught Masters courses has received comparatively little attention in the literature. In particular, the topic of dissertation supervision at Masters level has not been investigated in any significant depth to unlock the research supervision process and to help unpack any 'secret formulas or holy grails' that may exist to help inform other professionals' professional practice. Moses (1985; 1992) states that most supervisory problems can be overcome if there is clear and open communication on all aspects of the project, and if there is structure without a straightjacket (a framework for supervision which facilitates rather than hinders, the development and creativity of the student). Three distinct stages of supervisor involvement are identified; helping the student choose a viable topic and initiate data collection (intensive), monitoring student progress (less intensive) terminating data collection and writing up (intensive) (Moses, 1992).

### **Theoretical Lens**

Cullen et al (1994) reported that there are certain key generic processes in supervising students effectively. Cullen et al also indicate that due to disciplinary boundaries, the actual process and therefore the 'best practices' exhibited will and are different between cognate areas of study. Authors, such as Black, (1994), support this view. The core of their support is that the actual relationship between the student and the supervisor is the key or the membrane that facilitates effective supervision and helps to promote a good learning experience for the research student.

Much of the literature argues that the minimum requirements for research supervision are;

1. Supervisory style (correct level of direction, regular meetings, making time for students, interest in project, encourage ideas/individuality);
2. Supervisor competence with respect to the student project; personal characteristics and attitude of the supervisor (approachable, supportive, positive, open-minded, prepared to acknowledge error, organised, enthusiastic);
3. Academic and intellectual standing of the supervisor; that students view their supervisors as mixtures of strengths and weaknesses; in addition, those student-supervisor relationships are highly complex, dynamic and relational.

This desire for compliance or a template may be due to the legacy of New Managerialism (Pillot, 1990), as it has crept into the academy. New Managerialism seeks to maintain and enhance the three 'Es' of efficiency, effectiveness, and efficacy by adopting private sector managerial techniques to 'manage' public sector work and actions and seeks to ensure quality and to make professionals accountable and responsible for their actions. Nevertheless, elements of New Managerialism may have helped to reduce wastage in the academy. It may also have helped many students to receive a basic level of supervision, by right and entitlement, rather than some students receiving little, or inappropriate research supervision. Therefore, the use of policy documents do have both a positive and negative slant on research supervision with the contested terrain depending where the individual supervisor positions themselves, practically, ideologically and intellectually.

### **Policy Document Analysis**

Many universities have developed research supervisors' handbooks containing the formal roles, duties, and responsibilities of both supervisor and student in the postgraduate research process. However, the concept of postgraduate supervision is endowed with meanings, sometimes stable, sometimes confused, sometimes misunderstood, sometimes used for political and power issues, sometimes assumed, sometimes ignored, sometimes contested, and sometimes shared.

The following is a synthesis of the '*official*' duties and responsibilities as prescribed by internal university policy makers. This is derived from policy document analysis pertaining to the agreed policy documents regarding the roles and responsibilities of a supervisor and of postgraduate research students. The following is based on the policy document of; Monash University, University of Sydney, RMIT University, Glasgow Caledonian University, University of Sussex, Strathclyde University, and the University of Groningen. These were selected, as they were freely available and represent an interesting perspective from Europe and Australia.

Signals from the policy documents indicated that supervisors should;

- Be familiar with the subject area and the research process for that discipline area;
- Be familiar with the rules and regulations that govern the students research work;
- Provide advice and guidance of an academic nature to the student in the conduct of the research, and in some cases direct instruction in experimental procedures.

- Assist the student with pastoral/social services issues (i.e., personal, health or financial problems) by directing the student to the appropriate trained agencies
- Support the student in the development of their career both during their candidature (e.g., support for conference attendance, teaching experience, application for awards/scholarships, entry into competitions, publication) and beyond (e.g., referee reports for position and grant applications).
- Develop a 'memorandum of understanding' with the student, particularly outlining regularity of formal meetings.
- Provide a constructive, critical assessment of the work of the candidate,
- Advise the student promptly of unsatisfactory progress with regard to any aspect of their candidature, and put this advice in writing if such unsatisfactory progress is considered likely to interfere with satisfactory completion of the research by the agreed
- Provide guidance and specific advice on the format of the thesis to meet University requirements, as well as specific advice on the preparation of written thesis material to conform to the norms and expectations of the academic field.
- Actively engage in the preparation of a research plan with the student,
- Write a statement on progress of the research project at the time of progress review;
- Assist the student in identifying ethical and intellectual property issues, and complying with ethical and intellectual property regulations, and ensure that they know about the consequences of misconduct in research.

### **Adoption of Guidelines**

The managerialist language of “*supervisors must do*”, and “*supervisors should ensure*” gives the idea or metaphor of research supervision being an institutional act, as by taking the recommended treatment (the policy document) as prescribed by a more knowledgeable and powerful figure (like a Doctor, in this case the nameless author(s) of the policy document) then research supervision will be improved and students will benefit. If the application of this metaphor analysis is extrapolated further then just as drugs for the body can cause side effects, research supervision can also cause ‘side effects’ for the supervisor and the research student. Just as drugs can have interaction effects with one another if taken together, so can following such a prescriptive approach to research supervision result in expected and unexpected interactions? Common statements like “*all supervisors are aware of the necessity to implement the university’s code of practice for the conduct of research and are aware of the working procedures of the ethics committees*” are frequent in policy documents and were evident in the narratives undertaken for this project.

