

QUALITY IN POSTGRADUATE  
EDUCATION  
(QPR)

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COLLATED PAPERS

## CONSTRUCTING A THESIS; A QUESTION OF IDENTITY?

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I am here to suggest that it can't happen overnight, but that there are ways to promote it. I should like to describe some of the experiences, more and less successful, which my students and I have had in our attempts to achieve recognizable quality in their postgraduate research.

Current research in the field of socio-linguistics is opening up fascinating new worlds for people like me – academic teachers of our own language. Changing language practices in many social contexts are indicating intense changes in the ways in which power and social control are exercised (Fairclough, 1992:3), and the pertinent context for us is academic writing. Is it primarily a vehicle for the creation and communication of new knowledge, or is it a tool for exclusion and subjection? Romy Clark focuses on the dilemma this question poses for academic language teachers when she points to 'the tension that exists between the need to provide access to conventional discourse practices and the need to develop alternative practices.' (1992:137) International students from non-English-speaking backgrounds are at the centre of this tension because they are between worlds; they are doubly disadvantaged in that they are not well versed in our conventional scholarly practices and they are simultaneously excluded from and subjected by the conventions of their academic discourses. Consequently I have a firm conviction that if we are to develop strategies to help to empower the, we should face with them the challenges of text creation more resolutely than any others.

As the Academic Advisor to Postgraduate ESL Students in a Language and Learning Unit, my role is to facilitate the student's language development, usually focussing on writing and usually with a stimulus of the student's concern or anxiety because it is-in the process by which academic research turns into academic writing, that second-language students become most lost, confused and powerless.

### **The Extent of the Loss:**

I use the work 'lost' deliberately because it offers us the chance to consider who has lost, what. We must begin by exploring in details who the students are, in our chairs and in their texts, and by examining in detail where they are at, in their thoughts and in their words. A person can only find a way if they themselves are looking for it; we all waste a lot of energy describing conventions if the students, however unconsciously, are not ready to embark upon them.

Sometimes through diagnosis we can establish that students cannot gain access to the kind of competent performance they can expect of themselves in their native language because they need to work on their grammar structures; perhaps they have not mastered the standard study skills of our academic communities or do not understand the basic

expectations of their faculties. These deficiencies are easily addressed so that skills and confidence can be developed. In language work we can go further and with the enlightened leadership of Genre theorists like Swales (1990) we can help students to “unpack” the texts of their disciplines and to understand the larger expectations of thesis writing in their own academic communities. We can even point the way for them by referring them to a document such as the HERDSA Green Guide, Supervising Postgraduates (Moses, 1985:26-32), which outlines Madsen’s (1983) criteria for thesis assessment and offers many tips.

So far so good. Yet in practice, despite all this informed and dedicated teaching, not to mention hours of content-based discussion with supervisors and lecturers, there is rarely a marked improvement in the standard of the written text which emerges. The student too often remains and, much more significantly, feels, lost.

Ballard and Clanchy (1984: p.12) have famously declared that a root problem for Asian students lies in the difference in learning styles and in attitudes to the demonstration of knowledge which are current in the academic communities of different cultures. They emphasise the need for “analysis” and “interpretation” as distinct from “reproduction” in the English-speaking academic world, and this is clearly borne out by the terms of Masden’s assessment criteria referred to above: a thesis in English must comprise:

- a convincing account
- an ordered, critical and reasoned exposition
- the testing of ideas
- competence in independent...experimentation
- ability to make critical use of published work and source materials
- originally (Moses, 1985:27:28.)

But still, faced squarely with these signposts to good practice, our International students, whether or not their grammar and study skills are under control, generally begin to raise many questions which indicate their positions and help us to see more clearly how lost they are:

- How do you make an account convincing?
- What is the difference between a critical exposition and an exposition?
- How do you test ideas?
- How *can* my experimentation be independent?
- You mean I am to criticise published work!
- How do I *dare* to be original!

*How* indeed. Instruction will not suffice.

One of my Chinese students has been able to comment very perceptively about her own experiences of panic and disorientation when she first began to realize that such questions even existed, long before she felt the implications of having to find answers for them. Smattering her conversation with expressions like “awfully confused”, “very frightened”, you cannot imagine how worried”, she explained that in her Bridging Programme not only did she become aware that she was lacking some essential skills which she had never dreamed existed, but she also lost abilities which she prided herself on in china, in particular perceptive reading and her skilful memory. After participating in a class on the Harvard referencing system and patterns of in-text citation, she was horrified to discover that she could not remember the details. Only later was she able to articulate that the problem lay in the fact that she had, as she put it, no ‘schema’, no context into which to put the information. She lowered her voice to

'confess' that she had never heard of referencing another scholar's work or commenting on it, before she found herself in this class.

This student was able to make a comparison between this experience and an earlier one in China in which she had completely failed to understand a reading passage in English because it was about a dish-washer and she had never seen or imagined one. Now, however, the problem was not rooted in the lack of a strategy or external 'schema', but in her self. The 'schema' she was missing here was, as she saw clearly, not located simply in a deficient world-view, but was a void inside her. Beginning her postgraduate study with no compulsory reading list, an assignment ahead and no idea what was expected of her, her panic was at its height: "Then I worry indeed," she wrote, "since my mind is totally blank and I sit through the first few lectures feeling myself just like a fly without its head." (Lin, 1994: 2) Clearly what has been lost at the deepest level, is identity.

It is somewhere on this continuum of loss and disintegration, well documented in the literature on culture shock (Brown, 1989; Damen, 1987), that a deadline date for a piece of academic writing, a literature review or a thesis proposal, is handed down to the student. It is small wonder then that many of the emerging drafts are seriously flawed and we encounter inadequacies in the 'English'. The tasks themselves basically require, as Moses explains, 'adequate collection and understanding of relevant, recent data' and 'depth of thought, insights and interpretive skill in the presentation of it.' (1985:19) Even though our students may feel that they are building confidence in the first of these exercises, all too often we are of the opinion that their reading is endless, undisciplined and unselective, that their data gathering is unfocused and they seem to be unable to begin to write. Indeed we can witness their insecurities rise alarmingly to the surface when they attempt to write up their findings.

If, then, when we meet the drafts, we restrict our attention to the language problems and the limits of the knowledge displayed, and do not look for the degree of loss at the much deeper level of identity, we are making false assumptions about the nature of the writing process and its particular relevance to students working in a second language. It is fallacious to assume that the 'content' of a piece of writing can exist prior to, or in another form from, the language in which it is expressed. We cannot teach students of academic English to write good grammar so that they can put their information into it. P. Nightingale (1986), in a pertinent study of the problems of student writing, makes the salient point that good writers discover what they think as they write and not before. Knowledge is born into form and meaning in language, and applied linguists continue to discuss ways in which ideas and information are structured in writing differently from culture to culture. (Kaplan, 1996; Clyne, 1987)

Bearing this in mind, then, and recognizing how unclear the process is for second-language students, how can we best aid them to write well and to become, in the words of one well-experienced supervisor in Education, "good scholars" in English? Well, a first step is to explore, with the students, their own texts, in order to raise the student's consciousness of the role of the critical reader and, more importantly, to appreciate ourselves each student's specific 'writing' situation. Three examples which have furthered my own learning process may throw some light on the complexity of the problems.

### The Void in the Text:

A young Middle-Eastern woman writing an M.A. thesis and exploring to what extent Plato, John Stuart Mill and Aristotle can be called 'feminists', consulted me to help her to "correct her English". At one point she had written a delightful sentence making the point that in the *Republic* a basic distinction between the sexes is that men beget and women have bears.

With more or less a straight face I was able to reformulate this point for her in the simplest way, by supplying the idiom, a language entity, which she was missing:

a) a basic distinction between the sexes is that men beget and women bear children

However, this version failed to capture the force of the point being made, so we tried

b) a basic distinction between the sexes is that men beget but women bear children

I also pointed out that it was possible to be even more forceful if she wished:

c) *a basic distinction between the sexes is that men beget children but women bear them*

She, however, did not seem able to comment on the emphasis she needed or to make a choice from amongst the options. As we talked it became clear to me that exactly **how** this distinction was not accessible to this student. I believe that she understood the distinction itself clearly enough, but that she took its expression by me on trust. I do not think that she heard it in the text, it was not **her** writer's voice that created it.

Because of this thought process, and also spurred perhaps by the use of the archaic word 'beget', I unconsciously prompted the following dialogue:

Me: Who says this?

Student: (Puzzlement – no reply)

Me: Whose words are these?

S: Who?

Me: Yes, who? (Silence) Are these your words?

S: Yes, these are my words.

Me: Ah, so this is your point, about the *Republic*?

S: Yes.

Me: So Plato himself does not use these words in the *Republic*?

S: Oh yes, Plato uses these words.

Me: O.K. So these are Plato's words but this is your *point*?

S: ? (Puzzlement – no reply)

Me: What is Plato's **purpose** in using these words? What point is he making?

? (Puzzlement) What point are you going to make?

S: It is true. (Extreme puzzlement about what I am asking for)

Me: Oh yes. (Thinking to help by looking...) Where in the *Republic* did you get them from?

S: I got them from this book...(Produces a feminist critique of Plato)

In fact, in her text this student/writer had constructed a jigsaw of points and perspectives in which there was no place at all for her own 'voice'. She did not have the concept of such a thing, much less the skill to engineer it into her writing.

This dimension of thinking which operates **beneath** the text and finds its form in the 'voice' of the writer manipulating the linguistic techniques of academic argument, is generally most elusive for the second-language user whose own culture does not demand such an approach. Even where the content knowledge and the sentence structures have been largely mastered, the ideational skeleton which gives structure and 'voiced' thought to the writing (and which crucially for us reveals its intelligence) is most often weak, inconsistent or non-existent in non-native writing.

Many supervisors consider that this sort of complex problem can be mitigated by the effects of concentrated reading and they think to ease International Students in gently by asking them to prepare a literature review first. Here too, however, we often see that a confusion of 'voice' betrays the absence of a coherent writer's perspective beneath the review. A competent professional in population studies in Indonesia, who understood reasonably well the theoretical role of the research reviewer, wrote the following:

*It has been perceived by these theorists that health status and quality of life are structural factors. Therefore such programmes of health promotion and prevention are on the right track.*

In querying the possible non-sequitar, caused as they often are by verbs of inquiry and examination, I discovered that a central focus of his understanding as a developing writer, and of mine as his reader, lay in the question: 'Who is saying, "Therefore"?' If it is the theorists under review, then the problem is easily rectified:

*It has been perceived by these theorists that health care and quality of life are structural factors and that therefore such programs of health promotion and prevention are on the right track.*

If, however, this 'Therefore' is in the voice of the student/writer, then first we must be clear that it is because of the perception that the programmes are judged to be on the right track, and then, more significantly, we should easily be able to understand the contribution of this cause-and-effect point to a chain of points which structures the writers' overall 'interpretive' viewpoint on his subject. Halliday and Hasan (1976: 72) have made very clear this distinction between markers to the experiential level (or the subject matter) of the text and markers to its interpersonal (or thought process) level. It is a key one for non-English-speaking-background students because of the language in which it is conveyed. Where this thought process, the controlling viewpoint, is sporadic or largely absent, as is very frequently the case with our students who cannot find within themselves an appropriate 'voice' in English, then there is an apparent void for us in the text. Furthermore, errors of grammar, reproductive description and even plagiarism can be seen to be effects of this problem, not its causes.

### **Recreating the Writer's Voice:**

We cannot underestimate the centrality of the problem. In our academic culture it is universally accepted that is this controlling, personal viewpoint which provides the

focus for the research and the *raison d'etre* for the thesis. Indeed the meaning we attach to the word 'thesis' fluctuates tantalisingly between the bound volume and the thought process that informs it. Many of our second-language students never come to terms with this distinction, so even an excellent suggestion like Jonathan Anderson's (1994) recommendation that students learn to say, 'My thesis is that...' not, 'My thesis is on...', may immediately confuse and alienate them. Yet, as Anderson explains, such a statement of one's 'thesis' dictates the choices being made at all levels of work, in the collection of data, in the organization of it, in the literature review and in the writer's conclusions and recommendations. Of course the language teachers will add in unison, 'And it simultaneously dictates the whole culture of knowledge and the language by which it is maintained and expressed!' (See Ballard and Clanchy, 1988:7) In short, it inspires the writer's 'voice' throughout.

Strategies to help the second-language writer to find his or her own voice must begin within them. It proves immensely valuable at first to encourage them to refocus the reading and thinking that they are doing, confidently to reflect their own interests and queries. This demands a move, at least initially, by both the teacher and the student away from the formal convention and language structures which we expect of native speakers. The emphasis must now be on the clarification and articulation of a personal position, and the key to this process lies, no less than the problems do, in language.

There has been considerable debate in past years about the advantages and disadvantages of the academic convention of writing impersonally. The goal of objectivity has led scholars to an objective writing style on the assumption that any intrusion of the observer/writer into the text somehow invalidates the findings. (Cooper, 1976:14. See Jackson 1991:47) Gordon Taylor seems to concur, advising specifically in this *Student's Writing Guide for the Arts and Social Sciences*, that, since academic writing should by definition be an account of the writer's own justified judgements and beliefs, 'nothing is to be gained by making this explicit' and "I" is best used sparingly'. (1989-144) However, the recently formed 'Critical Language Awareness' (CLA) school under Norman Fairclough at Lancaster University, takes serious issue with this view. Their position is to argue convincingly that power relationships, which are often debilitating to those subjected by them, are created and sustained by the manifestation of conventions such as so-called academic objectivity, and that it is our responsibility as teachers to use and encourage 'emancipatory discourse', that is, discourse which does not disempower others. (See Janks and Ivanic, 1992)

Our International Students are disempowered, both by the discourse they need and by the very world which they have come to inhabit, and in practice the return to power can be by just this way of personal expression. One of Lind Flower's early strategies for releasing 'stuck' student/writers into creativity, the WIRMI ("what I really mean is") focus, is directly apposite for us here. (See Jackson, 1991:45) Our 'lost' students desperately need to find themselves both in their tasks and in their writing, and discovering what they really mean seems to happen quite successfully for us when they are given, and give themselves, permission to use quite freely the personal pronoun 'I'. Ros Ivanic explains most clearly how the process of returning to 'the I' fosters academic inquiry in a positive way:

*By the 'I' we mean recognising that writers not only construct their texts but are also constructed by them... The 'I' makes you write your ideas, thoughts and convictions... Finding an 'I' in writing also helps you to find clarity. (It) is a very simple tool for doing this because it let's you stand away from the writing and look at what you are trying to say. (1992: 144-145)*

In effect, as Gordon Taylor himself concedes, it helps the students to define more clearly for themselves their relationship with the material, with other scholar's judgements on it and with their readers. (1989:146) In this way it is a key to self-discovery in the academic context.

As we face our students' insecurities and difficulties, there are thus some positive steps we can immediately take in the light of these conclusions. Having established a topic for research, they can be aided to formulate their own list of the relevant questions which they would like to explore in the literature. Using a very personal approach, they can write their responses to their reading either in the form of a literature review or of a reflective reading journal (See Nightingale, 1986: 11-13) The language focus of this kind of writing is on the distinction between on the one hand, simple sentence structures based on personal pronouns and animate, reflective verbs, and, on the other hand, complex sentences dealing with clause construction based on verbs of reporting, exemplifying and evaluating.

My own experience and that of my colleagues in several contexts, suggests that effective critical oracy precedes critical literacy, and a most important aspect of this developmental process for us is that the students keep talking about their ideas and their thought processes regularly, in the first person, as they are formulating them. When the time comes to construct and organize a coherent personal response to the stimulus questions, students can be shown how to schematise the thought process in diagrammatic form, with the expectation that they will then talk 'to' the diagram. This can occur in an informal or a relatively formal context, but again it should be clearly their own viewpoint structured throughout with the use of 'I'. Then the 'I' should be sustained in early drafts of chapters, until the writer's voice is so clearly heard in the text that this over language device itself is no longer a necessary prop to the argument. By this point the writer's confident English-language-identity will have become both a precondition and a result of the process, giving substance to the well supported view that writing is more than expounding on paper; it is learning. (Jackson, 1991; Nightingale, 1988)

For those contexts in which impersonal text is more appropriate, it is then not a large step to guide the students to reformulate their language in terms of third person subjects, passive voice constructions, impersonal pronouns and conventional structures. Their thinking and their knowledge have, in the last analysis, to be recognised by their Australian academic communities in the conventionally respected genres. But what has been achieved by sustaining the personal language as long as possible, is the facilitation of a specifically Anglo-Celtic process of intellectual development which, experience has shown us, is otherwise unconsciously resisted by International postgraduates.

Thus the writing process has helped to build a bridge between the internal dialogue of reassessment which a person exchanging cultures must experience, and the external academic tasks required of the new environment. In this respect it is healthy as well as

productive, offering opportunities for self-discovery and the rebuilding of self-esteem. Of great significance to the English teacher, it is instrumental in creating active English-language identity, liberating and empowering talented students through language.