Supervisors may feel the need to battle with the rules and regulations for not being able to accommodate the unusual or the unique, as policy documents tend to cater for the ‘*average student*’ or ‘*the normal student*’. From the majority of the policy documents reviewed, policy documents acknowledge that the student – supervisor relationship is important. However, they do not provide guidance on how to enhance the nexus, only what to do if it breaks down, i.e., appeals, disciplinary, etc.

This emphasis suggests that it is not the student – supervisor relationship that is the key, but protecting the institution from student complaints. The UK QAAHE’s code

of practice for postgraduate research shows what is expected with regards research supervision. This document does not mention anything about the student – supervisor relationship. It only ensures that supervisors who are selected by the institution to supervise are fit for purpose as well as ensuring that the university has appropriate systems and procedures for recruiting, selecting and inducting students into the university, in conjunction with mechanisms to deal with staff and student complaints, i.e. *“there are procedures by which either the candidate or the supervisor may make representations as appropriate as significant difficulties arise (grievance procedures)”* (QAAHE, 1999).

The policy documents reviewed tended to assume that institutions, staff, students and research can be managed in a mechanistic manner. The fundamentals of the machine metaphor are that the machine (the process of supervision) has a purpose or goal that function in a predetermined and predictable way. The performance of the machine can be gauged and adjusted to achieve peak productivity. The machine is designed and built in a rational way with all parts of the machine working together to produce some output. The parts of the machine can be replaced when they wear out or no longer function properly, and the machine will function as before. They tend to ignore, or fail to articulate the human side of institutions and the human face of research and supervision.

Policy documents may be useful for enhancing practice, but they do not actively engage the community of supervisors, as policy documents tend to operate the following of the ‘thou shall do’ doctrine, so supervisors may be tempted to see their interaction with the policy as a game. Nevertheless, it is assumed that in some cases; this may indeed help students, who prior to new managerialism did not receive a rudimentary entitlement to research supervision. The game metaphor is one of the most popular metaphors describing human endeavor today. A game can be a cooperative game where players collaborate with one another to achieve an objective. A game can also be competitive where teams of players try to prevail. A common theme of all games is that players engage in activities to achieve some goal or objective. The players must continue to support one another to create and develop the most powerful ideas they can, but these ideas will have to compete with other ideas for acceptance, hence the supervisor and the student may work together to play the game and win, a successful project supervision for the supervisor with no complaints and a successful mark or grade for the student. This may mean that a relationship is formed for mutual gain and benefit rather than purely supporting the student to learn.

What may be missing from the policy documents is that research supervision can be viewed as a garden, where the supervisor tends the garden (the student) to allow the student to grow and learn. The skill of the supervisor affects the development of plants in the garden. The gardener usually has a structure and a plan, but within that plan there is usually some randomness and disorder. Growth depends on many factors, some controllable by the gardener and others not controllable (such as the weather). The gardener, in a sense, adapts to the conditions it encounters.

What is interesting is the idea that there is a standard template on how to supervise anybody from any discipline in any topic area is evident in policy documents. This assumption is questionable. As the research, process is complex, and each discipline

has its own body of knowledge and its own ways of looking at knowledge and undertaking research.

## **Research Design**

A phenomenological approach was used to guide and provide the necessary philosophical and methodological research underpinning to the project. The justification for this approach is based on the way people experience the social phenomena in the world in which they live and work and that there is some structure and essence to peoples shared experiences, which can be captured and developed into a worldview, ie Soft Systems.

The collaborators in this study felt that the majority of postgraduate supervisors learn the importance of the supervisory relationship and what makes a good supervisor by reflecting on their own, sometimes disappointing, experiences of supervision. Experts know what to do at a given time based on their knowledge of the content and knowledge of the context, as they actively engage with society via distinctions. However, it is very difficult to unlock tacit knowledge completely, as it becomes automatic, like touching your nose with your eyes shut. Narrative combined with an interpretive research stance, does provide a mechanism to attempt to unlock this knowledge to some extent via story telling and by exploring how the supervisor interacted with the student, colleagues, the institution and the subject matter at that time. However, this approach is limited. As Polany states, we know more than we can tell and that knowledge may never be fully captured retrospectively, as the context cannot be completely reproduced (Polany, 1974).

Grounded theory was used to help shape the research design. Grounded theory as developed by Glaser and Strauss (1967) allows the researcher to break away from the classic research model towards developing and elaborating on theory, rather than to whether or not the theory held up or not (Bechhofer and Paterson 2000). Given the fact that that the research into research supervision is still embryonic, it was necessary to use grounded theory to inform and challenge the data collected in an interactive manner, to ensure the right issues were being identified, investigated and analysed where possible. The bottom up approach is manifested via the development of a non-contentious primary task conceptual model discussed below.

## **Primary Data Collection**

All the 12 subjects, from a UK University, were asked and gave their informed consent to participate and for their contributions to be audio taped. Each collaborator was willing to be tied by an ethical code of conduct, to respect each other's views and not to damage one another physically, emotionally, and intellectually. Also, the issue of 'over-disclosure' (Bloor et al, 2001) was covered. If over disclosure occurred then the facilitator (researcher) would enact certain remedies and actions made clear to the participants in advance.

A pilot narrative session was performed to allow the author of the report to familiarise themselves with the technique and to practice facilitating the session to ensure that sufficient ground was being covered that was of benefit to the study. The pilot was

undertaken with a non-collaborative individual who was happy to help the author, but not to collaborate in the study for personal reasons.

Personal narratives were then sought from the collaborators regarding their experiences of what makes a good supervisor of a student and to reflect on these experiences. Each of the collaborative participants of the research team began the process of considering how they became good supervisors (as constructed by themselves) by constructing a short reflective statement. The reflective statement was designed to prepare the supervisors for an extensive narrative session with the author, by initially prompting them to reflect on how their own approach yielded effective supervision. Three types of question were used to help bring a semi structure to the narrative session. The three types of questions were used geared towards identifying the relationship with the student, what the supervisor did for the student and what the student did for the supervisor and to provide some contextualisation about the university, the business school, the nature of higher education, and what the supervisor thought the nature of being a professional was at the time of supervision.

Narrative can be viewed as 'lived stories' on a particular situation (both the content and the context). The researcher (in this case the author of the paper) seeks to collect this data and to describe the experiences pertaining to the particular situation. As an interdisciplinary method, narratology draws from traditions in literary theory, oral history, drama, psychology, folklore, and film philosophy (Connelly and Clandinin, 1990, cited in Marshall and Rossman, 1995). The researcher explores a story told by a participant and records that story through the construction of narrative. Narrative analysis can be applied to any spoken or written account (Marshall and Rossman, 1995). Narrative inquiry is appropriate here; since it can establish meanings, that lie behind responses of collaborators and it is able to establish uncertainties and ambiguities surrounding research supervision. Allied to this, narrative gives an 'insider's' viewpoint to the realities that enshroud this phenomenon.

The methodology justification for narratives is based on the notion of collaboration. It allows and actively seeks the voice of the collaborating parties and it helps to reduce the impact and / or polluting interpretations of what is being said by the traditional objective researcher, so that a more realistic view is obtained. Finally, narrative does allow others to relive and interpret the 'story', thus bringing about a positive change in practice. Narrative sessions were taped. Each session lasted around forty minutes. Three sessions were completed. Each narrative sessions was played back to aid the analysis numerous times by the author in order to capture the richness of the data. A full written transcript was not done. This was due to time constraints and also that a 100% complete transcript records of the event is impossible to achieve, as it depends upon what you are trying to do in and with the analysis (Silverman 1993). The tapes were played to identify the creation of categories, which allowed themes and emergent issues and ideas to be extrapolated from the data. The author found this more economical with time and that more could be learnt from listening to what and how the words were spoken, than reading them in a transcript.

In total 7 meetings took place in the same room (three individual narrative sessions, three individual refinements of conceptual model sessions, and one group session which developed the non contentious primary task consensus model). The room was laid out with a horseshoe of chairs to encourage discussion and debate, with a flip

chart facing the group, with tea and coffee available to participants to create a relaxed and informal atmosphere conducive to discussion.

### **Problematic Issues of Narrative**

Although narrative is a suitable research method for this project, there are a number of issues, which can be regarded as problematic. One of the main criticisms of narrative is that it focuses on the individual too much. However, for this study, it is the group's view that is important not the individuals, something that narrative cannot accommodate, but it can give the raw building blocks from which to move from individual to group view. However, given the multiple interpretations of meanings of key words and the emotions that people have surrounding key words and concepts used in the narratives, it is conceivable that combining narratives does not truly arrive at a consensus. What the collaborative group may have experienced is power and political interplay being exercised to give the illusion of a consensus being researched. Narrative at best gives an awareness and appreciation of a phenomenon. However, it is difficult to make specific claims about reality, truth, and knowledge based on narrative and the interpretation of such data due to the inherent methodological weaknesses.

Narrative inquiry is also difficult to perform, since a significant amount of sensitivity, trust, and good will to negotiate has to exist between the researcher and the collaborative participants. Narrative can provide some in roads to this area, but it requires intense listening and a willingness of the researcher to give the participant a full voice. Since narrative is collaborative in essence, both the researchers and the participants' voices are heard as they are working together to make sense of their view of reality. Like other forms of qualitative analysis, narrative does suffer from selective recall, in which the gap is filled in by inference and reinterpretation of the past events (Ross and Conway, 1985), rather than on fact. Since the nature of narrative is qualitative, it gives the illusion of causality (Ross and Conway, 1985) as the collaborators can infer a connection that may not be there. This is not to say that narratives do not provide insight and yield enriched data. It is more a question of to what degree and what can be claimed on behalf of a wider population? Nevertheless, to do collaborative research well, requires the researcher to be patient, flexible, trustworthy, and have honed negotiation skills.

From the point of view of the efficient use of resources, narrative is very time consuming, as it requires the recorder to actively listen and be able to quickly establish a supportive constructive environment, and be able to work with others in such an environment. Very few people have these skills. All of this is compounded by the fact that narrative is still a relatively new form of research inquiry, which means there is no established *modes of operandi* to help the novice user of narratives use narratives, and perhaps the only true way to understand narrative is via reflection.

### **Data Analysis and Findings**

The data analysis strategy of grounded theory was employed for this project to bring order, structure, and meaning to the mass of data collected. The data was thoroughly reviewed to become familiar with the categories, themes, and patterns that were unpacked. Salient themes, recurring ideas and language, and regularities were all



noted which allowed categories of meaning to emerge held by the participants in the setting.