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## **POSTGRADUATE SUPERVISION – INDUSTRY LINKS**

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### **Advantages of having industry involved in the project**

- more relevant education
- student gains experience in
  - time management
  - dealing with all levels of industrial personnel from managing directors to assembly line workers
  - meeting deadlines
  - writing succinctly (progress reports)
- student will be more employable
- increased likelihood of completion within the allowed three and a half years
- student gains experience in commercial R & D
- student gains an appreciation of where R & D fits into the overall development and commercialisation of a project

### **Disadvantages of involving industry**

- project is outcome driven
- project is very structured
- little opportunity to wander off at a tangent
- increased time commitment from academic supervisor
- sometimes it is difficult to meet the usual high expectations for relevant output

### **Mechanisms for industry involvement**

- CEED
- GILES
- GEI
- CRC
- Post-Graduate Industry Award
- ARC Collaborative research
- GIRD
- Industry Research Associations
- Direct industry funding

### **CEED – Cooperative Education through Enterprise Development**

- students work on projects originated by an industrial company
- projects directly related to company's normal activities
- students work directly with the company
- company pays
  - student
  - broker company
  - University Department in which student is enrolled
- both undergraduate and masters students involved

### **GILES – Graduate Industry Linked Education Scheme**

- project ideas come from industry
  - not part of everyday function for the company suggesting the idea
- University develops an incubator company
  - part owned by industry partner originating the idea
- Industry Partner is also part of the business mentoring system
- Industry Partner pays student scholarship

### **GEI – Graduate Entrepreneurial Initiative**

- Graduate Diploma – scholarship support for one year
- People and project both originate from the University system
- Aimed at development of new products in conjunction with an industry partner
- Students attend a business training course
- Access to a business mentor
- Involves the development of a business centred on further refinement or commercialisation of a product, process or service
  - management board for the business consists of people from industry and the Department of Economic Development
  - successful marketing is important
- 50% project 50% coursework
- coursework
  - any relevant electives but should include a marketing subject

### **CRC – Cooperative Research Centres**

- can fund postgraduate scholarships – usually at the priority level
- well defined but non-constricting projects are available for students
- students receive supervision input from more than one CRC partner
  - usually have at least two or three supervisors
- regular reporting requirements to ensure that students maintain steady progress
- good employment opportunities at completion of degree with a CRC partner

### **Postgraduate Industry Award**

- Industry provides at least \$5000 in cash and \$5000 in kind to the Department to support the project (per annum)
- Government funds postgraduate priority award
- student is under no obligation
- regular progress reports required
- project must be of importance to the company funding it
  - should lead to company growth
  - usually leads to development and marketing of a new product or service
  - could be either University or Company idea
- intellectual property usually 50/50 basis
- company is expected to be heavily involved in the project
- student should spend a large proportion of their time working at the company premises
- often leads to employment of the student by the company

### **ARC – Collaborative project**

- one line budget allows funding priority awards
- company supplies minimum 50% to project

- 150% tax deductible
- cash injection
- in kind contribution
- no requirement made by company on outcome
- company cannot demand copies of reports
- company must gain confidence in University people to fund a project like this
  - APRA industry award often provides the seed for an ARC collaborative project
- essentially for research work – long term pay off
- company must provide collaborative researchers

### **GIRD scheme**

- essentially for development work
- not tax deductible
- project must pay back in a short time scale
- company need not supply researchers
  - can contract research out
- not really suitable for PhD students but maybe OK for Masters students

### **Industry Research Associations**

For example: Australian Mineral Industries Research Association

- essentially contract research paid for entirely by a number of industry sponsors interested in solving a common problem
- outcome driven
- quarterly reporting requirements are usual
- regular sponsors meetings to report on progress and expenditure
- can lead to employment with one of the industry sponsors
- intellectual property usually 100% owned by University

### **Direct Industry Funding**

- Industry funds student and project directly, partly or fully
- student is under no obligation to industry
- intellectual property usually on 50/50 basis
- usually the project is initiated by the company
- relatively fast outcomes are usually desired by the company
- relatively uncommon funding mechanism due to availability of numerous government assisted schemes

### **Managing industry involvement**

- minimise number of progress reports required
  - alternatively minimise the expected length
- don't promise more than you are very confident of producing
  - perform better than you promised – good guy
  - perform worse than you promised – bad guy
- get intellectual property ownership sorted out before projects starts
- don't lose long term company interest
  - keep them involved by having regular meetings
  - invite them to Departmental seminars on the project
  - ensure that continuing progress is being demonstrated
  - keep the project on track

- don't change project goals without agreement from industry partner
- make sure deadlines and milestones are adhered to

#### **Implications for supervision practices**

- students need to be protected to some extent
  - industry demands on the student for regular reporting can be excessive
  - inflexibility of industry goals can adversely affect student creativity
- irresponsible or lazy students cannot be tolerated
  - University and the Department have an obligation to the industry partner
  - Any exhibition of this behaviour must be picked up early and remedied
- regular meetings with students to discuss progress and review deadlines are essential
- more than ever, students need time management guidance

#### **Implications for supervision practices**

- care needs to be taken to ensure student creativity is nurtured
  - Sometimes project goals may have to be adjusted to accommodate this
- urgency to meet project milestones and deadlines should not compromise critical thinking
  - mind needs to remain open to unexpected outcomes
- supervisors must cooperate with students in returning their work quickly
- funding should be sought at the beginning of the project to send the student to national and international conferences
  - attendance on the condition of presenting a paper
- maintain interest and commitment of industry partner
  - regular meetings and reporting
  - invitations to Department seminars on the project

## **MEETING WITH STUDENTS: PROVIDING MORE THAN RESEARCH SUPERVISION**

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Research students who join in and contribute to the activities of the department are likely to end up better trained in the wider sense that a student whose only contribution is his or her thesis. In my role as head of the Department of Econometrics, I have some to appreciate this point. We provide our graduate students with workshops on teaching and a very comprehensive research seminar programme. I also make a point of meeting weekly with students and discussing whatever seems to be the issue of the day. It may involve information on upcoming conferences, job interviews strategies, computing, departmental policy, tips on paper writing or conference presentations. It provides a forum for students to share their experiences with other students. It also allows me a forum for introducing visiting academics to the graduate students. A favourite question to such visitors is what do they think the greatest econometric advance in the last decade has been. This has generated some wonderful discussions that I am sure have given our students a much deeper understanding of the profession that just writing a thesis could ever do.

# **MY “GOOD” PRACTICES IN RESEARCH SUPERVISION OF APPLIED RESEARCH PROJECTS**

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## **1. INTRODUCTION**

Research means different things to different people. My “good” practices. The reason why I am talking about good practices is because the seminar convener wanted me to do so, to report to you about my “good” practices.

Before I begin my talk about practices in research supervision, let me define the meaning of research. Research is theoretical, experimental or otherwise original work which leads to the advancing of knowledge or to the creation or development of new or improved materials, products, devices, systems or services. This is really a very broad definition of research. It covers both fundamental and applied research. Because research is so broad, that is why it could mean different things to different people, and therefore research supervision should also vary depending on the nature of the project, ability of the student, availability of resources, and the character of the supervisor himself/herself. I remember when I was a research student working for my PhD some 27 years ago, my colleagues and I, from time to time, talked about whose supervisor was better and why/ They often told me that I had an excellent supervisor and I agreed, because he was internationally famous and he supervised very diligently. But I thought there was room for improvement and had decided that one day when I myself, became a research supervisor, I would keep my supervisor’s good practice and improve upon his deficiencies. So, here I am reporting to you my “good” practices of research supervision.

## **2. HOW I SUPERVISE MY PhD STUDENTS**

When I was a research student, although I had a good supervisor, I always felt that my research project was very boring. It was really more a fundamental research than applied. As an engineer, I have always been interested in getting things done, seeing what is happening, and getting the results that are of direct benefit to industry and society. From time to time, I had become very frustrated during the course of my research because I could not see the relevance of my project. However, it was a very good research training experience for me. Since I became an academic and began supervising research projects, I have realised how difficult it is to be a supervisor, especially in the applied research field. I feel research supervision is a very responsible and demanding task because you will be expecting significant results to be achieved, and the outcome of the research will warrant the student receiving his/her degree. At the same time, you also want the student to be able to enjoy his/her research work, so I see it necessary to divide the research supervision process into the following steps.

#### **a. Formulation of the Project**

Different levels of the problem require a different amount of effort for it to become a project that is worth pursuing. e.g. a Masters Degree project is much easier to identify and formulate than PhD projects. As a matter of fact, most PhD projects take me an average of 12 months to develop from the initial idea to what I consider a suitable project.

#### **b. Consideration of Student Interest**

When a student commences his/her PhD project, it normally takes an average of four and a half years to complete. It is very important that students enjoy what they are doing. Therefore, when new students arrive, I always encourage them to talk to every academic staff to find out all the research projects available in the School, and to undertake a project which interests them the most. A project which appears to be interesting at the beginning might not prove as interesting during the course of their research. Therefore, as supervisors, we have to continue to encourage and motivate our students at regular intervals or whenever we consider it necessary.

#### **c. Selection of Research Students**

The quality of students is very important. As previously stated, we, as supervisors, have the responsibility to guide the student to succeed in his/her research so that the student will receive his/her degree at the conclusion of the research. At the same time, we also need to maintain the standard of the degree they are pursuing. In recent years, there has been a decline in Australian students undertaking postgraduate research. Therefore, the quality of applicants also declines. It is dangerous for us to drop our standards because there is not a sufficient number of quality students wanting to undertake postgraduate research. I believe that if the government is really serious about the future development of this country, the value and number of research scholarships needs to be significantly increased. Before I offer a project to a student, I always look at the student's background and interests very carefully, making sure that we choose the right student for the right project.

#### **d. Early Stage of Supervision**

During the course of the research, if the right students have been selected for the right projects, I then meet the students on a weekly basis, or more frequently if required. At the beginning, I always explain to the students that if they want to be happy doing their research, then they must consider research as more than just an academic requirement. I will explain to the student that research training is a very rigorous process of thinking what one develops by applying the scientific method to the solution of problems, namely, to see the problem, get the facts, interpret the meaning of those facts and, on the basis thereof, make a decision. This is a valuable asset for tackling many problems in everyday living. A satisfying course of research could help students appreciate these assets. The real world is alive with problems and, consequently, concomitant research activity; it is everywhere. So the students should realise that carrying out their research work is not just a matter of getting another degree, but that the process of research and the experiences of research will

benefit them for the rest of their lives. During the early stages of research, I want the students to acquire a broad knowledge as closely related to the topic as possible, and, preferably, they should prepare a clear research plan including a milestone within two months. I believe the students should be encouraged to take as much initiative as possible and to be independent in developing new ideas. Although I have ideas as to in what direction their research should be heading, I always express my views after the students have really tried and have experienced difficulties. I believe young people are more creative and we, as supervisors, should never attempt to restrict their creative thinking. From my experience, in fact, I have found that most students can come up with excellent ideas and we have to give the students due credit, recognition, and encouragement.

#### **e. Treating the Students as Friends**

Doing research can be a very lonely process, especially PhD research during which, from time to time, the student has to overcome difficult tasks. As a supervisor, I feel the students need our understanding, need our continuous support mentally and, sometimes, emotionally. We need to let the student know; we need to treat the students as friends, and let them know that we are their friends and, therefore, when they have problems and difficulties, they should not hesitate to come to us, and I have found that social gatherings between staff and students are very beneficial.

#### **f. Monitoring Progress**

I always encourage and expect the students to develop their research plan, including a milestone, as early as possible. By doing so, it will encourage them to think ahead as far as possible, to reveal possible problems, and to work out strategies for achieving their research plan. Their progress is monitored against the plan during the weekly meeting and the plans are modified accordingly, when necessary. It is important to allow for unexpected problems and delays in the milestone.

#### **g. Overcoming Their Fear of Not Getting Anywhere**

I have found that almost all of my PhD students worry and fear too much about not getting anywhere and I don't blame them because in most of the PhD projects, especially in the advanced technology development area, many problems cannot be easily and clearly defined. To help them overcome their fear and worry, I encouraged them to "Do, Do, Do" and "stop worrying", "stop worrying", "stop worrying".

#### **h. How Much to Help**

I always emphasise to the students from the beginning that it is they who are going to receive their PhD and therefore they should do all the work. However, I can't refuse help when they are having problems. My practice in this regard is that I want the students to try as hard as they can and see if they can come up with a better idea than what I have in mind. If not, I'll then give them some hints. How much of a hint I give will depend upon the circumstances we are in and the students' creativity.

### 3. CONCLUSION

Research is an exciting and rewarding activity. Research supervision is a very responsible task. It could give us a lot of headaches, but how nice it is to see the student accomplish a challenging and difficult project and receiving the highest University qualification.

## TURNING EVALUATION INTO ENHANCEMENT

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Higher education institutions are currently facing demands for external accountability, democratic workplace and educational practices, and sustained academic achievement. An imperative for the 1990s is to resolve those competing demands in satisfactory ways. Indeed, quality initiatives in many universities are focusing on how to maintain high standards of scholarship in an environment of resource restraint and an increased and more diverse student participation. These changes are challenging traditional ways of arriving at quality outcomes. Old ways- no matter how suitable and successful they have been in the past – do not necessarily meet expectations brought about by new situations. Universities are therefore recognising the importance of devising strategies to address new needs and concerns.

### **Quality Assurance Project**

Changes taking place in higher education provided the backdrop to a Quality Assurance Project focusing on teaching and learning practices in the University of Adelaide. The purpose of the Project was to develop strategies for building quality improvements into existing educational practices. Such strategies must show how to demonstrate (for accountability) and encourage (for academic and professional development) quality in educational programs and services. They are the means for evaluating teaching and learning, and enhancing it. Strategies for achieving quality must be convincing about their educational purpose, too users of their services (for example current and prospective students, and governmental and community agencies) and to the staff involved.

An overall aim of the Project was to stimulate thinking for educational policy making, through consultation with those who are in a position to know first-hand the educational needs and challenges of the University. Academic departments are the primary providers of teaching services, so procedures for enhancing teaching and learning practices were devised and tested in academic departments. The approach taken was to collect information about existing teaching practices and to highlight, drawing on views of those consulted, practices that were working well and needed to be maintained. Similarly, areas where there was room for improvement were also identified.

When university teaching is discussed, the focus typically is on what individual teachers are doing. However in this Project the focus was on teaching at the departmental level; that is, teaching practices which give an overall guide to the distinctive educational and disciplinary values and offerings of the department. This involves building up a picture of teaching practices and services that enable effective learning progress to proceed in academic departments. There was also a need to be aware of existing practices- or the lack of them- that might, intentionally or unintentionally, inhibit learning progress for individuals or groups of individuals. These practices and services need to be formally supported through department policies, to serve as indicators of what the department is aiming to achieve; of what the department considers to be 'good practice'. A summary of 'good practice' characteristics can provide a frame of reference for evaluating and enhancing quality.

### **Project Activities**

The very best efforts in university teaching can be dissipated if they lack support and coordination at the policy level. Therefore, the work of the Project substantially involved asking questions about what mechanisms academic departments were using to promote and facilitate learning progress. Responses to these questions are pertinent to departmental practice, but are also relevant to university-wide reporting to the Committee for Quality Assurance in Higher Education. Central notions in the quality agenda are that learning and support structures are necessary for advancing educational and disciplinary work and that universities should be able to prove clear evidence that such structures are in place. The Project was designed to give direct input to this documentation.

### **Quality Assurance Project: Postgraduate supervision and teaching**

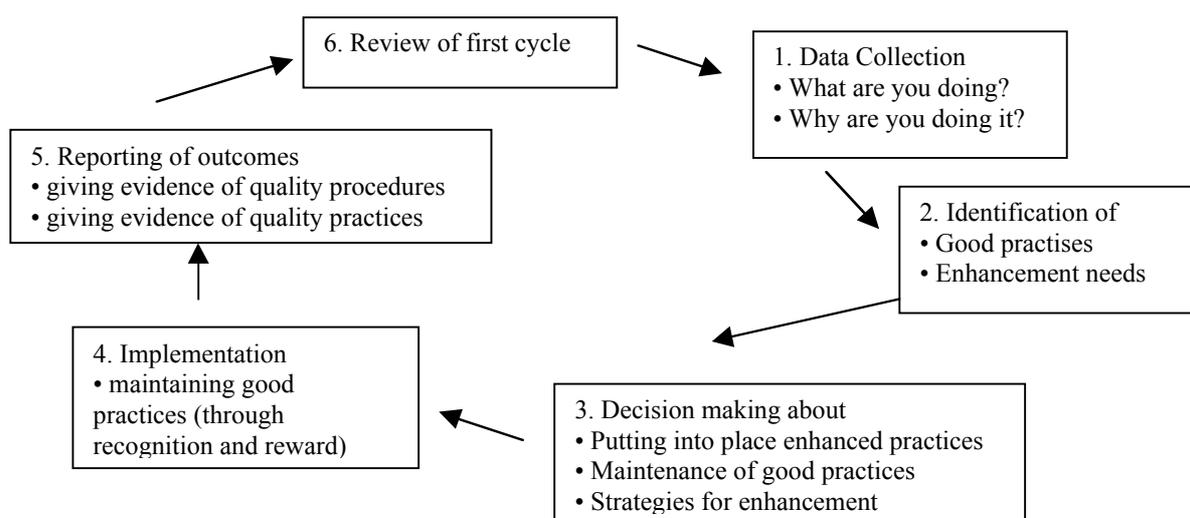
One strand of the Quality Assurance Project involved a study into postgraduate supervisory and teaching practices in the University. Enquiry and quality development activities took place in two academic departments: the department of Geography, Faculty of Arts and the Department of Biochemistry, Faculty of Science. Postgraduate programs in the Geography Department have undergone recent changes, largely because of a rapid increase in enrolments from international students, whilst in the Biochemistry Department most postgraduate students continue to be drawn from the Department's honours students. Views were sought about the provision and management of postgraduate programs and services from academic and general staff and current and past students. Information was collected primarily through individual consultations.

### **Turning Evaluation into Quality Enhancement**

Quality enhancement implies decisions and actions that are responding appropriately to needs identified and prioritised through an information-gathering process. In the postgraduate study, the essentially developmental approach involved a cycle of activity that can be broadly classified as follows:

- Development of a system of quantitative and qualitative information about existing postgraduate practices in the departments concerned, taking into account the perspectives of both users and providers of postgraduate programs and services;
- Recognising areas of good practice and setting goals for quality enhancement on the basis of information collected;
- Deciding upon, implementing and reviewing measures designed to maintain good practice and enhance those in need of development.

The cycle of processes is summarised in the diagram that follows:



The reality in practice is, of course, more complex than following step-by-step procedures. The process involves decisions about what information should be collected and who, it should be collected from. Interpretation of the information raises questions about who makes decisions and judgements, and from what perspectives. Are decisions and judgements, and from what perspectives. Are decisions and judgements seen as authoritarian and final, or democratic and open to discussion? Are they seen as imposed from outside, or generated through critical reflection from within? Do they, in effect, constrain activities or support them? Can they be justified in terms of their use of resources? The challenge is to find an appropriate balance among all of these. No one perspective or answer is more highly valued than others. Rather, departments need to develop a *framework* for making judgements. This framework must incorporate a diversity of perspectives and purposes, whilst maintaining qualities that are authentic for institutions of higher education and the disciplines concerned. In essence, the framework must comprise comprehensive and practical criteria for evaluating quality in educational practices, and for showing that ongoing improvement is taking place. In the enquiry reported here, we sought to establish a framework relevant to practices in postgraduate supervision and teaching.

### **Enquiry into postgraduate supervision and teaching**

The enquiry was designed to seek information about monitoring and support practices provided for postgraduate research students by two departments. The intention was to make available to other departments in the University practical criteria and means for reviewing and enhancing the quality of postgraduate supervision and teaching provided.

An interview schedule to canvas the views of staff and students about their experiences in postgraduate supervision and teaching was developed in consultation with the Dean of Research and Graduate Studies; the Registrar, Graduate Studies; and representatives from the Postgraduate Students' Association. In the departments participating in the Project, all postgraduate students and members of staff involved with postgraduate students were invited to be interviewed. Most interviews lasted about one hour. A summary of the data collection process follows.