Narrative sessions were listened to repeatedly by the author, who then developed a root definition and a conceptual model according to themes (for each of the three narrative sessions) by analysing the verbs used. These views (in the shape of a conceptual model) were collected and taken back to each collaborator for comment, modification and refinement, by way of acknowledging that the researcher was attempting to actively reconstruct the narrator's reality not just passively recording it and writing it up (Marshall and Rossman, 1995). Once each collaborator was happy with their model of reality, all the models were incorporated using the idea of a non-contentious conceptual primary task model. The findings discussed below are based on the collaborator's individual conceptual module (developed jointly by the collaborators and the researcher) from their individual narrative session. Salient themes arising from the narratives are commented. Where appropriate, the individual collaborators voice is given in italics. However, the development of the non-contentious primary task conceptual model illustrated after the individual conceptual models discussion was developed by all collaborators via a process of negotiation and reflection

Based on the content analysis there appears to be three distinct, yet interrelated views, of supervision, with each supervisor accepting to a lesser or greater extent what the other stages are, but favouring a particular stance. Nevertheless, all agreed that all they could offer was *"their time and their experience"* and that supervision was *"time consuming"* and *"a good working relationship with the student was necessary"* and that *"student must receive constructive and critical written comments and feedback on drafts that they submit and that work should be returned quickly as laid down by the rules and regulations of the duties of supervision by the university"*.

Following Lee & Green (2009) we identify 3 useful metaphors for consideration within the process of research supervision.

#### **(A) Metaphor of the Machine**

From the analysis of all three individual conceptual models, an element of *"doing what the policy said"* appeared, as all collaborators had some form of human activity that suggested monitoring and control of the students work, e.g. *"one of the duties of a supervisor was to monitor the students performance in line with the University regulations"*. Given the history and organisational Managerialist culture that exists within the Business School, this is not surprising. A number of the collaborators indicated the following activities as being some of the ingredients to providing good supervision.

From their views of reality, the key ingredients were to *"be accessible to the student to ensure that they can not complain to the associate dean of research, that they are not getting the support and help they need and are entitled to given the fact that they are paying their fees"*. What is interesting is that all the supervisors kept a supervisors log relating to each student they supervised. When asked whether this made them a good supervisor, the answers were mixed. One of the collaborators completed the log and gave a copy to the student outlining what was discussed and

what was expected for the next meeting. Their rationale was one of *“providing additional formative feedback to the student”* and to use the data as evidence of the supervision process and their activity in the supervision process. This was all done in case the student complained or the dean or the head of department requested a progress report on the student outwith the formal monitoring phases. Other collaborators completed such logs as it was expected within the *“rule book”* but they only completed it for their own needs and all cited the issue of providing evidence to a university committee if the student complained about them.

All the collaborators commented upon the need to manage the expectations of the student. *“You need to be upfront with the student what is expected, when it is expected, in advance to prevent any misunderstandings and future consequences”* was a common comment. This is interesting as the students expectations were seen as a way of establishing a relationship for dialogue and discussion with the student. However, when probed, it was not expectations of the student that was important, but how the supervisor perceived the students planned methodological, thinking, argument, and structure of the work. Comments like, *“the supervisor has to control the process”*, *“the supervisor is responsible for quality”*, and *“My real bug bear is the student who does not produce output and when they do, the output is developed in a way that is unnecessary”* were evident but not widespread. This indicates that it is not solely the management of the student’s expectations (which is discussed in the next section) but management of the supervisor’s expectations of the student and of the work, which is deemed important.

One of the collaborators was an advocate of only doing what was stated in the policy document and that, as a supervisor *“students had to listen to them and that if a student did what they were told then they would pass”* and *“each research student is an apprentice who has to learn the mechanisms of research from an older more experienced person”*. What is interesting is that the supervisor having an air of superiority and the idea that research is mechanistic, rather than a craft, which illustrates the complexity of the supervision process.

This rather didactic approach of the supervisor, completely ignoring the needs, thinking and contribution the student can make to the area of study, is mechanistic. It is this machine like manner which policy documents encourage. Policy documents only pay a passing token gesture to the student actually learning and developing as individuals. It is this last point, which at the collaborators group discussion session, (when the group developed the non-contentious consensus primary task conceptual model) caused the greatest debate, and required strong mediation skills from the author. It became apparent initially that one of the collaborators was an advocate of this Managerialist approach. However, during the group discussion, this was not indeed the case, as when they spoke of *“us”* and *“them”*, they meant the staff and management not the student and the staff member.

It became apparent that they wanted to provide students with more help but they wanted to do what management had told them to do, even though on earlier occasions they had told management that the policy was incomplete and detrimental to the students learning. They were willing to play the game and do what was commanded, in order to make a political statement to senior management. They would concentrate on the needs of the student when *“management came to their senses”*.

## **(B) The Metaphor of the Coach**

Most collaborators agreed that supervisors should not “*over supervise the student*” as it was the student’s work and they did not feel the right to act as a censor of the work. Most agreed that they were there only to provide advice about the work. They preferred the concept project advisor, as most felt ‘supervisor’ gave the wrong impression of what their work was about, i.e., it was not exclusively about control and monitoring, but more of a “*critical friend*” or a coach, giving their experience and knowledge of problems and “*to advise solutions that were appropriate to the limitations and the capabilities of the student*” (like a sports coach).