## Data Collection: Geography

Table 1 *Geography Staff Interviewed*

	Female	Male	Total
Possible interviewees*	8	9	17
Interviewed	7	7	14
% of possible interviewees	88	78	82

\*Applies to all staff (general and academic) involved with postgraduate students and on campus during the interview period.

Table 2 *Geography Students Interviewed*

	Female	Male	Total
Possible interviewees**	18	26	44
Interviewed	13	19	32
% of possible interviewees	72	73	72

\*\* Refers to those postgraduate students who were on campus (Several were away on field study)

## Data Collection: Biochemistry

Table 3 *Biochemistry Staff Interviewed*

	Female	Male	Total
Possible interviewees*	11	16	27
Interviewed	3	7	10
% of possible interviewees	27	44	37

\*Applies to all staff (general and academic) involved with postgraduate students and on campus during the interview period.

Table 4 *Geography Students Interviewed*

	Female	Male	Total
Possible interviewees**	13	16	29
Interviewed	4	5	9
% of possible interviewees	31	31	31

\*\* Refers to those postgraduate students who were on campus (Several were away on field study)

Interviews focused on five main areas of supervisory and teaching practices:

1. Departmental and student profile; (this information was not accessible in an appropriate form from the University Information System)
2. Progression and completion rates
3. Support structures and mechanisms available to students and staff

4. Characteristics of good supervision, and students and staff views on supervision offered by the department
5. Resources and special needs.

## **Outcomes of the Postgraduate Study**

### *Outcomes for the Departmental Evaluation and Enhancement*

In this section an overview of information developed about each department is outlined for each of the five categories identified above. This overview gives a breakdown of aspects or characteristics which, respondents consider, are essential to good practices in postgraduate teaching and supervision. We are suggesting that the information generated in this study of two departments provides a useful basis for other departments to implement evaluation and enhancement activities. By addressing these aspects through discussions, workshops and planning, departments are in a position to enhance teaching and supervisory practices in a systematic, ongoing manner.

Specific questions that departments might ask about existing practices in each category are available in a separate University of Adelaide document.

#### *(1) Department and student profile*

Departmental profiles were developed using data related to:

- Courses available and students interviewed by course
- The number of students supervised by supervisor
- Students by scholarship/employment
- Students by age (staff were not asked to supply their age)
- Students' previous study and reasons for studying at this University

#### *(2) Progression and completion*

Departmental information about students' progression and completion of postgraduate study addressed:

- Students' reasons for enrolling in postgraduate study
- Entry criteria
- The expected rate of progression and completion
- The impact of part-time enrolment
- The impact of intermission on progression and completion

#### *(3) Support structures*

Questions were asked about the various support structures provided by the University and departments as well as about those which students have developed for themselves. Areas of support identified include:

- The provision of information
- Help in getting started with postgraduate study

- Induction programs
- Departmental support structures
- Personal support structures
- Language support, especially responding to needs of international students.

#### *(4) Supervision and teaching*

Information was collected and summarised in regard to:

- The characteristics of a successful supervisor
- The supervision the students was receiving
- The possible role of the postgraduate coordinator
- The annual review
- Grievances
- Ways in which students are inducted into the culture of the discipline

#### *(5) Resources and special needs*

Additional information was gathered from a range of topics summarised under headings: 1) resources: availability, and identified needs, 2) ethical considerations 3) being a woman in the department.

### **Evaluation of individual performance in postgraduate supervision and coordination**

The issue of evaluation of teaching performance for promotion and tenure applications is one which impacts of departmental practice, even if somewhat indirectly. We believe that characteristics of successful PhD and Masters supervisors and postgraduate coordinators, in addition to suggesting models for good practice, can also form appropriate starting points for evaluating academic performance in those role.

Characteristics which respondents ascribed to successful supervisors and postgraduate coordinators form a core of questions for an item bank that we are preparing. Items from the bank can be used to canvas views of students and peers of postgraduate supervisors, through questionnaires and structured interviews.

Respondents' view of successful supervisors and postgraduate coordinators are listed below.

#### *Characteristics of a successful supervisor: Response from students*

- In order of frequency, students characterised a successful supervisor as a person who is:
- Respected because of his/her demonstrated research abilities
- Interested in, and committed to, the student and is prepared to 'fight' on behalf of the student if need be
- Approachable and has good interpersonal and communication skills
- Knowledge of the area being researched
- Reliable and punctual in terms of keeping appointments and returning work

- Able to help the student research a high standard in presentation and intellectual content without ‘taking over’ or lowering the student’s self-esteem
- Happy to be used to *bounce idea off*
- Able to let students find their own way but not get lost
- Enthusiastic
- Able to respond to student needs and develop an adult-adult relationship based on the understanding of the student
- Able to make the student feel important and not that she/he is a nuisance
- Concerned with providing regular contact
- Knowledgeable about the postgraduate system

*Characteristics of a successful supervisor: Response from supervisors*

Supervisors suggested similar characteristics but in a different order of frequency. They described a person who is:

- Able to recognise that every student has different needs and so needs different help. The supervisor must be able to assess each student’s needs
- Willing to make time available
- Very familiar with the topic and is interested in that field of work
- Caring about the students and interested in him/.her as a person
- Rigorous without being destructive. “A supervisor cannot afford to be too generous with comments. One can’t let the student think that everything is OK when it is not.”
- Able to walk the fine line between encouraging the student without taking over
- Part of the collegial structure that supports students
- Able to challenge students and force them to think and to defend their stance
- Flexible
- Sympathetic
- Patient
- Approachable

*Characteristics of a good Postgraduate Coordinator: Response from students*

Students suggested that a good postgraduate coordinator is one who:

- Develops means for students to get to know one another and share ideas and offer mutual support
- Is the first contact when thinking of enrolling in a higher degree
- Is a cross between lecturer/academic adviser and counsellor
- Mediates between student and supervisor and is the person to go to if there is a problem with the supervisor
- Coordinates the annual review, seminars, postgraduate get-togethers, orientation

- Is readily available, even outside regular hours
- Provides support, particularly to those international students who do not have family in Australia
- Organises resources (desks and chairs, materials), seeks additional funding where necessary for these things and provides appropriate lists (for example, software held by the department)
- Provides information to students and arranges for students to have information about one another and staff (for example, photos of staff and postgraduate students, lists of topics and academic interests of both groups)
- Acts as a link between the department and the rest of the university.

#### *Characteristics of a good Postgraduate Coordinator: Staff responses*

Staff expectations of a postgraduate coordinator were not very different from those of students. Respect and trust of colleagues and students was considered important. In order of frequency, a good postgraduate coordinator is one who:

- Coordinates the use of facilities and resources an the “mechanical, procedural things”
- Is in the department, and readily available
- Arranges opportunities for students to interact with one another
- Takes a mediating role if necessary, but is sympathetic to both sides
- Organises meetings of the postgraduate committee
- Sees that students receive the supervision they require
- Maintains a postgraduate profile for the department and knows the status, intermission and expected completion schedule for each student
- Introduces students to the university, the library, and the department
- Is the postgraduate contact person for the department with the faculty

#### **Summary**

The focus of the Postgraduate Quality Assurance Project was on aspects or characteristics which are seen as critical to good practice in teaching and learning; and within the postgraduate study, on exemplary practices in supervision and teaching. These characteristics highlight distinctive aspects of postgraduate activities that departments engage in indicate how good practice can be recognised, and provide a format for the reporting of progress in achieving quality outcomes. A ‘good practice’ format provides a framework for departments to demonstrate accountability in their stated educational objectives. The use of ‘good practice’[ criteria for reporting makes clear departmental goals and support for achieving quality in teaching practices. Finally, the process of identifying and achieving these goals involves collaborative decision making, informed by a diversity of views and purposes that are relevant to higher education in the 1990s.

## RESEARCH METHODS PROGRAM FOR PhD STUDENTS

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An introductory course in research methods for PhD students was introduced in the Department of Politics (Faculty of Arts) in Semester 1 1993.

The course consisted of weekly two-hour seminars and workshops on various matters related to postgraduate research in politics and specifically designed to support the areas of research already agreed for each student. The aim of the course was to give the new postgraduate students:

- knowledge about the nature of PhD research and the administration of higher degrees at The University of Adelaide;
- access to a variety of different approaches to postgraduate research and writing;
- the opportunity to develop skills appropriate to the contemporary task of postgraduate research;
- a degree of sensitivity to the methodological issues involved in PhD projects;
- the opportunity to build a sense of cohesion and mutual support..

In addition the students attended the weekly departmental research seminar. Students were also in regular contact with their supervisors as well as working directly on their projects. After ten weeks of the program, the students gave a two-hour collective presentation of their projects to the Department in a special session of the research seminar. In a formal sense, the course finished after 13 weeks, but the group planned to meet at approximately 6-monthly intervals during the candidacy for review sessions. There will also be a number of further sessions on specific computer research skills.

Pre-course and post-course interviews with the student group have monitored students' expectations PhD study, perceptions of the research methods course and learning experience to date. In the pre-course discussions students spoke of several elements; and a perceived absence of role models. At the same time there was a sense of challenge and anticipation, and a determination to finish on time. The post-course discussions indicated that the vastness of the project was still a major issue with the students. However, they expressed increased confidence derived from the knowledge that the work was taking shape; time was mapped out; and networks of support were being formed. The research methods course was given a strong vote of approval.

Aspects of the course seen as most important by the students were:

- the teacher of the course provided a role model for research activity, but did not impose preferred approaches on the students;
- introductory procedures were de-mystified;
- the sessions with computers enabled easy access to sources of information world-wide;
- the course introduced research approaches and skills that would normally take much longer to acquire;
- cooperation in a group was seen to save time.

It is intended that the course (or an adaptation of it) will be made available for all PhD students in the social sciences in 1994.

### **Research methods program for PhD Students**

Week	Topic
Week One	<ul style="list-style-type: none"> <li>• initial meeting and course outline:</li> <li>• doing a PhD in the Politics Department in the Faculty of Arts at The University of Adelaide;</li> <li>• an outline of the requirements/expectations for the PhD, administrative structure and procedures, departmental support – a focus on production of the concise outline and the preparation for research associated with it;</li> <li>• an introduction by each of the students to their projects and their expectations about postgraduate research and writing;</li> <li>• preparation of a brief presentation of their project.</li> </ul>
Week Two	<ul style="list-style-type: none"> <li>• a review of student expectations by the staff of the ACUE;</li> <li>• a brief presentation of research projects and key assumptions.</li> </ul>
Week Three	<ul style="list-style-type: none"> <li>• matters to be considered in writing a research proposal:               <ul style="list-style-type: none"> <li>○ method</li> <li>○ qualifications</li> <li>○ justification</li> <li>○ importance/relevance of conclusions</li> <li>○ timetable for research</li> <li>○ budget</li> </ul> </li> <li>• preliminary discussion of what a budget for a PhD might be like;</li> <li>• production of a working title (linked to concise outline requirements);</li> <li>• preparation of a fully costed budget – and identify sources of funds.</li> </ul>
Week Four	<ul style="list-style-type: none"> <li>• report back on titles and budgets;</li> <li>• techniques of postgraduate research;               <ul style="list-style-type: none"> <li>○ a research plan, integrating writing and research;</li> <li>○ a research and writing diary as a record of the structure of</li> </ul> </li> </ul>

	<ul style="list-style-type: none"> <li>the work as a whole;</li> <li>○ elements involved in the actual research'</li> <li>○ noting and index systems;</li> <li>○ use of computers for noting and for bibliography;</li> <li>• prepare an account of individual research practice.</li> </ul>
Week Five	<ul style="list-style-type: none"> <li>• review research styles and practices;</li> <li>• consider literature surveys – place in research, alternative approaches to the research problem;</li> <li>• present an account of the central literature relevant to research project and identify key assumptions, concepts and methods.</li> </ul>
Week Six	<ul style="list-style-type: none"> <li>• report back on literature survey;</li> <li>• consider requirements of the concise outline and research proposal;</li> <li>• prepare initial draft of a concise outline.</li> </ul>
Week Seven	<ul style="list-style-type: none"> <li>• present concise outline and discuss questions of method.</li> </ul>
Week Eight	<ul style="list-style-type: none"> <li>• a session on techniques for seminar presentation and participation;</li> <li>• discussion of work plans and research methods.</li> </ul>
Week Nine	<ul style="list-style-type: none"> <li>• trial seminar presentation.</li> </ul>
Week 10	<ul style="list-style-type: none"> <li>• discussion of method and argument by another staff member/supervisor. (Supervisors, or other members of staff, present an account of the method used in a given piece of work and then discuss the methodological issues in a piece on which they are working – very useful as part of the induction of new PhD students to the research and writing culture of the Department);</li> <li>• work through the methodological issues raised by each of the research projects.</li> </ul>
Week Eleven	<ul style="list-style-type: none"> <li>• discussion of method and argument by another staff member/supervisor;</li> <li>• introduction to the process of publication and its place in the postgraduate students career.</li> </ul>
Week Twelve	<ul style="list-style-type: none"> <li>• group presentation of research projects to a special session of the Department research seminar;</li> <li>• discussion of method and argument by another staff member/supervisor;</li> <li>• a review of group presentation (technique);</li> <li>• stages in postgraduate research or writing, from initial design to submission and examination.</li> </ul>
Week Thirteen	<ul style="list-style-type: none"> <li>• training session on using Telnet for research work;</li> <li>• detailed review of research and work plans;</li> <li>• 'graduation' lunch</li> </ul>

## APPRAISAL FOR DEVELOPMENT AS A MODEL FOR THE EVALUATION OF POSTGRADUATE SUPERVISION

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My proposal is that the postgraduate supervisor and the postgraduate student will formally meet at least once a year in the course of which both the student's progress and the supervisor's performance will be discussed and written reports will be jointly agreed upon.

Postgraduates, especially those who are past the early stages of their candidature, are more like colleagues than students. A major goal of postgraduate research degrees is to induct talented undergraduates into the research culture of the discipline, into the *collegium*. Indeed, in a significant number of cases they are, in fact, colleagues in one's own or a neighbouring university. The appropriate processes for evaluating colleagues in a university are those of peer-review and review-planning should be the model for the evaluation of postgraduate supervision.

The extension of this model to the evaluation of postgraduate supervisors has all the same problems that we have already faced in the introduction of appraisal among academic staff:

- inequitable power relationships between colleagues;
- the confusion of formative and summative evaluation;
- the difficulty of maintaining confidentiality.

It would be unwise to minimise these problems. Peer evaluation of teaching among academic staff is still at a developmental stage in my university. There is some evidence that review-planning has been successfully introduced, but not without some suspicion and anxiety.

If this model is accepted in principle, the question that needs to be addressed is – what adaptations do we need to make to review-planning to bring this form of evaluation into conformity with basic principles that must underlie the evaluation of teaching, namely that:

- judgements are based on clear and explicit criteria;
- judgements are based on valid and reliable evidence;
- evidence can be gathered in a practical and cost-effective way;
- judgements are sensitive to discipline differences;
- the process is acceptable within the culture of the University;
- the evaluation is useful in improving student learning.

As regards review-planning, we have dealt with the problem of introducing review-planning in my University in two ways:

- by structuring the situation with a carefully designed policy and procedure;
- by training in review-planning for both reviewers and staff.

Clearly, we should learn from this experience in extending the model to the evaluation postgraduate supervision. Our success with review-planning seems to have been dependant on extensive consultation during the development of the policy, and on a long trial period before final approval by decision-making committees, and an extensive training program. The training programme for academic staff, which is compulsory for

reviewers, but also available to reviewees, has been modified and developed extensively over several years of experience.

The review-planning process already encourages a two-way discussion between an academic member of staff and the Head or senior colleague engaged in the discussion. The review-planning process is not an evaluation of the staff member by the Head. Nor is the process merely one in which the member of staff reviews and plans his or her work in isolation from the organisational context in which that work is done. The review-planning discussion is an opportunity for a two-way review of the work in the department, in which the academic member of staff might well point out the obstacles to his work arising from the way in which the Head is managing the department.

This proposal extends that notion of an honest and constructive discussion between academic colleagues to postgraduate 'colleagues'. A basis for the process also exists in the current requirements that supervisors write a report on each of their postgraduate students, the contents of which are discussed with the student before being passed on. This proposal would expand this annual review to include a discussion of and report on the performance of the supervisor as well as that of the student.

One major problem with this proposal is one which besets review-planning – the confounding of formative and summative evaluation. The problem for review-planning is the difficulty of keeping the developmental process of review-planning separate from formal, institutional decision-making processes, such as promotion or assessment of unsatisfactory performance. There is sometimes reluctance on the part of academic managers to accept this separation, and there is considerable scepticism on the part of many staff about its possibility. The present proposal would deliberately overlap formative and summative evaluation. Supervisors and their students would be asked to engage in a dialogue about the effectiveness of the supervisory process and to distil from that discussion a summary report, agreed to by both parties, which would go forward as evidence in other evaluative processes – the supervisor's own review-planning discussions with his or her Head, promotion committees, etc. Clearly there is pressure on both supervisor and student to collude to put forward as complimentary a report as possible, and if that pressure is not resisted the whole process will be nothing but window-drawing. It is not a solution to make the process purely formative – it is in the interests of the 'good' supervisor and of the University that his or her effective performance is validated and publicly recognised.

Another major problem with the proposal is also apparent in the existing review-planning process – the disparity in power between the Head or senior academic engaged in the review-planning meeting and the young, untenured, Level A academic. The junior member of staff will be acutely aware that tenure, progressive increments, promotion to Level B, access to research groups, and allocation of teaching responsibilities are all in the hands of the senior staff. The success of review-planning, especially as a two-way exchange of views, depends on the senior academic being sensitive to the imbalance in the power relationship and taking positive steps to redress the imbalance. Discussion of how this might be done is an important part of the training programme. Some departments have dealt with the problem by having another member of staff present during the discussions. Extended to the evaluation of postgraduate supervision, this suggests that the postgraduate co-ordinator, or another postgraduate student, might attend the meeting with the role of a 'sounding board' or moderator.

There would need to be considerable support for students, and encouragement of the view that postgraduate supervision will only improve if the difficulties between individual supervisors and their students are frankly discussed and a mutually acceptable solution is sought, and if this progress is documented and recognised. Only some development of the review-planning model of evaluation seems to provide the opportunity for a review of something as complex and far reaching as postgraduate training.