As an advisor to the student, the role of supervision is much wider than that of the actual project under supervision. One of the roles of a good supervisor is to “*build the confidence*” of the student and to provide the student with a wider access of networks. For example other students who are studying the same or similar areas of study, companies for case studies, people to interview, a library of previous publications, help in finding a job, career advice for that cognate area, to write references, help with CV writing, etc.

Of those collaborators who shared this view, they indicated that the supervisor had to be completely honest with the student and that the key was “*to listen to the student and to fully discussion issues relating to theory, methodology, content and getting the project done*”.

All agreed that the departure away from the policy rulebook, towards this interpretation of the duties and roles of the supervisor meant, “*every supervisor has to find their own style*” and that as supervisors “*You learning from trial and error and from more experienced colleagues*”.

## **(C) Metaphor of the Journey**

The idea that research supervisor was more like a partnership and a research journey, where the student and supervisor learnt together was not universally shared by all the collaborators. Nevertheless, perhaps it is this view which provides a missing dimension as to what makes a good supervisor. However, this view is a further development of (b) but perhaps more mature in essence.

However, some of the collaborators did see this as a rather romantic and ideological view of supervision, but felt that it did have some merit and therefore limited inclusion in the agreed conceptual model. The issue here would be whether those people who think that this view is romantic may indeed not be research active themselves, therefore, they have no wish to undertake the journey.

## **Soft Systems Methodology**

Soft Systems Methodology has been developed from the original ideas of systems thinking, which provides an enriching way of viewing real world problem situations from a holistic and systemic perspective. These ideas have their foundation inherent in the work of the Gestalt psychologists (Ellis 1938), who provided the initial

theoretical frameworks for systems thinking. The development of systems thinking can be accredited to the work of Von Bertalanffy (1950, 1951, 1968) an organismic biologist who translated and applied his knowledge and views into a set of ideas and concepts now called the General Systems Theory.

SSM can be summarised as: “... *a methodology that aims to bring about improvements in areas of social concern by activating in the people involved in the situation a learning cycle which is ideally never ending. The learning takes place through the iterative process of using systems concepts to reflect upon and debate perceptions of the real world, taking action in the real world and again reflecting on the happenings using systems concepts. The reflection and debate is structured by a number of systemic models. These are holistic ideal types of certain aspects of the problem situation rather than as accounts of it. It is taken as given that no objective and complete account of a problem can be provided*” A summary by Von Bulow, (1989) of SSM pp28 in Checkland and Scholes, 1990. SSM is a vehicle which allows collaborators to discuss issues in a semi structured way. It requires stakeholders, to engage in the process and it allows them to see what potential solutions are available.

One of the main foundation pillars of systems thinking and in particular SSM is the view and value of ‘Human Activity Systems’. Human activity systems can be defined as models to ‘*enable us to distinguish between what gets executed in the (always abstract) holon, namely, activity and what characterises the real world namely the action*’ (Checkland and Scholes 1990 pp24). This concept informs that action is the transformation of any sub system to yield an output from a given input. Allowing the argument that multiple perceptions can exist on what constitutes the transformation process, and it is these world views of the problem domain which provides the deep enriching analysis using epistemological holons to uncover the multiple whats and hows of any process.

The development of a conceptual primary task model was utilised as a research tool to determine the presence of certain words and or concepts within each of the narrative sessions. At the core of this analysis is that words and signs can be assigned to conceptual categories and that these categories can be tested, to reveal the importance of the idea by the way in which they are used in the narrative. In summary, the researcher searches for structures and patterned regularities in the words and makes inferences based on these regularities as the meanings are shaped in the context of the exchange between respondents (Silverman, 2000).

For each narrative session a root definition and a conceptual module was developed by the researcher and taken to the participant and together a final version was developed. Views of the problem situation are derived by initially brainstorming possible interpretations of the problem situation, via the use and development of relevant systems. Selecting *relevant* systems is an attempt to attribute meaning to the data and to covert it into meaningful information, which would be of benefit to the study. Potential *Weltanschauungen* or views of interpretation (world views) are selected as meaningful to primary task analysis. Primary task systems are systems, which can be directly mapped on to the real world with ease, as they exist in the real world. These systems are selected in accordance with the sub-systems of transformation, support activities, environmental linkages, monitoring and controlling

activities, applicable to any system. These were then used to develop root definitions and conceptual models pertaining to the problem situation.

Once several relevant systems have been identified, and deemed useful to the study and informally named at this stage, then they are developed into formal root definitions. Root definitions are '*a concise and precise description of the relevant system*'. (Lewis 1995, pp170). Embedded within root definitions are explicit statements which describe what the system is trying to do; how the system intends to go about achieving this desired goal; and why it is intending doing what it is doing, i.e., to legitimise its existence.

Root definitions have a 'checking mechanism', which validates that all the key elements of the system have been identified and deemed relevant to the study. The acronym 'CATWOE' is used to provide this checking mechanism. Customers of the system (those people who will benefit from it or suffer from the system); Actors (the persons who carry out or cause the elements of the system to operate); Transformation (the purpose of the human activity i.e., to transform an input into a desired output); The Weltanschauungen (the view of the real world which legitimises the set of human activities which makes the system meaningful and relevant); Owners (the persons who have the power and authority to stop or modify the system); Environmental constraints (the imposed rules, conditions, terms of operations which are taken from the wider external environment which directly affects how the system will operate). Once the root definition has been checked, ensuring that the root definition conforms to the following: *A System To Do X, by Doing Y in Order To Achieve Z*, then human activity models are directly derived from the root definition, showing greater detail the activities which are logically defensible and have to be done if the desired transformation is to be achieved. Or simply put "*.. an account of the activities which the system must do in order to be the system named in the definition*" (Checkland 1981, pp169).

Conceptual models represent a view of the problem situation from an explicit perception or belief about the problem situation. They are not pictures of the real world, but interpretations of the problem domain. Each human activity (bubble) can be expanded and 'blown up' into a higher resolution in terms of a new sub system, which must exhibit all the characteristics above to be a relevant system in its own right. Once several models have been developed and compared with the real world then the next stage can be undertaken, that is to reach this agreed and negotiated consensus.

### **The Consensus Primary Task Root Definition & Conceptual Model**

The Consensus Primary Task Conceptual Model brings together all the relevant conceptual models via the assembly of relevant activities to construct another conceptual model known as the Neutral (non-contentious) Primary Task Model (Wilson 1990; 2001). The premise is that no matter how much people will disagree as to what the nature and function of research supervision should be, there will be a view of it, which everyone can accept. This defines what ingredients are needed to bring about good research supervision.

A draft root definition is formulated in an attempt to encapsulate these activities. A conceptual model is built from this draft root definition and compared with the activity model. Several draft Consensus Primary Task Root Definitions are formulated, modelled, and compared with the activity model. This process of reiteration eventually arrives at the final ‘non-contentious, negotiated’ Consensus Primary Task Root Definition and the adopted Consensus Primary Task Conceptual Model.

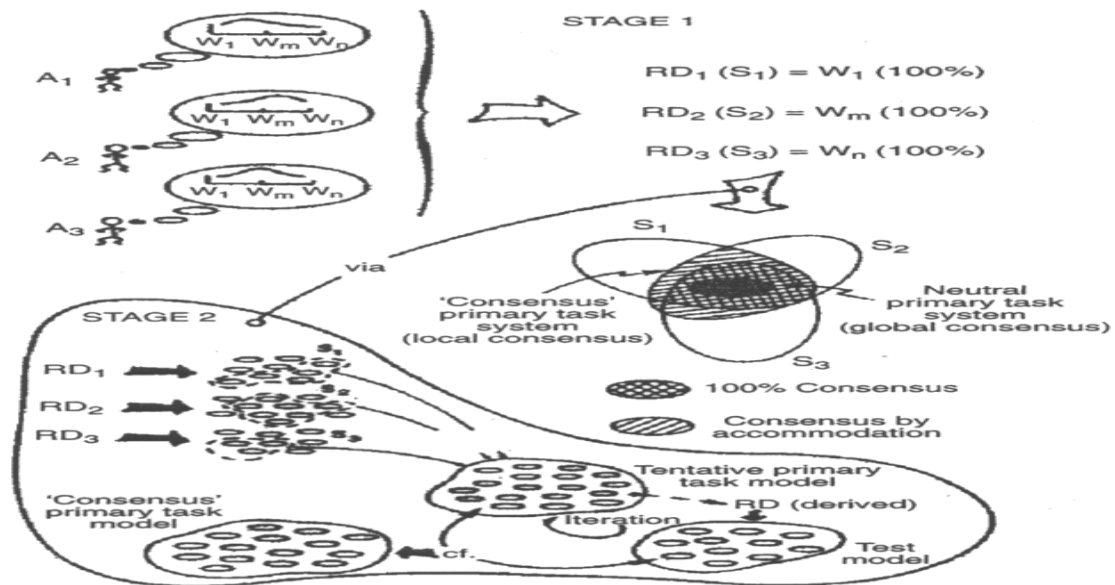


Figure 1 A Process of Systems Condensation (taken from Wilson, 2001)

This model represents a negotiated single model of the multiple perceptions taken from the various collaborators; this remains a conceptual description of what needs to happen or should happen to be that view of reality, and not what actually takes place in reality. This is followed by comparison and reflective session with the collaborating team members to establish the model's creditability within the real world, via the following headings; Activity, Done How?, By Whom?, How?, How Judged?, Judgement?, Change?, Implication to bring about change and hopefully improvement. This process took three hours to complete given its interactive and reiterative approach.

### Consensus (Non Contentious) Primary Task Root Definition & Conceptual Model

The development of the non-contentious primary task conceptual model was developed after the individual conceptual models discussion. This composite model was developed by all collaborators via a process of negotiation, reflection and comprise. The developed non contentious primary task conceptual model indicates a framework which the group of collaborators felt should be issued to all masters level and above supervisors in an attempt to show what was felt to be good practice, but to leave colleagues to either accept and enact all, none or parts of the model to inform their own personal professional practice as they saw fit.

### **Consensus (Non Contentious) Primary Task Root Definition**

A university owned system, operated by research supervisors and research students to undertake academic research work and to enhance the skills, knowledge and learning of both the supervisor and the student by using appropriate methodologies, methods and concepts, in an environment which encourages free useful and constructive discussion within the academic constraints of that cognate area and the rules and regulations of the University and the abilities of the student and the supervisor.