Should this form of evaluation be compulsory for all postgraduate supervisors? In practical terms, it is unlikely that all supervisors and students will be comfortable with the demands that effective review-planning place on collegial relationships. The consequence of not participating, however, is that those supervisors will not be able to submit to appointment or promotion committees this form of evidence of their abilities as supervisors. All that they will have to show will be performance indicators – with all the limitations associated with this type of evidence. It is hoped that this will be sufficient incentive to encourage people to make the effort required to engage in effective peer review. A starting point may be the requirement that all *participate in the process*, without being required to report the decisions or conclusions. Currently, this is the minimum requirement for academic staff seeking promotion increments.

This proposal bristles with difficulties! Six years ago people said the same of review-planning. We do face a dilemma – either this important part of university teaching is regarded as beyond the scope of valid and reliable evaluation, or we are prepared to engage in a sensitive, difficult, but potentially rewarding process of constructive criticism.

## GOOD PRACTICE IN POSTGRADUATE SUPERVISION WAYS AND MEANS FOR THE 1990'S

Julie A. Owens, Department of Obstetrics & Gynaecology  
University of Adelaide, Australia

### **Abstract**

The practical experience of a supervisor of postgraduate students in the University of Adelaide during the introduction of guidelines and quality assurance will be outlined.

An idiosyncratic and qualitative view of

- the challenges facing supervisors today
- the strengths and weaknesses of current guidelines and procedures – how useful are they?
- suggested priorities and additional mechanisms for meeting the demands of quality assurance and students

will be presented and the views of other participants sought.

### **References:**

*Code of Practice for Maintaining and Monitoring Academic Quality and Standards in Higher Degrees*, Graduate Studies Section, Research and Graduate Studies Branch, University of Adelaide.

*Writing up Research, Experimental Research Report Writing for Students of English*, R Weissberg & S Buker (1990) Prentice-Hall, New Jersey

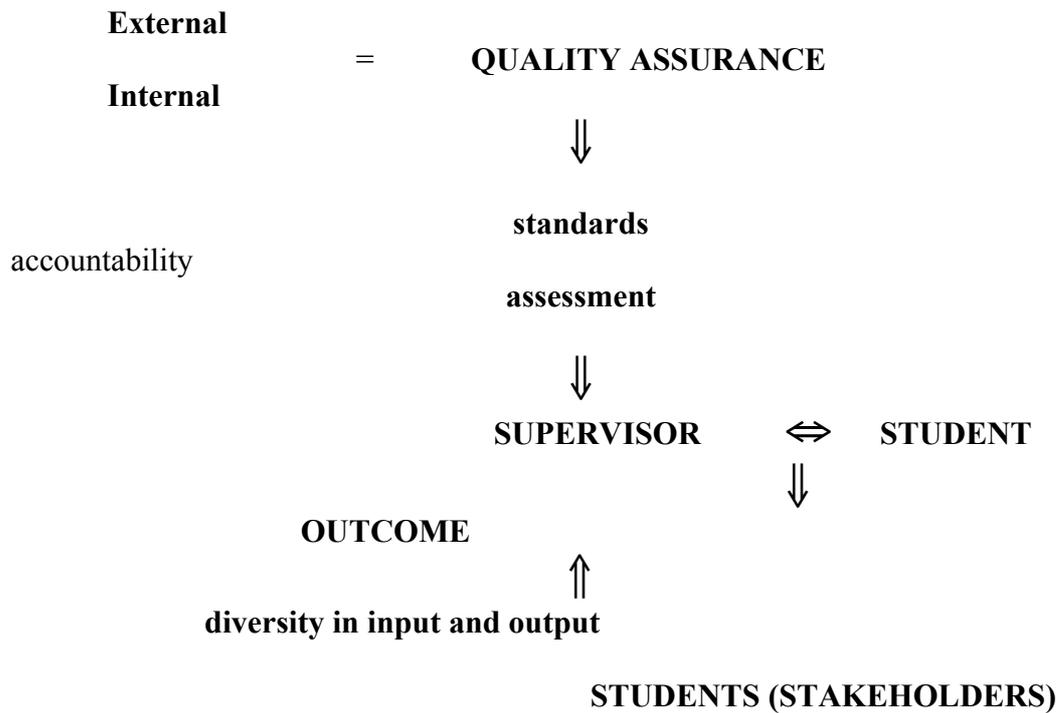
(Note: The following notes are based in part on the above references guidelines, which have been abstracted in part and also modified/expanded and hence represent the authors own views and not necessarily those of the institution.)

## GOOD SUPERVISORY PRACTICE

### OUTLINE

- WHO and WHERE:
  - Challenges
  - Stakeholders – Profiles
  - Environment/Context
- WHAT:
  - Desired Outcome
- HOW:
  - General Principles/Responsibilities
  - Specific Elements
    - priorities*
    - mechanisms – provision/monitoring/remediation*
- WHAT ELSE?

## CHALLENGES FACING SUPERVISORS IN THE 1990's



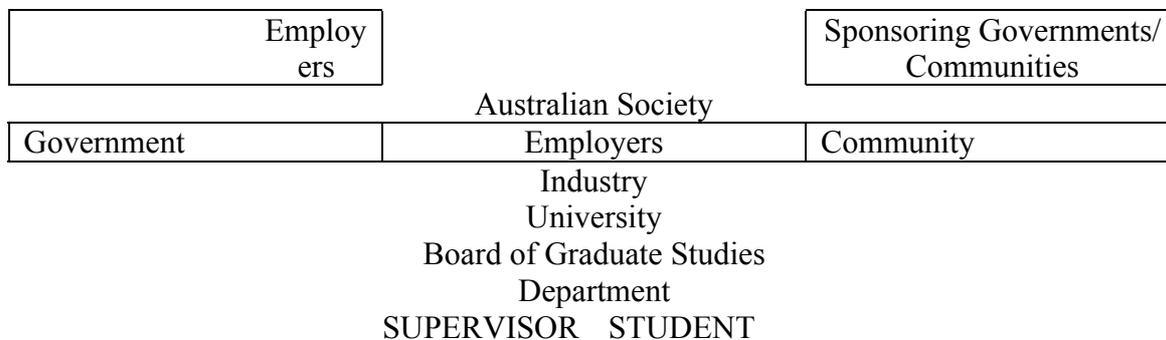
### Increased Diversity/Change in

- INPUT**
- prior training and skills (language)
  - interests
  - culture
  - ability
  - personality
  - maturity
  - funding
  - gender balance
  - other commitment

- OUTPUT**
- desired outcome (student, sponsor, employer, community)
  - career options
  - strict timetable – same/better product
  - increased complexity in some research areas

## GOOD SUPERVISORY PRACTICE

### ENVIRONMENT/CONTEXT



Expectations/Demands of Stakeholders:

Quality in Process  
Quality in Outcome

**DEPARTMENTAL PROFILE  
- CHANGES (%) OVER 7 YEARS**

Department:

Clinical Department, Faculty of Medicine  
Three sites: Medical School, QVH, QEH  
Teaching 5<sup>th</sup> year medical students  
2<sup>nd</sup>, 3<sup>rd</sup> year BSc, BHS ↑

Supervisors:

Full-time Academics  
External Funded Research Fellows (includes overseas) ↑  
Internally Funded Research Fellows

Women ↑

Students:

Overseas students ↑  
Women ↑  
Mature age ↑  
English as second language ↑

**STUDENT PROFILE  
- CHANGES OVER 7 YEARS**

Department and My Group:

Externally funded Research Fellow

Students (primary supervisor of 5, co-supervisor of 4, adviser to 3):

Disciplines

Science 100%

Science 56%

Agricultural Science 11%

Veterinary Science 11%

Medicine 22%

Country of Origin

Australia 100%

Australia 67%

Asia 11%

Africa 11%

Middle East 11%

English as second language

Nil

33%

Gender

Women 50%

66%

Maturity (Other commitments)

Mature age Students 10%

44%

Funding

Australian Govt. 90%

Australian Govt. 11%

AIDAB 11%

Industry 10%

Industry 33%

Overseas Govt. 11%

Department 22%

## GOOD SUPERVISORY PRACTICE

WHAT:

Desired Outcome

*Formal Requirements:*

Quality in the “provision of training and education”

CAPACITIES

- independent research of originality and quality  
**Intellectual and Technical Expertise and Skills**

- initiate, complete a research program (unsupervised)  
**Creativity, Planning and Organisation**

- communicate research findings to peers and wider community, via seminars, conferences presentations, refereed publications, reviews, articles  
**Communication Skills**

- collaborate with others in same and other disciplines (broader knowledge and interpersonal skills)  
**Collaborative and Networking Skills**

- obtain funding/resources  
**Grant Preparation and Interview Skills**

- self-directed further development and responsiveness to change  
**Adaptability**

## GOOD SUPERVISORY PRACTICE

WHAT:

Desired outcome

*Formal Requirements:*

Quality in the “provision of training and education”

EVIDENCE  
OF  
THOSE  
CAPACITIES

- produce new knowledge  
discovery of new facts  
formulation of theories  
innovative re-interpretation of known data  
and established ideas

- thesis: well written (communication)  
independence of thought and approach  
deep knowledge of field of study  
significant original contribution to knowledge

- seminars (internal, external)  
conference presentations (published proceedings)  
refereed publications  
co-authorship of reviews

- demonstrated use of appropriate collaboration in execution of  
research project  
co-authorship of/with collaborators in publication etc.

OTHER DESIRED OUTCOMES:

VIABLE CAREER OPTIONS

matching of students capacities, ambitions with needs of  
potential employers

NETWORKS

Students and their capacities and body of work known to  
leaders in the field

## **GOOD SUPERVISORY PRACTICE**

HOW:

General Principles and Responsibilities

Characteristics:

- accessibility:           time, frequency and nature of interaction
- adviser:                administrative  
                              intellectual
- modes/mechanisms:
  - supervisor as a model  
  (scholarship, technical expertise)
  - supervisor as a coach/teacher  
  (critical analysis, facilitator of students  
  development – their own critical abilities)
  - supervisor as mentor  
  (provide support, encouragement, awareness of  
  administrative and other external aspects of candidature.

Desired outcome:

Student and supervisor develop a suitable structure for the research program such that the interaction benefits both (adequate feedback, variable styles)

### **FLEXIBILITY OF APPROACH – ADAPTATION TO INDIVIDUAL NEEDS**

## **GOOD SUPERVISORY PRACTICE**

HOW:

Specific Elements

1. Prior to an Applicant's Acceptance to the Department
1. Upon Commencement of the Candidature
1. Encouragement of a Student's Research potential
1. Absence of a Supervisor
1. Submission of a Thesis for Examination
1. Other Responsibilities

## GOOD SUPERVISORY PRACTICE

HOW:

### Specific Elements

#### 1. Prior to an Applicant's Acceptance to the Department

Inform/advise Head of Department, Student as to:

- acceptability of student based on qualifications/prior research experience
- co-occurrence of applicant's and supervisors interests/knowledge area; need for co-supervisor?
- propose research projects that are feasible (time, resources) and likely to lead to desired outcomes: produce *new* knowledge and a *significant original* contribution to knowledge – not trivia!
- supervisory load
- availability of adequate resources (supervisor and department to provide):
- ensure student's stipend is adequate or that additional income can be obtained without compromising progress
- ensure supervisor is not absent for long periods and at critical times (first year and last 6 months)
- ensure ethical clearance is obtained if relevant, and satisfy other administrative requirements

## GOOD SUPERVISORY PRACTICE

HOW:

### Specific Elements

#### 1. Prior to an Applicant's Acceptance to the Department

Inform/advise Head of Department, Student as to:

- acceptability of student based on qualifications/prior research experience
  - emphasis on final undergraduate years performance and research experience (nb Honours grade – IIA > I)
  - consider *nature* of previous training – didactic?
  - interview
- co-occurrence of applicant's and supervisors interests/knowledge area; need for co-supervisor?
  - difficult to ascertain student's interests and talents accurately, student has limited appreciation of/insight into nature of the work
  - take into account student's career aspirations and likely options
  - supervise only in area of expertise and current activities and readily involve others as appropriate
- propose research projects that are feasible (time, resources) and likely to lead to desired outcomes: produce *new* knowledge and a *significant original* contribution to knowledge – not trivia!
  - justify research plan as feasible given time and resources
  - show evidence of active research and *at cutting edge*
  - justify research project as not trivial
- supervisory load
  - consider number of students, degrees undertaken, stage reached (first year and last 6 months critical)
  - consider other commitments:
    - teaching
    - administrative (committees, departmental chairs, editors, officers of professional societies)
- availability of adequate resources (supervisor and department to provide):
  - library, computing, laboratory, technical assistance, maintenance funds, departmental accommodation, funding of membership of scientific societies, travel for field work and attending conferences
  - substantial external funding usually required, will vary with project and student's stipend (maintenance often included)
  - critical mass and optimal size of research units: 5 – 8 persons

- ensure student's stipend is adequate or that additional income can be obtained without compromising progress
  - determine students commitments (family etc)
  
- ensure supervisor is not absent for long periods and at critical times (first year and last 6 months)
  - study leave
  - field work
  
- ensure ethical clearance is obtained if relevant, and satisfy other administrative requirements

## GOOD SUPERVISORY PRACTICE

HOW: Specific Elements = GSP

### 1. Upon Commencement of the Candidature

Inform/advise/assist Student regarding:

- administrative and academic requirements for the research program and likely requirements for post degree fellowships and positions
  - administrative statutes, processes, requirements, guidelines
  - format and length of dissertations
  - procedures for thesis examination
  - nature of research and expected standards
  - other expectations
  - use of one years probationary period
- orient student as to available resources
- assist with research planning:
  - preparation of concise outline
  - timetable of study and research with objectives, benchmarks, review and re-assessment
  - introduce student to appropriate methodology, particularly statistics provision of supervisor's strategic plan for period of candidature
- establish basis for good working relationship with student
  - clear understanding of supervisor's expectations  
(have similar and high expectations of all students)
  - gain student's confidence by consistency, reliability, clarity, external verification of approach and work and clear mastery of intellectual and technical elements of research area, willingness to acknowledge errors and constructive approach to errors
  - agreed time, frequency of meetings with students
  - build student's self-confidence by setting of intermediate *achievable* goals with clear indicators of success (both internal and external)
- ensure understanding of intellectual property rights and agree on credit and authorship of publications
- assess student's proficiency in English language (whether a first or second language!)
  - work with Advisory Centre, additional courses
- be aware of particular needs of students especially overseas and provide assistance as required
- introduce student to appropriate networks (local and elsewhere)

- ensure adequate resources via external funding bodies
- ensure student understands and obtains all necessary administrative clearances for project (including ethical)

## GOOD SUPERVISORY PRACTICE

HOW:

### Specific Elements

1. Encouragement of a Student's Research Potential
  - inform student of available resources: library, bibliographical, technical, other departments, institutions, individual expertise
  - be conversant with relevant literature, methodologies, theoretical aspects of student's research; assist in critical appraisal
  - closely and expeditiously supervise thesis preparation and encourage early preparation of sections, especially with English as a second language, have student write papers before or with theses
  - acquaint student with different models of research methodology and provide training if necessary (Dept Mathematical Statistics – Statistics in the workplace)
  - close critical and constructive assessment of work
  - inform student of relevant seminars, conferences and insist on attendance (provide support), insist on regular presentation of work in seminars and at conferences
  - indicate when work is becoming fruitless and new direction is needed and most importantly, when sufficient work has been completed
  - be aware of employment opportunities and plan for these from the beginning with the student – particularly when choosing the research topic and developing other skills and networks

Quality in postgraduate research: Some findings from a three-Universities project in South Australia

Alan Russell  
School of Education, Flinders University

Summary of points made in the presentation

This presentation is based on a project funded by a Commonwealth Staff Development Fund Grant to the three Universities in South Australia

Project title: Staff Development for Postgraduate Supervision

Conducted by

Alan Russell (Flinders University)  
Jan Whittle (University of South Australia)  
Gerry Mullins (Adelaide University)  
Julie Potts (Project Officer, Flinders University)

Three broad approaches

- Interviews with staff and collection of materials to obtain examples of good practice.
- Interviews with staff to determine areas of debate and uncertainty/continuing issues.
- Conduct of staff development workshops aimed at improving the management and supervision of research degree.

The three Universities have well-developed policies and codes of practice. These provide broad guidelines. Policies do not cover everything. There remain issues of interpretation and implementation of codes of practice. This project deals with practices “on the ground”, what people (staff and students) involved in research degree supervision think and do. It relates to how policies are implemented, and clearly has implications for policy and administrative procedures. It is partly a project looking at current practices, but for today it is development of policy or strategies. We have treated the project as one investigating an area where all the answers are not known, but where there are many examples of current good practice on which to base policy and procedures.

The three Universities have well-developed policies and codes of practice. These provide broad guidelines. Policies do not cover everything. There remain issues of interpretation and implementation of codes of practice. This project deals with practices “on the ground”, what people (staff and students) involved in research degree supervision think and do. It relates to how policies are implemented, and clearly has implications for policy and administrative procedures. It is partly a project looking at current practices, but for today it is development of policy or strategies. We have treated the project as one investigating an area where all the answers are not know, but where there are many examples of current good practice on which to base policy and procedures.

Some poor practices from individuals or Departments clearly arise from not following guidelines and codes of practice. However, there are still some genuine areas of difficulty associated with research degree supervision and administration.

The interviews and collection of materials were directed at 10 topics.

### 1. Models for supervising different types of research projects

For example:

- Strategies for students in the physical sciences versus the social science
- Strategies with laboratory-based research
- Strategies for ethnographic research
- Strategies for industry-based research

There are clearly differences in the nature of research across sectors of the Universities, and these have implications for the supervision of postgraduate research: what is appropriate and applicable in one setting or for one kind of research may not be for another kind of research.

The differences raise issues about the nature of the PhD degree, the goals or outcomes sought by a research degree. It is at this level that we find staff expressing some uncertainty. It is important at the institutional, department and individual supervisor level that effort go into clarifying and agreeing about the nature of a PhD.

- For example, assisting students with a better understanding of
- What counts as an original contribution to knowledge

- What is involved in demonstrating a capacity for independent research

An issue here is: are there sets of knowledge and/or skills expected from PhD graduates that should be taught via coursework. This is an area addressed in the workshop program.

### 2. The examination process

Procedures for the selection of examiners varies at times from Department to Department. Criteria for the examination of these are often perceived by staff as unclear. The process is problematic at times, with examiners differing vastly in their assessments of individual theses. Even very experienced supervisors are sometimes uncertain about how examiners will treat the thesis, and surprised at the results.

There is a need for more research on the examination process, especially the criteria used by examiners, and the development of further policy and procedures in the area of the examination process. Understanding the criteria used by examiners will assist, for example, in clarifying further the nature of the PhD. This is an important area that Jan Whittle is pursuing in her own research.

### 3. The supervisor's roles/responsibilities/relationships with students

The three University's codes of practice outline roles and responsibilities of supervisors. The project has yielded many examples of very good supervisory practice in each of the Universities. Some of these staff are presenting at the conference.

Recognised good supervisors develop good relationships with students; with students; but this can be done in different ways and there are differences in the extent to which the relationship remains professional and the extent to which it is personal and social.

It is accepted that supervisors should assist students in selecting and clarifying a research topic. Strategies for doing this, however, vary: from providing students with the topic to requiring students to independently develop their own topic. Staff are often uncertain

about the best teaching methods to use in helping students select a topic and formulate a research proposal. Some staff basically write the proposal for the student. For other students it is their virtually unaided work. The University of Adelaide is now requiring that students participate in a structured program at the beginning of their candidature that leads to the presentation of a research proposal.

It is accepted that supervisors should respond to written work from students and assist them with their writing. Codes of practice indicate that staff should do this, with a reasonable turnaround time. Some staff seem to be good at this task. Others are inadequate and are looking for further assistance. They are unsure about how far their role requires them to respond in great detail and correct every sentence. Good support services exist in the three Universities in this area. Many staff are seeking further guidelines on how to respond to students' written work.

It is accepted that supervisors should give advice on how to do research. Should this be via coursework topics, and how directive should this advice be?

It is accepted that supervisors will have regular contact with students. How often varies enormously, but recognised better supervisors appear to be more regular and consistent in meeting with students.

Recognised better supervisors appear to have established support networks for students. These can be networks of a mainly social kind, for example to enable overseas students to be part of a social group. They are also of an academic kind; meeting with students in groups, and encouraging students to read each other's work and generally assist each other. Examples of this kind of support networks will be provided in workshops during the conference.

Recognised better supervisors introduce students to scholarly networks such as by encouraging publication and facilitating student attendance and presentation at conferences. These supervisors work closely in assisting students gain the confidence and techniques to present their work at the level of journals or professional conferences.

These are all areas broadly covered by guidelines for policies and procedures, but they also require further development and clarification.

#### 4. the nature of co-supervision

Co-supervision is permitted or required (USA). The University of South Australia also requires the establishment of a research degree panel for each student. Panel supervision is also used at other times in the three Universities. Flinders requires each student to have a supervisor and an advisor. There would be advantages from further policy development in this area to assist in the conduct of co and panel supervision.

#### 5. Evaluation of the supervisory process.

This has been a major area of recent developments in the Universities of South Australia, and was covered by one of our Staff Development workshops. This is also a topic covered by workshops at the conference.

Supervising students with special needs e.g., overseas students, NESB students, part-time students, women.

Policies are limited in specifying procedures and strategies to deal best with students with special needs. Practices from some individual supervisors and the Support Services in the

three Universities have developed that constitute examples of good practice. Some of these are presented in the workshops at the conference.

8. Student perceptions of the supervisory process and their needs.

A particular issue that arose from this project concerns how to obtain student perceptions of the supervisory process and postgraduate research degrees. They clearly have an important input into the whole process when their views are known. The real issue relates to how to obtain open student comments. Most students are reluctant to present their honest opinions. Suggesting they should have access to the Head of Department or Post graduate Coordinator appears not to be especially helpful, and there is a need for more creative strategies to gain access to genuine student comments.

9. Management practices at Dept or Faculty level

- Recruiting students
- Allocating supervisors
- Providing guidelines to students
- Proposal acceptance procedures

These are all areas where practices differ and at times there are needs for policy development or clarification of strategies.

Completion rates differ from one sector of the University to another, or from one Department to another. Research in South Australia and our own project have identified some of the factors associated with higher completion rates.

10. Ethics in research and supervision, including intellectual property.

Intellectual property has been an area where policy development has occurred in recent years. Ethical standards in research are now well established. Less attention has been given to ethics in supervision.

The Staff Development Workshops.

1. “Quality in the management and supervision of higher degrees”

Aimed mainly at Deans and Research Degree/Postgraduate coordinators. It addressed overall University policies and structures before focusing on such as

1. “What would a high quality Department/School/Discipline provide by way of guidelines for students?”

Nature of a Masters and Doctoral degree  
Responsibilities and expectations of student, supervisor, department steps for developing a research proposal  
Timelines and milestones for the successful completion of the degree  
Information of seminar presentation opportunities

2. “In a high quality Department/School/Discipline, what would be the role and responsibilities of the Research Degrees/Postgraduate Co-ordinator?”

Co-ordinate supervisors  
Induction  
Staff development of supervisors  
Selection/allocation of supervisors

Setting up supervisory panels  
Deal with student/supervisor problems

Co-ordinate students

Entry  
Induction  
Proposals  
Seminars  
Progress  
Disputes  
Examination process

Manage the program

Committees  
Resource management and allocation

2. “Induction course for postgraduate supervisors”

Examined an existing induction program for supervisors. Part of this was to examine the roles and responsibilities of supervisors, and the characteristics of good supervision. In groups work, participants designed their own induction program. An outline of what was believed should be contained in an induction program for supervisors is in the report from the workshop.

3. “Induction course for postgraduate students”

The workshop examined a research skills induction course from the USA and an induction program from the Department of Politics at the University of Adelaide. In groups, participants then considered what kind of induction program they might provide for students in their own Department/School/Discipline.

4. “Meeting the needs of a diverse postgraduate population”

A workshop focused on policies and strategies for several special needs groups: mainly International students, NESB students, aboriginal students, women, distance students.

Input was provided from students, experienced and successful supervisors, support staff responsible for specific programs for these students, and other staff with expertise in the area.

The focus was on

The needs, characteristics and problems of these students  
Strategies, policies and programs for working with these students.

Conclusion: the project relates to one strategy for “making it happen” in the area of quality postgraduate programs, namely staff development. This can be done using local resources by first identifying those who are working successfully in the area and who have addressed the issues of concern.

However, the project also reveals that there is much still to be done both in the development of policies and strategies and also in the implementation of policies that have already been formulated.

Reports of the first three Staff Development Workshops are available for purchase at the conference. All participants at the conference will be sent information when the final report from the project becomes available.

## TEXTUAL DESIGN FOR ACADEMIC DISCOURSE

A/Professor Cal Swann  
School of Design  
University of South Australia

It is recognised that essays and thesis at postgraduate level usually requires further tuition, particularly in courses in the professional areas. Guidance is provided in the form of handouts and personal tuition where necessary, by study skills counsellors. The visual presentation is expected to flow from these, together with a few general guidelines with regard to typing style, margins and binding.

Many students, and most academics, now have access to word processors and quite sophisticated desk top publishing software which can emulate most of the traditional practices in the printing and publishing fields. Never before has the availability of such systems been so easy, but the improved technology has not improved the quality of the presentations. The new freedom of access to typography has resulted in an uncontrolled explosion of visual eccentricities. The centuries of publishing experience and knowledge of typographic 'good practice' are not guaranteed through ownership of the current technology.

Instead of providing a tremendous opportunity to economically publish a small quantity of quality literature in the academic field, there is a profusion of poor visual quality publications, swamping the previously well designed books and monographs produced by visually trained staff.

If the opportunity to publish well written, well presented academic research and scholarly contributions to debate is to be realised, visual presentation skills, particularly in relation to desk top facilities, need to be developed alongside the other well recognised skills of communication.

Students on the Master of Design course (covering a wide range of design areas) are given instruction on the main principles of text composition which ensure the optimum conditions for legibility and comprehension of texts, and are provided with a guide for textual design of their assignments and thesis (as attached).

### **1 Introduction**

Assignments should normally be printed on A4 white paper and bound with a slip-on plastic grip binder for ease of removal in case of photocopying. A wide left hand margin should be established to accommodate this and any form of future binding.

The cover should bear the legend of the University, Faculty. School and course title Master of Design. The title of the Assignment should be below this, with the candidate's name and date of submission.

A short abstract or summary of the main content and issues covered should accompany the title details on the cover. This outline will probably describe the structure of the

essay as ‘section one examines the relationship...’etc. The total number of words used in the essay should also be indicated in parenthesis.

References in the text should be noted in accordance with University requirements using the Harvard System as set out in the information sheet issued by the study skill tutor. A reference list of articles and books to which you have referred in your essay *must* be included at the end. You may list a bibliography as an *additional* item if you wish.

The following is a summary of printer’s rules for setting text which have been extracted for application in this context. It is set in 10pt Palatino, single spaced, using Microsoft Word 5.

## **2 Recommendations for text setting**

All text composition should be closely word spaced and ideally contain twelve to fourteen words per line. Text should *not* be ‘justified’ (squared up on both sides). The aim should be to have a consistent and close word space on each line.

The choice of type face in the University corporate style is Palatino or occasionally Helvetica, and in some cases they may be mixed quite successfully. Palatino is a traditionally roman letter with serifs (the short, decorative ends to many of the letter strokes) and is regarded as a design more suitable for reading long passages of text, as opposed to sans serif letterforms like Helvetica. It can certainly be argued that the serifs help to form familiar word shapes, but legibility, which might be described as reader comfort *and familiarity* with letterforms.

The sans serif letterform has only recently (comparatively) been used to present long passages of text, but as we become accustomed to magazines, technical journals and teletext messages set in varying styles of sans serif typefaces, our visual expectations are extended and embrace sans serif type faces for text. Research has shown (Zachrisson, 1965) that it need take only one week to learn to read the Fraktur type, a condensed German gothic letter. In the end, the choice depends largely on personal preference associated with the subject matter to be presented. However, Palatino reproduces well on the laser printer and has the advantage of familiarity as a traditional bookface. Palatino is the *recommended typeface* for text..

### **Composition of text**

The publishing conventions for the composition of text as prescribed by typographers over the past fifty years or so (Williamson, 1956; Lewis, 1963; McLean, 1980; et al) allow for a wide variety of information to be presented to the reader in a clear and rational system through the use of different weights and typestyles. The main principle is to be consistent, with the minimal set of visual cues which will convey the information effectively.

### **Visual coding**

Typeface designs, or type styles, have been developed to provide some different ‘visual tones of voice’ within a related group of designs. These variations within one overall

type style is usually referred to as a ‘family’. The normal family used in text composition is:

Plain (Roman)     **Bold**     *Italic*

These three variations in lower-case composition should be enough to deal with most situations requiring headings, sub-headings and italicised words within the text. Headings set all in capitals as either roman or bold styles, add another two ‘voices’ which should be ample for quite complex structures of information.

ROMAN CAPS     **BOLD CAPS**

However, lines of capital letters are less familiar than lower-case lines and their regularity of contours do not provide such distinctive word shapes, slowing down legibility. Lines set in capitals are *not recommended*.

It is surprising how much text can be effectively conveyed using only the three main variants of roman, bold and italic, without resorting to lines of capital letters, by careful visual editing of the writings into these categories. This editing process is called *coding* text into hierarchies of priority order

### **Paragraphs**

Paragraphs are normally indicated in one of two ways, either by indenting the first few words by a few word spaces, or by missing out a line after the last line of preceding paragraph and not indenting the first word. Good typographic style does *not* require *both* indicators to be used at the same time (the minimum principle). Where indenting paragraphs is preferred, it is not necessary to indent the first paragraph following a heading or subheading.

It is recommended to miss one line out between paragraphs without indenting as is the case with this guide. Visually breaking up paragraphs in this way is more encouraging for the reader to plough through text and allows particular paragraphs to be more easily identified in reference situations.

### **Subheadings**

Subheadings may be treated by setting in bold type without extra line space (as in this setting). More important headings may be allocated an extra line space before the subhead, and a line space following.

### **Quotations**

Quotations are indicated by using single quotes as ‘less is more’. A quotation within a quotation such as: ‘Mies van der Rohe proclaimed that “less is more” as a key concept in modern design’ is indicated by the use of the double quote symbol.

Long passages of quoted sections may be indicated by setting the whole item in italics, or by changing the type size and separating the passages by line space above and below.

Your method of dealing with quotations will depend on how many and how lengthy your particular research requires. The rule is consistency and simplicity

### **Punctuation**

Punctuation should be used sparingly but consistently. Everyday usage has reduced the need for many full points to be used. Common abbreviations and contractions do not require full points (full stops), viz: Mr Mrs Dr Co Pty Ltd St mm cm km kg k It. When setting abbreviations of organisations, titles, omit full points as MA PhD DSO etc.

This is not intended to authorise a general contraction of words in text composition which are normally expected to be spelt out in full: 'street' for example should be spelt out in text but would be set without a full point if contracted in display.

Ampersands may be used in text composition in the names of organisations, companies, partnerships etc, and in titles of books ie 'J Brown & Co'. Ampersands may also be used when particularly close relationship between words is to be stressed ie, Mr & Mrs even when 'and' is spelt out elsewhere

### **Parentheses**

Use parentheses () for explanation and interpolation, brackets [] for notes. If parentheses are needed within parentheses, use brackets. Where bracket and parentheses fall together at the end of a line, use a thin space between.

### **Figures**

Use the fewest possible figures in dates, but 1992-96 is acceptable in order to provide consistency with dates that spread from one decade to another. In text matter, numbers under 100 should be spelt full out.

### **Hyphenation**

The breaking of words (hyphenation) is less harmful than too much space between them. A divided word should be avoided on the last line of a page or column. A page should never commence with the last line of a paragraph.

The English language is a representation of sounds and the printed word should be divided in the same manner as in speaking, according to syllables and not as is generally accepted, according to derivation, for instance, the word 'photography' is derived from the Greek word 'photo' (light) and 'grafien' (to write). If the division of the word is based on etymology it would be divided 'photo-graphy' but that is not how the word is pronounced. It should be divided 'photog-raphy'. There is no disagreement with 'photo-graph' and 'photo-graphic' for the pronunciation and derivation are the same.

Avoid the confusion caused by part of a broken word having itself a meaning unconnected with the whole er starv-ation or starve-tion, not star-vation. Double consonants are generally divided as syllables, ar-rest', but the following consonants should not be divided: ch ck ph sh th, as 'wish-ing', 'franch-ise', etc.

Please note that computer hyphenation programs do not divide words in the traditional publishing style as outlined above. Computers divide by syllable, with some undesirable results to line endings. Quite short words such as design are split as de-sign for example. Turn off the automatic hyphenation instruction on your system if necessary, and where you wish to hyphenate particular words, do so manually.

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# **GRADUATE STUDENT SUPERVISION IN A MULTIDISCIPLINARY ENVIRONMENT: A COOPERATIVE RESEARCH CENTRE**

John Wallace, Katrina Downer, Paul Walton and John Ballard  
Cooperative Research Centre for Tissue Growth & Repair  
Adelaide, Australia

## **1. The Cooperative Research Centre Scheme**

Since 1991, 51 Cooperative Research Centres have been established under a new Federal Government scheme administered by the Office of the chief Scientist (in the Department of the Prime Minister and Cabinet) to foster productive research collaborations between CSIRO, the Universities and Industry covering many areas of natural science and engineering, with a view to developing internationally competitive industry sectors. A further round of 10 is scheduled for 1994.

Overall, the scheme is funded for the contract period (5-7 years) by \$700 million of new Federal funds plus \$1500 million pledged by the almost 300 core participating organizations, and involves more ...an 5000 research workers (full-time and part-time) plus graduate students enrolled for higher degrees in tertiary institutions. The fields of research include manufacturing technology, information and communication technology, mining and energy, agriculture and rural-based manufacturing, the environment, medical science and technology.

## **2. The CRC for Tissue Growth & Repair**

Established in 1991 among the first round of 15 CRCs, this Centre has provided an opportunity to expand and elaborate on an existing 10 year collaboration on the biology of growth factors between the CSIRO Division of Human Nutrition and the biochemistry Department of the University of Adelaide, and more recently the Child Health Research Institute (CHRI) of the Adelaide Women's and Children's Hospital. The additional long-term Federal funding, plus the involvement of staff from two more University departments (Chemical Engineering: Obstetrics & Gynaecology) as well as the Australian Dairy Research & Development Corporation, has enabled the scope of research undertaken to be broadened both in terms of the disciplines involved and the range of goals envisioned.

Currently 90 scientific, technical and support staff are involved in the work of the Centre which covers projects in 5 main areas:

- Protein Modelling and Genetic Engineering
- Large-Scale Production of Recombinant Proteins
- Large-Scale Production of Growth Factors and other Bioactive Products from Cheese Whey
- Applications of Insulin-like Growth Factors (IGFs), their Binding Proteins (IGFBPs) and other Growth Factors *in vitro*
- *In vivo* Investigation of Growth Factor Action, especially IGF-I and IGF-I Analogues.

Commercialisation of the CRC's vertically integrated research programs is undertaken by GroPep Pty Ltd, a discrete corporate body owned by the CRC's parent organizations. GroPep has an established international reputation in the production and marketing of novel growth factors.

### **3. Graduate Students in the CRC for Tissue Growth and Repair**

Approximately 25 graduate students from a diversity of backgrounds and disciplines are investigating various aspects of the biology of growth factors and their production by biotechnological means, as part of the vertically integrated program of research by the CRC for tissue Growth and Repair into the medical and agricultural applications of these bioactive molecules.

The students are enrolled in one of five Departments in The University of Adelaide (viz. Biochemistry, Chemical Engineering, Medicine, Obstetrics & Gynaecology, Paediatrics) as appropriate to their research project. Most students are co-supervised by both a University staff member and an affiliated non-University staff member of the CRC seconded from either CSIRO or CHRI.

Although many of the CRC's research projects are strategic in nature, most of the graduate students' projects are in fundamental aspects of topics relevant to the strategic goals. Thus, for example, while a strategic goal of the *in vivo* program may be to develop an analogue of IGF-I which has a greater than normal ratio of affinity for the IGF receptor than for the insulin receptor, graduate students associated with that area of research can devote themselves to understanding the basic aspects of this structure/function relationship.

### **4. Special Features of a Postgraduate Studentship in this CRC**

The range of skills covered by the Centre's personnel facilitates a multidisciplinary approach to the students' projects whenever this is appropriate, thereby encouraging students think about and participate in the wider ramifications of their research.

Students' discoveries of a fundamental nature that may have commercial potential can readily be followed through to commercialisation in collaboration with senior scientists experienced in such matters.

As the Centre encompasses 2 research institutes and 5 university departments, students have access to a wider than usual range of equipment for their research and have been quick to take advantage of this by relocating their activities to wherever a particular task can be accomplished most effectively.