- C** Supervisors and research students
- A** Supervisors and research students
- T** To undertake academic research work and to enhance the skills, learning and knowledge of both the supervisor and the student by using appropriate methodologies, methods, and concepts
- W** That students and supervisors can work together and learn about research in that cognate area in a partnership of learning
- O** University
- E** Time, Resources, University Rules, and Regulations, Conceptual & Methodology tools are understood by the supervisor and the student and can be applied to the topic under investigation. That an environment, which encourages free and useful discussion between the supervisor and the student, is possible. Abilities of the student and the supervisor.





One of the collaborator's conceptual model suggested that some of the key skills of a supervisor was to be "*passionate about the area of study*", and to be "*enthusiastic about learning and learning with and from others*" and that advanced academic "*scholarship was the key, as supervisors need to lead by example and help light the fire of the students imagination and curiosity.*"

In order to facilitate this view, supervisors have to "*build and maintain an active research profile*" and "*allow the student to be critical of their work*" in a process of constructive dialogue and negotiation. "*Supervision is about the continual exchange of ideas and supervisors should refrain from talking about students and see and treat them like junior colleagues eager to learn and research*".

This partnership, where the supervisor guides the student and navigates with the student along the research journey is the only way to generate new knowledge, as the junior colleague has new eyes and the supervisor has the experience to see it through. Together they both co-learn and challenge what has gone before. Nevertheless, section (b) and to a lesser extent, elements of (a) are needed in addition to section (c), to ensure that both parties reach the destination safe and sound. As research, supervision is simply "*collaboration plus explanation*".

The rationale behind this co learning partnership can be summarised by the American authors Andre and Frost when they state "*Professors can contribute to society if they provide better students, individuals who can think critically and broadly and who become enthusiastic about learning. If we can narrowly focus, passive learners who are organisational conformists and pallid citizens, then give them rote learning from a canned curriculum, not these professors. If we want organisational innovation and problem solvers then expose students to people like these who are themselves working enthusiastically at the cutting edge of their fields. Our contributors seem to have known instinctively that a crucial part of teaching students to learn is to model being a learner themselves through demonstrating, among other things, curiosity, passion, commitment of time and resources and a spirit of playfulness. Professors who believe that their discipline is important empower students to see the world through a particular lens, and the experience of an aggregation of many lenses in education*", (Andre and Frost, 1997, ppx).

The multidimensional nature of supervision and what this means to academic professional practice is still extremely debatable, but perhaps a little less cloudy. This project provides an *agreed* view of what makes a good research supervisor; it does not offer a complete solution, but more a deconstruction of practice, which offers solutions not final outcomes (Stronach and MacLure, 1997). Our research also determined that the most important ingredient in successful postgraduate supervision was not solely being a scholar in the field but building an effective professional relationship with the student. In many cases, this involved modelling good research practices, but in just as many cases, it required encouraging the student regardless of the supervisor's personal opinions of their work and learning the craft of project supervision via trial and error. Nevertheless, there was still a strong need to monitor and control the student to some extent.

The project supports the view of Smith, 2001, who provides an eloquent synthesis, as "*My role is to make sure they understand the parameters and the context in which*

*they are working, to make sure that they have some sense of what it is they're trying to do and to provide models and exemplars. In the latter part of the candidature, the role of the supervisor shifts to become a critical friend, close critical reading of final chapters, critique and feedback and gradually shaping the writing to ensure the thesis is ready conceptually and technically as a coherent work ready for examination. The role of the supervisor changes from one phase to another. In the beginning, it is about building confidence, relationship, and trust. It is about scaffoldings. In the latter stages it is about removing the scaffolding and generating confidence, voice and independence” (Smith, 2001 cited in Kindlbinder, 2001, pp39) (note: talking about PhD students but the essence remains appropriate to all post graduate supervision)*

## **Conclusion**

Overall, the study supports earlier work undertaken by Kandblinder (2001) where they state that supervisors describe their approach to supervision was developed as the result of experimentation, until they formulated a method that worked for them. In discussing their motivations for becoming better supervisors, it was clear that experienced supervisors had been reacting to their own experiences of being research active (were relevant). Whether their own relationship with their supervisor was a productive experience, which they sought to emulate or, more commonly, as a negative experience they wished to avoid, it is clear that a successful supervisor is typically thoughtful about how they supervise and draws on a range of approaches to suit the student's individual circumstances. It was clear from the narratives that most supervisors saw themselves as advisors and or co-learners in the supervisory relationship.

The research identified that the most important ingredient in successful postgraduate supervision was not solely being a scholar in the field but building an effective professional relationship with the student. In many cases, this involved modelling good research practices, but it also required encouraging the student regardless of the supervisor's personal opinions of their work and learning the craft of project supervision via trial and error. However, there was still a strong need to monitor and control the student to some extent to ensure that the supervisor were themselves and to a lesser extent the student, conforming or ensuring that the universities policy document requirements could be seen to be have met.

## **References**

ANDRE, R., & FROST P., J., (editors) (1997), *Researchers Hooked on Teaching, Noted Scholars Discuss the Synergies of Teaching and Research*, Foundation for Organisational Science, Sage Publication, California.

BECHHOFFER, F., & PATERSON, L., (2000). *Principles of research design in the social sciences*, Routledge, London.

BLACK, D., (1994) *A Guide For Research Supervisors*, Centre for Research into Human Communication and Learning, Cambridge, UK.

BLOOR, M., FRANKLAND, J., & THOMAS, M., & ROBSON, K., (2001), *Focus Groups In Social Research*. Sage. London.