### **5. Future Developments**

It is proposed to provide instruction for the Centre's postgraduate students in "life skills" e.g.

- skills in presenting the results of their research both orally and as posters;
- writing grant applications (the best effort(s) will win conference expenses as a prize);
- intellectual property matters;

- commercialisation of research.

While instruction in some of these skills may already be available in Departments/Faculties with large numbers of postgraduate students, smaller research groups cannot provide these as readily as can a large, integrated organization such as a CRC.

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I welcome the opportunity to address this seminar as Researcher of the Council of Australian Postgraduate Associations.

CAPA is the national organisation representing Australian postgraduates.

It is committed to quality education for all postgraduates. Postgraduates represent the research future of Australia and, we estimate, carry out over 50 per cent of research in this country. In its 1994 pre-Budget submission CAPA stated: "It would be unacceptable to make students pay or incur debt while working towards this immense contribution to the nation".

CAPA recognises tertiary education as a major national resource; it should be open to all, planned, guarantee academic freedom, sustain high standards, respond to broad social needs and be accountable.

Over the past four years CAPA has witnessed a major change in postgraduate education in Australia. Beasley, as Minister of Employment, Education and Training was committed to subsidising tertiary students to obtain their first degrees which some saw as an attempt to contain the dole queues. But he made it clear that second and postgraduate degrees would increasingly be funded by the individual or their employer.

This raises serious concerns about the quality of fee-paying courses, discussed later. It should be noted here, however, that the Higher Education Council, in draft advice to the Minister in July 1992 on The Quality of Higher Education, had the following to say on the issue:

*the enrolment of students in research training programs should be dependent on the existence of a strong and active research presence in that area. The Council is concerned that there is evidence of expansion into research training occurring 'the other way around' – that is, driven by demand from prospective students, with little regard for the capacity to provide them with a quality education at the level. (p.33).*

CAPA opposes privatisation because it threatens the access of disadvantaged groups to higher education; it allows the federal government to further reduce funding for postgraduate education; it threatens academic freedom, and creates an education system which is less accountable and responsive to the general community.

The rise in the number of postgraduate students in Australia and the decrease in the number of APAs with and without stipends in 1994 has produced a crisis in postgraduate education.

There has been a decrease in the number and value of APAs with stipend over the past four years. The level of stipend was set on the recommendation of a committee headed by Prof. Geoff Wilson in 1989. A further recommendation that the stipend be linked to a low-level academic salary scale has not been implemented. Consequently, the value of stipends has fallen.

Moreover, there has been serious concerns raised about the haphazard manner in which APAs without stipend have been allocated on many campuses this year. Part of the difficulty is the lack of clear guidelines from DEET.

Of even more concern to CAPA and its constituents is the steep rise in the number of fee paying courses. CAPA has conducted a survey of these courses in each of 1991, 1992 and 1993.

In its 1993 survey, *Even Less Rhyme or Reason*, CAPA found a 43% jump in fee-paying postgraduate courses that year. Thirty eight per cent were in business, the discipline with the most fee paying postgraduate courses. The price range was substantial. The cost of MBAs in Victoria, for example, ranges from \$45,000 at Monash to \$6,000 at RMIT. But students doing MBAs at Murdoch, Curtin or Flinders are required to pay only HECS.

The survey questioned whether a substantial difference in price – from \$45,000 down to HECS – indicated a substantial difference in quality (including resources, facilities and supervision guidelines) or are other factors operating?

The survey found that students believed substantial fees did not guarantee quality. Crowded lecture theatres, poor facilities and recycled undergraduate units in postgraduate courses were common complaints.

The CAPA survey and a 1993 survey of fee-paying students at the University of Adelaide indicate a significant change in the profile of fee-paying coursework postgraduates from 1991 to 1993. These suggest that DEET guidelines, which virtually deregulated fee paying postgraduate courses, have ensured access to these courses primarily for students on high incomes or those men in business whose employers pay their course fees. The guidelines discriminate against lower income groups, Aboriginal and Torres Strait Islanders and especially women.

CAPA argued in the survey that if fee-paying postgraduate courses are to be marketed with integrity, DEET needs to develop comprehensive guidelines to ensure that students are not short-changed. The guidelines must ensure that fee-paying postgraduates have the same consumer protection which governments provide for customers in the marketplace. The guidelines must also safeguard access to fee-paying courses for those who otherwise will be locked out of postgraduate education. As well, the guidelines must be compatible with best practice in Higher Education.

CAPA is concerned that employers are also being short-changed with fee paying courses. Many students are graduating without a wide range of skills and training. In particular, many postgraduates lack the highly developed written and communication skills employers expect. The Australian Association of Graduate Employers recently told Vice-Chancellors that Australian universities must quickly address “major deficiencies” in the communication skills of graduates. Its survey of 150 of Australia’s largest employers found that while the quality of graduates was generally high, when problems did emerge, the most common reason was poor written, verbal and interpersonal skills. (*CRW* 27 January – 2 February 1994). CAPA has had discussions with Business HERT which has also expressed similar concerns.

Throughout the second half of 1993 the Quality Committee carried out audits in universities in its search for best teaching and research practice. CAPA is concerned at the notion of assessing quality outcomes and where postgraduates fit within this process.

The Ministerial Guidelines for the Committee asked it to consider the following principles:

- Institutions have a major responsibility for ensuring that the teaching process, their research efforts and their graduates are of high quality.
- Excellent outcomes in universities are a function of not only the level of resources available but also of the way these resources are used.
- Institutional self-assessment will be a key element of the quality review processes to be implemented by the Committee.
- Diversity in the higher education system will be promoted through an approach which emphasises quality within the context of an institution's own mission statement and its stated objectives.

In addition to these principles, the guidelines indicated that the overall quality of outcomes would be taken into account; these were to include the national and international impact of the institution's research; producing graduates who can operate anywhere in Australia or overseas at standards consistent with best practice in their fields; and the contribution of institutions to their various communities.

The Australian Vice-Chancellors Committee, while co-operating with the Committee, expressed concern:

*that the Committee would not be subject to direction by Government, and there have been concerns that changes in Government policy have altered the focus of the Committee from the examination of quality assurance mechanisms and dissemination of good practice, to more subjective judgements of the quality of university programs. It would be counterproductive if the initiative persuaded universities to abandon their distinctive missions to emulate a pattern or model perceived as "successful".*

The Minister, when he met with CAPA on 16 March, said that universities had incorrectly interpreted the quality allocations as a ranking system. However, he said he would be paying close attention to the guidelines for the next round of allocations of the Quality Committee.

CAPA is concerned, though, about the fundamental notion of measuring quality outcomes, especially in relation to postgraduates. For example, how do you measure that a graduate or postgraduate can operate anywhere here or overseas at "standards consistent with best practice in their fields". Unless the Committee uses TQM principles, how do they, in fact, measure this?

While dialogue between postgraduate associations and university administrations is good on some campuses, and poor on others, CAPA and its constituents would like this seminar to consider the following:

1. Better formal mechanisms for postgraduate associates to have an input into University decision making. This should begin with comprehensive consultation with postgraduates in the annual Quality audits.
2. Encouragement for postgraduate associations to receive a fair share of union fees. At some universities administrations have strongly supported postgraduate associations on this issue. CAPA argues that a strong association means better services for postgraduates, which in turn helps to increase completion rates. It also argues that the better the quality of the postgraduates' experience while doing a thesis, the better the end product.
3. More consultation between Postgraduate Associations and University administrations. CAPA argues that the more open and frequent consultation

between the two groups becomes, the greater the university's commitment to quality postgraduate education.

4. Extensions of guidelines for staff-student relationships, and supervisory practices.
5. More money and resources for staff development. CAPA and its constituents have observed that universities with good staff development units, tend to have better guidelines on staff-student relationships, tend to have better supervisory practices and tend to produce better postgraduates.
6. Mechanisms to improve access of disadvantaged groups to postgraduate education. CAPA, in *Even Less Rhyme or Reason*, recommended the following:
  - That institutions establish a pool of scholarships equivalent to 10% of fee-paying enrolments, to provide disadvantaged students with access to any fee-courses they choose.
  - That institutions give students on low incomes the option of paying HECS, rather than fees.
  - That institutions permit postgraduates to pay fees by instalment.

If institutions are committed to quality postgraduate education, and CAPA believes most are, then they need to improve dialogue with postgraduate associations, who provide representation and services for postgraduate students.

There is a fundamental issue that underlies the determination of postgraduates to participate more fully in the life of the university, and that is the perception which universities have of their postgraduate population and their role in Higher Education. CAPA wishes to further discuss these issues with the AV-CC, with Business HERT, with the Minister, DEET and with the National Tertiary Education Union.

## ISSUES OF CONCERN

Kate White  
CAPA Researcher

Yumi Lee yesterday cautioned participants at this seminar not to develop a "warm fuzzy" feeling, and pat each other on the back.

She raised a number of concerns about lack of facilities for postgraduates, about pressures on universities to bring in fee-paying overseas students etc,

Some of these concerns arise from the pressure placed on universities, and in turn on postgraduates, by Government policies. In this context, it is a pity that the Department of Employment, Education and Training did not see fit to participate in one of the most important seminars ever held on Quality in Postgraduate Education.

To some extent we as postgraduates, university administrators and academics are hamstrung in "Making it Happen" in postgraduate education, when dialogue with DEET is sometimes difficult.

The organisers of this seminar are to be commended on the series of workshops conducted. These have been informative and stimulating, and have produced a good flow of information between the various stakeholders in postgraduate education. Some of the concerns raised in these workshops included:

- \* improving supervisory practices
- \* Intellectual property and postgraduates
- \* access to postgraduate education
- \* completion rates versus quality.

### **Supervision**

We have had examples presented at this seminar of best practice in supervision. This includes induction programs, induction booklets, residential weekends for supervisors and postgraduates and the like.

We have also heard that those working in staff development units often have difficulty in engaging some supervisors in training, although the Registrar of Supervisors established at one university, is one way around this problem.

Beyond these immediate concerns, I ask the seminar to consider the nature of the supervisor-postgraduate relationship. Is it a mentor relationship, or is it akin to medieval guilds, as mentioned yesterday? Or is it, or should it be, an equal relationship. One model sees the supervisor as contributing experience, the student enthusiasm, and the synergy created between these two as producing an equal relationship. Another model sees the relationship as unequal at the beginning, but the dynamics changing markedly in the course of the thesis. By the end the student is the expert in the subject area, and leaves the supervisor behind.

## **Intellectual Property**

Universities must focus on postgraduates as a group separate from academic staff in considering intellectual property. CAPA resists any moves to force postgraduates to sign IP agreements at the point of enrolment. It is particularly concerned about IP agreements which postgraduates in cooperative research centres must sign.

## **Access to postgraduate education**

This seminar needs to appreciate that not all postgraduates are 21 year-old high-flying males. Postgraduates may be overseas students; men and women with family responsibilities (for whom recent changes in the Social Security Act make it even more difficult to remain in postgraduate study); Indigenous students without the peer group or support mechanisms available for most postgraduates; part-timers who juggle home, work, and study; and external postgraduates who tend to be invisible.

## **Completion rates**

Concerns have been raised about Government policy and the pressure to complete Ph.D.s in three and a half years. CAPA shares these concerns and the tendency to trade-off completion against a quality end-product, and also the quality of the postgraduate experience.

CAPA is attempting to make a small contribution to improving completion rates. It has NPRF funding for a project to develop mechanisms to improve completion rates for Indigenous postgraduates.

It is important in Making it Happen in postgraduate education that academics, administrators and postgraduates engage in continuous formal and informal dialogue. This seminar has been a great start in that direction.

PRESS RELEASE

**QUALITY IN POSTGRADUATE RESEARCH  
National Seminar in Adelaide**

Two hundred academics, university administrators and postgraduates attended a two-day seminar at the Ramada Grand Hotel, Glenelg, on 7 and 8 April. The seminar was organised by the University of Adelaide, Flinders University and the University of South Australia.

The seminar discussed issues such as training and evaluation of supervisors, industry supervision and problems with intellectual property, resource allocation, multiple entry points into postgraduate research, joint staff development activities, induction programs for supervisors and students, and evaluation of quality in supervision.

One of the organisers of the seminar, Dr. Gerry Mullins, Director, Advisory Centre for University Education, University of Adelaide, said the seminar wanted to identify and share good practice in postgraduate education, and to look at these good practices at various levels in institutions. He added: "Once good practices are identified, universities need policies and procedures to ensure that good practice happens consistently across the institution".

Professor Ian Davey, Pro Vice-Chancellor (Research), University of South Australia, said that one of the great strengths of the seminar was that it brought together academics, students and administrators from right across the system, enabling a very productive exchange of ideas about current problems and possible solutions.

"Another strength has been the critical input from postgraduate students who reminded participants that they are central to any discussion on quality in postgraduate research", he said.

He added that the three South Australian Universities have offered to host a Biennial Conference on Quality in Postgraduate Education to maintain the momentum generated at this seminar.

Papers from this Conference are available on request.

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Dr. Gerry Mullins (08) 3033025

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# **COLLABORATIVE SUPERVISION AND RESEARCH SKILLS TRAINING IN RESEARCH DEGREE PROGRAMS**

Jan Whittle  
Centre for University Teaching and Learning  
University of South Australia

This paper discusses a research skills workshop program which was trialled in the University of South Australia as a strategy to improve the teaching and learning environment for research masters students in the Faculty of Social Sciences. The concept of providing candidates with research skills training through a series of structured workshops taught collaboratively at a faculty level, arose from concerns about student performance which had arisen during informal discussions with supervisors in the Faculty. Unsatisfactory completion rates and high levels of attrition in humanities and social sciences have been documented in numerous studies in Australia and overseas (DEET, 1988; OECD, 1987). An investigation of postgraduate participation and performance conducted by the author at the University of Adelaide (Whittle, 1991) revealed that research degree candidates in the Faculty of Science completed their degree four times faster than candidates in the Faculty of Arts. This study also indicated that candidates in research Masters degrees and those studying on a part-time basis were at a significantly higher risk of not completing their degrees or of having long completion times than their peers in doctoral programs or full-time candidates. The problem that this paper addresses is how can students be assisted in completing their degree programs within satisfactory timeframes?

## **RATIONALE FOR A TEAM TEACHING APPROACH TO RESEARCH SKILLS DEVELOPMENT**

### **Key Factors in Successful Research Degree Performance**

During the last decade, research in Australian universities has provided a wealth of information about supervision practices (Moses, 1985), student participation and performance (Powles, 1988, 1989; Whittle, 1991), barriers to women's participation (Moses, 1990; Poiner, 1989), and discipline differences in approaches to supervision (Whittle, 1992a). An analysis of this research suggests that key factors for achieving satisfactory performance in higher degrees can be identified at various levels of academia (Whittle, 1992b). For example, at the institutional level, it is important to establish policies and encourage practices that will maintain academic quality and standards in higher degrees, and to provide adequate resources to sustain a high quality teaching and learning environment. The development of written guidelines such as a Code of Practice for Research Degree Supervision (AVCC 1990) and the provision of funding for staff development programs on supervision are two strategies institutions can adopt. At the faculty department or school level, research suggests that key factors include limiting the number of research students per supervisor, closely matching students' research projects with supervisors' areas of expertise, providing students with adequate space and resources, developing a strong research ethos, and establishing mechanisms (such as faculty-based research seminar programs) to integrate students into disciplinary research culture. (1)

It is widely accepted that the ability to provide effective supervision is a key factor in assisting students to complete their degrees on time. The supervision of research students is a complex teaching task which requires a wide range of personal and professional qualities to be effective. Supervisors need to be flexible in meeting the needs of individual students and in guiding them towards independent research. The literature indicates that good supervision practices include acting as a mentor for students, encouraging open communication, making expectations, roles and responsibilities explicit, scheduling regular and frequent formal meetings, encouraging students to publish, providing opportunities for joint publication, and assisting students in attending conferences. Key elements for successful candidature from a students' perspective include selecting a research topic to which there is a strong personal commitment, being highly organised, setting manageable goals and objectives, starting to write early providing supervisors with written work at regular intervals throughout candidature, and maintaining regular contact with supervisors.

### **Faculty-based Research Skills Training and Team Teaching**

Research supervision has traditionally been, and still largely remains, a teaching activity which is essentially a private matter between individual supervisors and students. This approach has resulted in wide variations in the quality of supervision and the level of student satisfaction with the support received (Whittle, 1992a). In order to improve completion rates and enhance the quality of supervision, universities need to develop strategies which take into account the basic elements for successful outcomes which have been outlined above. An efficient and effective strategy for providing many of these key factors is the provision of a structured workshop program on research skills training for novice research students. The success of workshop programs in maintaining students' progress in research and thesis writing has been documented by Zuber-Skerritt (1987). In this paper, it will be shown that a collaborative teaching approach to research skills training enhanced the teaching and learning environment for research Masters students in the Faculty of Social Sciences and succeeded in getting students off to a good start in their research degree programs. Furthermore, it will be argued that the team-teaching approach to supervision provides an opportunity for reliable evaluation of supervision.

#### *Improvements to Teaching and Learning*

The rationale for providing a collaboratively taught workshop program is grounded in the assumption that the quality of teaching will be enhanced by providing opportunities for staff to discuss different approaches to research and supervision. That is, it is anticipated that staff will gain developmental benefits from shared knowledge about teaching research students, and that students will benefit from exposure to a range of academic approaches. A further reason for adopting a team-teaching approach derives from a desire to reduce the burden of responsibility for supervision on individual staff and to encourage all faculty members to contribute to the induction of students into research processes. The traditional approach to postgraduate teaching at research degree level in the social sciences and humanities generally involves one-to-one supervisory student teaching. An associate or co-supervisor may also be available to the student but usually plays a minor role. Thus, responsibility for providing advice and support falls largely on the shoulders of a single academic. This teaching model can be problematic if personality clashes occur, for inter-disciplinary projects requiring a range of academic expertise, or where the research interests of the staff member and the

student are not well matched (which is not uncommon in the social sciences and humanities). The team-teaching approach to research skills development does not attempt to replace the one-to-one supervision model, but rather acts as a complementary support strategy for both students and staff.

In addition to the benefits to student learning which go hand-in-hand with improvements in teaching, the workshop program also aims to enhance the learning environment for research students by reducing the social and intellectual isolation often experienced by candidates in the social sciences and humanities, and which part-time candidature can exacerbate. The workshop program aims to provide opportunities for the development of open communication between staff and students, peer interaction between students, and to integrate students into the research culture of the discipline. Furthermore, it is suggested that the workshop program can provide a focus for the development and strengthening of a disciplinary research ethos.

### *Opportunities for Evaluation of Supervision*

Current demands for institutional accountability and the emphasis on quality in university teaching has placed pressure on academic staff to evaluate their teaching. Evaluation of teaching at research supervision level is fraught with difficulties due to the long term and special nature of the one-to-one student-teacher relationship. Moreover, biased evaluation of supervision after graduation is inevitable since research students continue to rely on supervisors as referees for applications for employment, post-doctoral positions, scholarships and research grants. The author believes that collaborative teaching approaches such as that used for this workshop program provide opportunities for both peer and student evaluation of supervision which staff can use for promotional and reflective purposes.

## **THE WORKSHOP MODEL**

Participants included 28 newly enrolled, part-time research Masters candidates and their 14 supervisors from the Faculty of Social Sciences at the University of South Australia, and the author (in her capacity as staff developer). There were equal numbers of male and female students, 63% were in the age range 36-49 years, and 75% were in paid employment. A program of four two-hour workshops was held in the evenings in Semester I and participation was on a voluntary basis. Prior to the first workshop, students and staff were asked to identify their main concerns about studying or supervising and outline what they expected to gain from the program. The program developers (the author and two members of the Faculty) attempted to incorporate material into the workshops to meet needs identified by the participants. The workshops had an applied focus to enable staff and students to work on actual thesis projects. Topics covered by the program included roles and responsibilities of supervisors and students, time and data management, writing a thesis proposal, how to structure a thesis, and methodological approaches in social science. Workshop presenters included the program development team, several Faculty supervisors and staff from the University Library. Formal presentations were kept brief as the central objective was to encourage a high level of interactive discussion among the participants through small group activities and whole group open forums.

## **Objectives of the Workshop Program**

The broad objectives of the workshop program were to enhance supervision practices and to assist students in making a good start in their research degrees. Specific objectives of the program were that by the end of the workshop series, students would have

- established a mutually satisfactory timetable of supervisory meetings
- clarified expectations, roles and responsibilities with supervisor
- completed a research proposal
- commenced a literature review
- set goals and objectives for completing their degree program

## **Examples of Workshop Sessions**

As space limitations do not permit a full discussion of each of the workshops, only two will be described to provide a flavour of the training program. The first workshop of the series dealt with issues and concerns for students and the supervision relationship. The session commenced with an outline of the purposes and aims of the workshop program, and an overview of the topics covered was provided. This was followed by time for questions and discussion. The next component was devoted to personal introductions: students were asked to identify themselves, their school and research topic; supervisors gave their names, school affiliation and research interests. This ice-breaker activity was very useful for students as they were able to identify other students who had similar research projects. The range of research projects also gave participants a sense of the research culture within the Faculty. The author then gave a short overview of the barriers to completion and strategies for successful candidature. This was followed by an open forum discussion of students' concerns and suggestions of how to deal with these issues. After a short break, the final hour was spent exploring the roles and responsibilities of staff and students in the supervision relationship. A Role Perception Rating Scale was used as a stimulus for discussion on eleven central aspects of supervision ranging from responsibility for selection of topic through to responsibility for thesis standards. Participants initially completed the rating scale individually, then worked in small groups to exchange their views. This activity generated a great deal of discussion in the small groups and later in the plenary session, and enabled supervisor-student pairs to clarify their expectations and develop an ethos of open communication. The workshop closed with information about the next session and tasks for the students to do in the intervening four weeks.

The workshop on research methodologies commenced with a staff member presenting a half-hour overview of different research approaches used in the social sciences. Students then formed small groups of 3 or 4 to discuss the methodologies they had chosen for their research projects and to explain the reasons for their choice. A supervisor was allocated to each group to assist the discussion by asking probing questions to help students explore the rationale for their research methodology. This activity lasted for about 30 minutes and was followed by a feedback session involving the whole group. After a short break, the remainder of the workshop was devoted to parallel small group discussions led by four academics on the following topics: survey and experimental methods, ethno methodology, action research, and historical and feminist approaches. Students who were interested in more than one research approach had the opportunity to move between groups. The session closed with a brief summary.

## EVALUATION OF WORKSHOP PROGRAM

The workshop program was evaluated by questionnaire, informal discussions and critical reflection by the author. Workshop attendance averaged between 30-35 people, with the majority of students and about half of the supervisors coming to each of the four sessions. (2) A warm, friendly environment was quickly established in the workshops and a high level of interaction between participants was maintained throughout the program. An analysis of questionnaire responses indicated that, overall, participants felt that the workshop program had been very useful in meeting their needs, and there was unanimous support for it to be repeated on an annual basis. Benefits for staff included an improved understanding of supervisors' responsibilities and better appreciation of research students' needs. One staff member commented that the workshop program "made me realise that students need this kind of environment to feel free to discuss their fears and concerns, and that they need many opportunities to do so". Several staff noted that the workshops had facilitated students' progress in completing research proposals, and one academic commented that "(her) students who have completed the program have written superior research proposals to those who have not attended".

There was strong support for the program among the students and many requested that further workshops be provided in second semester to cover topics such as thesis writing and to provide a venue for on-going peer group interaction. (3) Overall, students felt the program had provided a useful introduction to research skills, clarified what was expected of them as research students, assisted the development of good supervisory relationships, and improved their levels of self-confidence and motivation. In particular, students valued the opportunity to meet and interact with other research students and a range of academic staff in the Faculty. K The following comments have been taken from students' written evaluation of the workshop program;

Having attended all four workshops, I feel more confident and anchored in my research. The interaction between staff and students, with students able to benefit from staff experience in research was just great – I wish there could be more of this.

The major benefit for me was integration into the Faculty, other students, and the field of research, after a few years' break.

The workshop program provided good mix of information input and group discussion. I enjoyed both. Discussions were non-threatening and people felt able to air problems without fear. Definitely valuable and gave me the feeling I was not totally 'on my own'.

Obviously the impact of the workshop program on completion rates and attrition levels cannot be assessed at this early stage. However, the evaluation results demonstrated that the workshop program succeeded in achieving its central objectives of getting students off to a good start in their candidature and enhancing academics' understanding of the complexities of supervision. Suggestions for improving the program included scheduling the workshops earlier in the semester to dovetail with submission dates for research proposals, and increasing the number of workshops in the program. From a staff development perspective, the program could have been improved by a higher participation of supervisors, and it is suggested that this could be achieved by providing staff with a workshop on how to organise, develop and present a research skills

workshop program, and encouraging faculty staff to take responsibility for their program.

## SUMMARY

Research on postgraduate participation and performance indicates that completion times for research students are too long and that supervision practices should be improved. These concerns, together with the recent reduction in the time allowed for research degrees and the consequent reduction in scholarship funding, underline the importance for institutions to develop strategies to assist students to complete their degrees on time, and to improve the quality of the teaching and learning environment. It is suggested that the faculty-based workshop program on research skills which this paper has discussed is one way of providing this assistance to students. This model, which emphasises a collaborative teaching approach, could also be used at the department or school level, or by inter-disciplinary research groups which support postgraduates. Research skills training will be of particular value to candidates who are at risk of having poor completion time or who have not had the advantage of completing an Honours degree prior to embarking on a research degree. By providing students with structured research skills training at the commencement of their degree programs, staff can work as a team to improve the teaching and learning environment at the postgraduate level and help students to get off to a good start in their candidature. Furthermore, staff in disciplines which do not have a strong research background will benefit from the collaborative teaching approach and the workshop program will stimulate the development of a research culture.

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## NOTES

1. The locus of responsibility for these practices varies across institutions according to different academic structures.
2. Attendance levels of supervisors was disappointing, but not unexpected as the Faculty was undergoing restructuring during this period, and most staff had unusually heavy administrative responsibilities.
3. The Faculty is providing two further workshops for students in Semester 2.

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## WORKSHOP TOPICS

**Research Skills Seminar Program  
Faculty of Social Sciences  
UniSA Semester I 1993**

Workshop 1	INTRODUCTION TO BASICS Students' Research Projects Supervision: roles and responsibilities Barriers to Completion Students' Concerns Strategies for Success
Workshop 2	ORGANISATIONAL SKILLS Library Skills Data Management Time Management How to Structure a Thesis
Workshop 3	WRITING A THESIS PROPOSAL Refining the Research Question Justification of Research Study Literature Review Designing Research Program
Workshop 4	RESEARCH METHODOLOGIES Survey and Experimental Methods Ethnomethodology Action Research Historical and Feminist Approaches Students' Choice and Justification of Methodology

# A MODEL FOR THE MANAGEMENT OF RESEARCH DEGREE SUPERVISION IN A POST-1987 UNIVERSITY

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## Introduction

In late 1987 the federal government announced its intention to reorganise the structure of tertiary education in Australia by establishing a 'unified national system' of large, amalgamated institutions (Dawkins, 1987). The amalgamation process combined the former 19 universities and 57 colleges of advanced education into 37 institutions, all with university status. The removal of the binary divide in tertiary education has caused unprecedented upheaval in the administrative, management and academic sectors of universities. This chapter is concerned with the impact of the Dawkins' reforms on the provision of research degree programs in the 'new' universities in the unified system.

The task of developing competitive research degree programs and providing quality supervision presents special challenges for those post-1987 Australian universities which do not have a strong history of research and postgraduate education. The challenges arise from limited institutional infrastructure to support research, lack of staff with experience in conducting research and providing research degree supervision, and a high proportion of research degree candidates who have not been exposed to research activities in their undergraduate degree programs. Many faculties representing disciplines from the former Colleges of Advanced Education are offering research degree programs for the first time; and faculties representing professional disciplines are expanding their research Masters programs and offering new doctoral programs.

This rapid expansion of research degree programs in the 'new' universities has changed the nature of academic work for many staff. There is an expectation that all academic staff should participate in research activities, and pressure has been placed on staff without research degrees to upgrade their qualifications and develop new teaching skills. In emerging research disciplines, such as Nursing, where there is not research tradition or infrastructure to draw upon, staff face the task of developing a research culture from scratch. Furthermore, in an effort to meet student demand, those staff who do have the necessary research experience and academic qualifications to supervise research degree candidates are under pressure to take on excessive numbers of students. An additional complicating factor in many 'new' universities is that a significant proportion of students entering research degrees have not come through the traditional Honours degree route and, therefore, do not have experience in conducting research projects. Students without this background tend to place heavy demands on supervisors' time in order to adjust to the expectations of research degree study. These factors have created a situation of work overload for staff and inadequate supervision for students.

The following discussion focuses on the approach taken by one post-1987 university to managing its research degrees program, and developing and maintaining high quality supervision practices. The approach is characterised by centralised administration and management of research degrees, with academic decision-making devolved to the faculty level. Key elements include a comprehensive code of practice for supervision which provides the framework for the interaction of academic staff and students; a mechanism for the accreditation of supervisors; organisational support; needs-based staff development initiatives; and structured research skills training for research students.

## **The University of South Australia**

In 1991, the South Australian Institute of Technology and three campuses of the South Australian College of Advanced Education amalgamated to form the University of South Australia. At this time there were three doctoral and 18 research Masters degree programs available in the former Institute, and no research degrees at all in the former College. Over the next three years, the research degree profile expanded significantly, and, by 1993, there were 398 postgraduates enrolled in 26 doctoral and 32 research Masters degrees across the University. In comparison with the other two universities in South Australia, the proportion of students undertaking research degrees is relatively low: research students at the University of South Australia make up less than 2.0% of the total student population, compared with 10.5% at Flinders University, and 12.0% at the University of Adelaide (1992 data). Nevertheless, the task of supervising research students is a new responsibility for many academic staff, and presents difficulties for those staff who have limited research experience.

As a strategy to improve its research profile, the University has, over the past two years, assisted staff in developing their research skills through a system of mentorship by experienced researchers. In this scheme, both the mentors and the novice researchers receive funding to release them from teaching activities. In addition to receiving advice and support for their research projects, staff participate in a range of workshops on research skills.

### *Review of Existing Policies and Practices*

Each of the former tertiary institutions brought to the new University different educational traditions, practices and attitudes to research and research training. For example, entry requirements, examination policies and expectations regarding their content and standards for research Masters degrees were not consistent across the University. Although formally united as a single university, the level of experience with and the approaches taken to research degree education clearly reflected former institutional allegiances. Not surprisingly, a great deal of confusion existed about 'correct' University research degree policies and practices.

With a view to streamlining the provision of postgraduate education, the Pro Vice-Chancellor (Research) commissioned the author early in 1993 to review the existing policies and practices, and to develop a proposal for the management of research degrees in the University of South Australia. The proposal was submitted in June, and contained 60 recommendations for research degree programs and processes for monitoring and evaluating academic quality and standards in teaching and learning at this level. The author based her recommendations on a review of the relevant literature and the University of South Australia's policies on research degrees and supervision, extensive discussions with key University of South Australia staff, and consultations with personnel involved in the management, support and teaching of research degrees programs in eight other Australian universities. The recommendations related to a range of issues including the management model and administrative structure. Definitions of research degrees, allocation of research degree places, supervision policy, *Code of Good Practice: Research Degree Supervision*, monitoring student progress, examination policy, support for research students, equity considerations, and library resources (Whittle, 1993). The proposal was accepted by the Research Degrees Committee and working parties were established to implement the recommendations. By December 1993, the Academic Board of the University had endorsed several new policies relating to the management of research degrees and supervisory practices.

### *Management and Decision-Making Structure*

A brief overview of the decision-making structure relating to research degrees will provide the context for the discussion of the University's approach to the management of supervision. Traditionally, Australian universities have adopted a de-centralised approach to the management of research degrees in which faculties have responsibility for both academic decision-making and most administrative matters. This approach made it difficult for institutions to establish uniform administrative procedures, and has led to a highly variable quality of research degree supervision across disciplines. To avoid these problems, the University has established a centralised administrative and management structure, and retained academic decision-making at the faculty level. This system provides an effective and efficient means of delivery of services, support and advice to staff and students, and has the educational benefits of drawing on specific expertise within disciplines, for academic issues related to research degrees. Quality control of academic standards and coherence of research degree provision across faculties has been provided for through a central academic committee comprising representatives from each faculty.

The University is organised into nine faculties and 40 schools. The faculties represent the following broad discipline areas: Aboriginal and Islander Studies; Applied Science and Technology; Art, Architecture and Design; Business and Management; Education; Engineering; Health and Biomedical Sciences; Humanities and Social Sciences; and Nursing. Each faculty is comprised of a number of schools, each representing a specific field of endeavour. For example, the Faculty of Health and Biomedical Sciences is made up of the Schools of Occupational Therapy, Pharmacy and Medical Sciences, Physiotherapy, and Medical Radiations.



**Figure 1: Research Degrees Decision-making Structure, University of SA, 1993**

Against this academic organisational framework, the research degrees decision-making structure can be described in the following way (refer to Figure 1). Oversight of the University's research degrees program is vested in the Research Degrees Committee

(RDC) which has authority in all matters relating to research degrees. Membership of the RDC is drawn from senior academic staff in each faculty, the student body, and the Research Office, and also includes a person to monitor equity issues. Its central role is to develop policy and monitor academic quality and standards in research degrees and to make recommendations to Academic Board. The Examination, Candidature and Scholarships Panels are sub-committees of RDC. Each faculty has a Research Management Committee (RMC) which has responsibility for developing five-year Research Degrees Management Plans (RDMP) which are submitted to the RDC for approval. RDMPs must include a list of staff who are on the *Register of Research Degree Supervisors*, the number of research candidates that faculties can support, and a guarantee of adequate resources to support research students (including physical space, equipment, on-going and appropriate supervision). They must also indicate how candidates' research proposals dovetail with the research objectives of the faculty, describe how research seminar programs will be conducted, and how outline the mechanisms for processing students' annual review of progress and the procedures for selection of examiners. Faculty RDMPs are the key documents for monitoring quality in research degrees in the University. Faculty RMS make recommendations to RDC on academic matters relating to research degrees including the appointment of examiners, scholarship allocations, acceptance or research proposals and continuation of candidature. Each faculty is also responsible for appointing research degree co-ordinators whose role is to oversee the supervision of research students within schools.

### **Management of Research Degree Supervision**

There are three main elements to the University's approach to the management of research degree supervision: a policy framework, organisational support, and staff development.

#### *Policy Framework*

The University has adopted a policy of *co-supervision* which ensures that each research candidate has a principal supervisor who has prime responsibility for the candidature, and an associate supervisor, who provides support to the principal supervisor. The requirement for principal supervisors to undertake supervision training is an important means of quality assurance and, to the author's knowledge, the first move by a university in Australia to formally restrict access to supervisory responsibility. The University's policy of co-supervision provides for the mentoring and informal training of associate supervisors through their collaboration with experienced supervisors. Two policy documents which have recently been endorsed by Academic Board provide a framework for establishing, supporting and maintaining good supervisory practices. These are the *Code of Good Practice: Research Degree Supervision*, and the *Register of Research Degree Supervisors*.

#### **Code of Good Practice: Research Degree Supervision**

Guidelines for the interaction of academic staff and students are contained in an 11-page *Code of Good Practice: Research Degree Supervision*. The Code, which was developed by the author in conjunction with a 15 member Reference Group, articulates the consensus that exists currently within the University about the characteristics of good supervision, and delineates the locus of responsibility for maintaining and monitoring academic quality and standards in research degrees.

The University's Code is similar to other codes of supervision practice in that it describes the roles and responsibilities that the institution, faculties, research degree coordinators, supervisors and students have in regard to their mutual obligation to ensure that research education is conducted in the most effective manner. Importantly, however, the Code also embodies two features which distinguish it from other

Australian codes of supervision practice. First, the Code is intended to be an evolving, 'living' set of guidelines, which will change over time as new knowledge about teaching and learning at research degree level emerges. The Code stresses that the University recognises that the concept of good supervisory practices is a contested one which is not only concerned with approaches to supervision but which invariable context specific and involve moral, ethical, ideological and political considerations. Thus, the Code acknowledges that research and supervision practices will vary in relation to research culture, fields of inquiry and individual project (University of South Australia, 1993a). An important purpose of the Code is to invite on-going critical review and debate within the University about what constitutes good practice and, accordingly, the Code will be review on an annual basis through a process of consultation and evaluation.