CHECKLAND, P., B., (1981) *Systems Thinking, Systems Practice*, Wiley, Chichester

CHECKLAND, P., B., & SCHOLE, J., (1990) *Soft Systems Methodology in Action*, Wiley, Chichester.

CONNELLY, F., M., & CLANDININ, D., J., (1990) Stories of experience and narrative inquiry. *Educational Researcher*, Vol 19, pp2-14.

CULLEN, D., J., PEARSON, M., & SAHA, L., J., (1994) *Establishing effective PhD Supervision*. Australian Government Publishing Service, Canberra.

ELLIS, W.,D., (1938) *A Source Book of Gestalt Psychology*, Routledge and Kegan Paul, London, sourced in Lewis, P (1994) *Information Systems Development*, Pitman, London.

GLASER, B.G., & STRAUSS, A.L., (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. Aldine Publishing, New York.

HAMMERSLEY, M., (2002) *Educational Research: Policy Making & Practice*, PCP, London.

KANDBINDER, P., & PESETA, T., (2001) Report - In Supervisors' Words....An Insider's view of postgraduate supervision, Institute for teaching and learning, The University of Sydney.

LAVE, J., & WENGER, E., (1991) *Situated Learning: Legitimate Peripheral Participation* Cambridge University Press.

LEE, A and GREEN. B (2009) *Supervision as Metaphor*, Studies in HE, Vol 34, No 6, pp 615-63

LEWIN, K., (1946), Action Research and Minority Problems. In G.W. Lewin (Ed), *Resolving Social Conflicts*. New York, NY: Harper & Row, pp. 201-216.

LEWIS, P., (1994) *Information Systems Development*, Pitman, London.

MARSHAL, C., & ROSSMAN, G.B., (1995) *Designing Quality Research*, (2<sup>nd</sup> edition) Sage, Thousand Oaks.

MOSES, I., (1985) *Supervising postgraduates*. Higher Education Research Development Society of Australasia, Green Guide No. 3. Sydney: TERC, University of New South Wales.

MOSES, I., (1992) *Research training and supervision*. Proceedings from the ARC and AVCC sponsored conference in Research Training and Supervision held at Canberra in May, 1992. (AVCC and ARC, Canberra).

POLANY, M., (1974) *Personal Knowledge Towards a Post Critical Philosophy*. N.Y.:Harper & Row.

POLLITT, C., (1990) *Managerialism and the Public services*, Blackwell, Oxford.

QUALITY ASSURANCE AGENCY FOR HIGHER EDUCATION, (1999) Code of practice for academic quality and standard in higher education, postgraduate research degrees, Cheltham, Gloucester.

ROSS, M., & CONWAY, M., (1986) Remembering one's own past: The construction of personal histories, in R Sorrento & E.T. Higgins (Eds) *Handbook of motivation and cognition foundation of civil behaviour* (pp122-144), Guildford, New York. Cited in MARSHAL, C., & ROSSMAN, G.B., (1995) *Designing Quality Research*, (2<sup>nd</sup> edition) Sage, Thousand Oaks.

SIDDLE, D., (2001) Preface to Kandlbinder, P., & Peseta, T., (2001) Report - In Supervisors' Words...An Insider's view of postgraduate supervision, Institute for teaching and learning, The University of Sydney.

STRONACH, I., & MACLURE, M., (1997) *Educational Research Undone: the post-modern embrace*, Open University Press: Buckingham & Philadelphia.

VON BERTALANFFY, L; (1950) The Theory of Open Systems In Physics and Biology, *Science*, Vol. 111, pp23-29.

VON BERTALANFFY, L., (1951) General Systems Theory: A New Approach To Unity Of Science,*Human Biology*, 23, pp303-361.

VON BERTALANFFY, L., (1968) *General Systems Theory*, Braziller, New York.

WILSON, B., (1990) *Systems: Concepts, Methodologies And Application* (2ed), Wiley, Chichester.

WILSON, B., (2001) *Soft Systems Methodology: Conceptual Model Building And Its Contribution*. Wiley, Chichester.

### **Monash University**

Monash University, Results of 1998 Supervision Survey

<http://www.monash.edu.au/phdschol/forms/handbook.html>

### **University of Sydney**

Supervision Roles and Responsibilities

[http://www.usyd.edu.au/study/pg\\_studieshb/PGHbookRes/Research\\_Chapter\\_8.pdf](http://www.usyd.edu.au/study/pg_studieshb/PGHbookRes/Research_Chapter_8.pdf)

The University of Sydney's Code of Conduct For Responsible Research Practice

[http://www.usyd.edu.au/study/pg\\_studieshb/PGHbookCwork/Cwk\\_Appendix\\_5.pdf](http://www.usyd.edu.au/study/pg_studieshb/PGHbookCwork/Cwk_Appendix_5.pdf)

### **RMIT University**

Faculty of Business – Statement of Research Supervision

<http://mams.rmit.edu.au/cq11t5psvku5z.doc>

In-SITE2014 (Wollongong, Australia)

**Glasgow Caledonian University**

<http://home.gcal.ac.uk/internal/issues.htm>

**Strathclyde University,**

Research Supervisors Handbook, 1999

<http://www.strath.ac.uk/>

**University of Groningen.**

Research Supervisors Handbook, 2000, part of the Training Course for Research Supervisors

<http://www.mastersportal.eu/universities/37/university-of-groningen.html>