The second distinguishing feature of the Code is its emphasis on the responsibility of supervisors to adopt teaching practices which enable *all* students, regardless of their background or characteristics, to have an equal opportunity to learn, and to demonstrate that learning, in accordance with the aims of the degree program. The Code states that 'a fundamental characteristics of good supervision is that academic staff constantly reflect on their approaches to supervision' and that supervisors have a responsibility. Ground in the principles of social justice, to 'maximise the opportunities each graduate will have to contribute to society' (University of South Australia, 1993a). This means that supervisors are expected to carry their teaching in relation to the needs, values, experiences and abilities of individual students. The University's history and it access and equity policies have created a diverse postgraduate population of students drawn from a wide range of ethnic, socio-economic and education background. For example, in 1993, overseas students represented 15% of research degree candidates, and students from non-English speaking backgrounds, 30% (University of South Australia, 1993b). In this environment, it is important for supervisors to be sensitive to individual students needs and flexible about their approaches to supervision so that effective working relationships can be established.

#### Qualifications of Supervisors

There has been no formal process in Australian universities for the training or accreditation of research degree supervisors. Traditionally, academic staff have assumed responsibility for supervision on an *ad hoc* basis, and have relied o their personal experience of being supervised as a model for their own practice. This has resulted in the quality of supervision ranging fro excellent to very inadequate (Whittle, 1991). The quality of supervision is one of the main factors which influence the quality of research theses and the ability of candidates to complete their degrees on time. Several studies have indicated that the majority of candidates depend on their supervisors as the main source of support and encouragement during their candidature, and that unsatisfactory supervision has a strong negative effect on the participation and performance of research students (Powles, 1989; Moses, 1989; Higher Education Council, 1990; Whittle, 1992).

As a strategy to establish, maintain and monitor excellence in the quality of the supervision, the University of South Australia has established a mechanism for the accreditation of academic staff who have responsibility for supervising doctoral and research Masters students. It is University policy that staff who wish to act as principal supervisors must first be admitted to the *Register of Research Degree Supervisors*. To be admitted to the Register, academic staff must have a 'higher degree by research or have an equivalent record of scholarly achievement', and be 'currently engaged in research methodologically appropriate to the discipline', and have undertaken 'appropriate training in research degree supervision' (University of South Australia,

1993a). The policy also provides for a regular review of membership of the Register and the removal of staff who no longer meet the requirements of admission.

#### Implementation strategies for policy framework

In addition to the development of a policy framework for research degree supervision, the University has established implementation strategies to disseminate information about the new initiatives and to ensure that staff and students adhere to policies. Strategies include formalised lines of communication through decision-making structures, regular distribution of hard copies of new policy documents, and discussion of new initiatives in staff development workshop.

For example, the implementation strategies for the *Code of Good Practice: Research Degree Supervision* included the following processes. Members of the Research Degrees Committee (RDC) had responsibility to inform their faculty Heads of School, research degree co-ordinators, and relevant committees about the development of the Code and its endorsement by Academic Board. In addition, through their membership of faculty Research Management Committees, RDC members provide advice to their faculty on matters arising from the Code. A copy of the Code was distributed to all faculty on matters arising from the Code. A copy of the Code was distributed to all supervisors and research degree students at the start of the academic year, together with other University policies and regulations concerning research degrees and supervision, which had been updated to include cross references to the Code. Academic staff and postgraduates have opportunities to discuss the Code and provide evaluative feedback on it through participation in staff development programs on supervision and student induction programs respectively.

#### *Organisational support*

Two strategies for supporting academic staff and maintaining excellence in supervision have been embedded into the academic organisational and management structure of the University. First, faculties have a responsibility through their Research Degree Management Plans to ensure that the *workload of supervisors* in research, teaching, supervision, and other duties permits them to have sufficient time to provide students with proper supervision. This strategy aims to protect supervisors from work overload and discourage unsatisfactory supervision practices which can result from staff taking on too many research candidates.

Second, faculties must appoint senior academic staff members as *research degree coordinators* whose central role is to coordinate research degree matters, oversee the quality of research degree supervision, and monitor the progress and welfare of research students. Faculties also must provide *adequate resources* and make workload adjustments to support co-ordinators in the performance of their duties. Co-ordinators are chosen on the basis of their excellent interpersonal skills and extensive experience in research and research degree supervision. They play an important role in providing a link between the faculty research management committee and staff at the school level by disseminating information from management and representing the interests of staff in their schools. Research degree co-ordinators are the first point of contact for research students and act as a resource on research degree matters for both students and staff. They also have responsibility for conducting annual reviews of student progress which include separate interviews with supervisors and students and the production of a written report. The annual review process provides co-ordinators with a mechanism for monitoring the quality of supervision and staff adherence to the *Code of Good Practice: Research Degree Supervision*. Co-ordinators also act as mediators and facilitate the resolution of conflicts between students and supervisors.

### *Staff development: Training and support for supervisors*

The value of providing training and support for supervisors has been recognised in both the well-established and the 'new' universities, and most institutions now provide some form of staff development in this area. Staff development programs range from short, 'one-off' workshops on supervision to systematic, 'on-going' support programs. The former type of staff training can be conceptualised as a 'top-down' approach as the process and content of workshops are developed in isolation from the participants, and generally are generic in nature. In contrast to this, a 'bottom-up' approach in which the participants identify their areas of developmental need involves educational developers and academic staff collaborating on the design of the training program which can be tailored to the disciplinary context in which the staff are working. Research on educational change indicates that the short, 'one-off' workshop approach to staff development has a limited effect on changing teaching practices for at least two reasons. First, staff find it extremely difficult to implement new approaches to teaching in the absence of continuing support and encouragement; and second, 'one-off' programs lack the relevant context as they are not designed to meet the specific needs of individuals or disciplinary groups (Fullan, 1991).

The University's academic staff development unit has responsibility for providing training programs, support and advice for staff in their teaching role, including those involved in supervising research students. The philosophy underpinning the unit's approach to academic staff development emphasises the provision of long-term, on-going support for staff, and the provision of a range of training and support strategies which are tailored to the needs and interests of individual staff, faculties and schools (Reid & Whittle, 1993). Thus, the majority of the unit's activities emerge from liaison with faculties and schools. The unit also provides university-wide 'one-off' workshops on aspects of teaching and learning, including an induction program for supervisors. The academic staff development unit also convenes special interest discussion groups, and provides support and advice to staff on an individual basis. In addition, there are opportunities for staff development through inter-institutional programs on supervision which enable staff to form networks with colleagues in other South Australian universities.

### University-wide induction programs

Each semester, university-wide supervision induction programs are conducted to introduce staff to University policies on research and supervision, the role and responsibilities of supervisors, and key issues and concerns relating to research degree study. Various methods are used to stimulate discussion about the role and responsibilities of supervisors and to encourage staff to reflect on what teaching learning theories underpin their own approaches to supervision. The author has found role perception rating scales, case studies, and expert panels of supervisors and students have been effective in this context. The induction program enables staff from a range of disciplines to share their experiences and perceptions of supervision, and provides opportunities for reflection on practice.

It is important to note that the induction program is intended to be the first step in a continuing program of support for supervisors. During the induction program, staff are encouraged to establish networks for peer support, and further staff development activities are organised to meet the needs and interests of the participants. For example, often issues will be raised in the induction workshops which staff wish to explore further and special interest groups are formed to fulfil this purpose. In the past, interest groups have been established for staff to discuss supervising overseas students, distance

supervision, supervising women in non-traditional fields of research, supervising the writing process, and distinguishing between the requirements for research masters and doctoral theses.

Feedback the author has obtained from academic staff via questionnaires evaluation of staff development workshops indicates that considerable benefits accrue from inter-disciplinary discussion of supervision, Staff benefit from being exposed to issues, concerns and solutions experienced in disciplines other than their own, as this broadens their perspective and encourages the development of flexible approaches to supervision. However, it is also important for staff to have opportunities to discuss supervision issues with colleagues within their own fields of research, so that discipline-specific strategies for effective supervision can be shared, It is therefore helpful when organising induction programs, to provide staff with a balance of same discipline and cross-discipline discussion groups.

#### Faculty/School-based support for supervisors

The University also provides for faculty-based and school-based staff development programs in response to staff requests. The opportunity to work with a single faculty or school means that discipline-specific tasks can be used to explore food supervisory practices. There are several reasons why training programs of this kind are likely to have a high success rate in changing attitudes and supervision practices. First, because the need for staff development has been identified by the academic unit, staff 'own the problem' and have a vested interest in working towards finding solutions. Second, as these programs are faculty or school initiatives, they have the support of Deans, Heads of Schools and other senior academic staff. This level of support is vital for the successful implementation of new pedagogical approaches which may require redistribution of resources or changes to traditional ways of operating within the academic unit. Third, the 'local' focus of the staff development tends to encourage an ethos of open communication and discussion among staff which provides a basis for educational change.

A research skills/supervision training program which was conducted at the University in the first semester of 1993 illustrates this needs-based, discipline-specific approach to staff development. The University's academic staff development unit was approached by representatives of the Faculty of Social Sciences for advice and support regarding supervision in their research Masters programs. The Faculty, which had very few staff qualified to act as principal supervisors, was faced with the problem of providing supervision for 28 new research Masters students. The author, in collaboration with senior faculty members, developed a semester-long program of seminars and workshops to provide both supervision training for staff and research skills induction for the novice students. This innovative program used a team-teaching approach to supervision, and provided the opportunity for the entire cohort of supervisors and students to work together. The seminars were designed to have an applied focus so that students were able to work on their own research proposals throughout the program. Topics covered by the program included roles and responsibilities of supervisors and students, time and data management, writing a thesis proposal, how to structure a thesis, and methodological approaches in social science. Workshop presenters included the program development team, several Faculty supervisors and staff from the University library. Formal presentations were kept brief, as the central objective was to encourage a high level of discussion among the participants through small group activities and whole group open forums. A full discussion of the workshop program and its evaluation can be found in Whittle, (forthcoming).

The rationale for providing a collaboratively taught workshop program was grounded in the assumption that the quality of teaching would be enhanced by providing opportunities for staff to discuss different approaches to research and supervision. That is, it was anticipated that staff would gain developmental benefits from knowledge about teaching research students, and that students would benefit from exposure to a range of academic approaches. A further reason for adopting a team-teaching approach was to reduce the burden of responsibility for supervision on individual staff and to encourage all faculty members to contribute to the induction of students into research processes.

The traditional approach to postgraduate teaching at research degree level in the social sciences and humanities generally involves one-to-one supervisor-student teaching. An associate or co-supervisor may also be available to the students, but usually plays a minor role. This responsibility for providing advice and support falls largely on the shoulders of a single academic. This teaching model can present problems if personality clashes occur, or in inter-disciplinary projects requiring a range of academic expertise, or where the research interests of the staff member and the students are not well matched. The team-teaching approach to research skills development does not attempt to replace the one-to-one supervision model, but rather acts as a complementary support strategy for both students and staff.

In addition to the benefits to student learning which go hand-in-hand with improvements in teaching, the workshop program also aimed to enhance the learning environment for research students by reducing the social and intellectual isolation often experienced by candidates in the social sciences and humanities and which part-time candidature can exacerbate. The workshop program aimed to provide opportunities for the development of open communication between staff and students, peer interaction between students, and to integrate students into the research culture of the discipline. Furthermore, the workshop program provided a focus for the development and strengthening of the research ethos of the faculty.

The current demand for institutional accountability and the emphasis on quality in university teaching has placed pressure on academic staff to evaluate their teaching. Evaluation of research supervision is an important reflective tool which staff can use to improve their teaching practices. Feedback from evaluation can also be used for promotional purposes. However, the evaluation of teaching at research supervision level is fraught with difficulties due to the long term and special nature of the on-to-one students-teacher relationship. Moreover, biased evaluation of supervision after graduation is inevitable since research students continue to rely on supervisors as referees for applications for employment, post-doctoral positions, scholarships and research grants. Team-teaching of groups of research students, such as that used for the Faculty of Social Sciences workshop program provide opportunities for the peer evaluation of supervision practices, as academic staff in this teaching context are actively involved in each other's work. This collaborative approach to supervision also presents the possibility of reliable student evaluation of supervision as students can comment on the team's approach to supervision without the dear of personal disadvantage which may be associated with evaluating individual supervisors.

The approach to research induction which has been described above, could also be used at the department or school level, or by inter-disciplinary research groups which support postgraduates. Research skills training will be of particular value to candidates who are at risk of having poor completion times or who have not had the advantage of completing an Honours degree prior to embarking on a research degree. By providing students with structured research skills training at the commencement of their degree

programs, staff can work as a team to improve the teaching and learning environment at the postgraduate level and help students to get off to a good start in their candidature. Furthermore, staff in disciplines which do not have a strong research background will benefit from the collaborative teaching approach, and the workshop program will stimulate the development of a research culture.

### **Evaluation of the management model**

Systematic evaluation of the policy framework, organisational support, and staff development programs discussed above forms an essential aspect of the University of South Australia's quality control of its management of research degree supervision. At the time of writing this chapter, it was too early to comment on the effectiveness of these new initiatives; however, there are several strategies in place for evaluation.

Staff who participate in the induction program and other training and developmental activities designed for supervisors are asked to critically evaluate those programs by means of an open-ended questionnaire survey conducted at the close of each program. These data will be used to improve on staff development programs and inform policy development. *The Code of Good Practice: Research Degree Supervision* will be reviewed annually on the basis of feedback from academic staff who attend workshops, and data obtained from a comprehensive questionnaire survey of all supervisors and postgraduate students. The five-year Faculty Research Degrees Management Plans will provide a benchmark against which the ability of individual faculties to meet their objectives for research degree management can be judged and evaluated. The annual review of the progress of research students in which supervisors and students are interviewed separately will provide research degree co-ordinators with a rich source of information about the effectiveness of supervision and adherence to University policies.

### **Conclusion**

In this chapter it has been argued that many academic staff in the post-1987 universities face special challenges in fulfilling their roles as research degree supervisors. It is evident that the morale of academic communities in the 'new' universities has diminished in the environment of rapid change and job uncertainty that the amalgamation process has created. It is important, therefore, that institutions provide adequate support to assist their staff cope with the demands which the removal of the binary divide in tertiary education has brought about.

The approach taken by the University of South Australia in managing research degree supervision is offered as a model for the provision of a high quality teaching and learning environment. The University has established a policy framework for good supervision practices and has provided a system of training and support for academic staff. While each university has its own unique characteristics and must develop strategies to meet its specific needs, the model presented here can be used as a framework for management of supervision in those universities which, by virtue of the recent amalgamation processes, have limited research infrastructure, limited staff expertise in supervision, and a rapidly expanding research degree program.

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## POSTGRADUATE STUDENT PROGRESSION

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### **Background - Innovations in Postgraduate Education and Research Training**

Since 1991, the University of Adelaide, through the newly established Board of Graduate Studies and the Research and Graduate Studies Branch, has embarked on an ambitious program of quality assurance and enhancement initiatives to ensure that the quality of research training is not sacrificed with the planned growth of postgraduate numbers. The key initiatives include:

- Establishment of a "one-stop shop" for postgraduate scholarship enquiries and initial postgraduate course information;
- Development of a Code of Practice for research degrees, including a procedure for the resolution of grievances, and "best practice" supervision guidelines ;
- Reform of the annual review process for all research students to increase its effectiveness;
- Introduction of an intellectual property policy and procedure for students working in commercially sensitive areas;
- In conjunction with the Advisory Centre for University Education (ACUE), the introduction of a supervision training program for new academic staff;
- Definition of the role and the mandatory introduction of Postgraduate Coordinators in Departments;
- Streamlining of procedures and the production of handbooks in plain language for higher degree students and academic staff to enhance the delivery of programs.
- Institution by the University Council of an Award for Postgraduate Teaching Excellence, and by the Postgraduate Students Association of a Supervisor of the Year Award.

Two further major initiatives are being taken in 1994 to enhance the quality of the University's research training and the monitoring of its performance. The first is the introduction of a **Structured Program** for all new students in the first year of the PhD. This incorporates formalisation of the development of the research proposal, and allows for the possibility of a coursework component for those with non-standard backgrounds. Feedback to Departments from monitoring and evaluating of the Structured Program will assist them to review the quality of their programs and performance. From 1994, all Departments will be required to induct their incoming students through a Structured Program.

The second major initiative is the introduction of **Exit Surveys** for all research students at the time of submission of their theses, to be administered by the Research and Graduate Studies Branch. These will provide a vital instrument for the overall monitoring and evaluation of postgraduate teaching and supervision from the student perspective.

### **Operational and Monitoring Difficulties**

Improvements in the actual practice of postgraduate education and training in the University of Adelaide have not kept pace consistently and across the board with the pace of the positive changes to academic policies and administrative procedures summarised above. There are many difficulties confronting the University in its endeavours to enhance the quality of its work with postgraduate students:

- Although a wealth of data is collected regularly about students, their research topics, course results and so on, there is no ready mechanism for generating regular reports (such as senior

administrators or quality auditors might call for), and inadequate capacity for individual staff to access information which might assist them in managing postgraduate student load, selecting appropriate supervisors or examiners, investigating the need for support services in study skills or other areas, and monitoring the effectiveness of educational or administrative changes;

- In particular, the University has made a commitment to require Departments to offer structured programs, and students to undertake exit surveys, without yet having in place efficient procedures for gathering and analysing data which would enable the impact of these innovations to be monitored, evaluated, and reported;
- Informal, anecdotal evidence exists that significant numbers of postgraduate students are either dropping out or else taking many more years than normal to complete their courses, but it is virtually impossible to make an objective, statistical investigation of the factors giving rise to these situations;
- Patterns of enrolment by students in postgraduate course - sometimes leading to serious over-enrolment - are not necessarily guided, for the students or for the staff concerned, by reliable information about the capacity of Departments to resource and otherwise support programs, or about the matching of student's interests with staff expertise and actual work in progress;
- There is a great deal of variation in the structure and organisation of Honours course in the various Faculties and Departments, including the kinds and levels of assessment demand placed on students, the use of the Honours year as a first training ground for research or for extending breadth and depth of exposure to a discipline or for indicating the standard at which the ordinary degree has been completed - and all this presents serious practical difficulties in terms of comparative standards, when it comes to the use of Honours results as part of the criteria for selecting students to receive postgraduate scholarships;
- Information management approaches in use by different administrative components of the University, including the Graduate Studies, Research Management and Scholarships sections which collectively make up the Research and Graduate Studies Branch, are not necessarily capable of communicating effectively either with each other or with the main administrative systems and networks;
- The University is involved with 19 other institutions in the development of Core Australian Specifications for Management and Administrative Computing (CASMAC), using Powerhouse software, which holds some promise of addressing several of the difficulties outlined above, but which will probably not come into operation for student information processing until 1996 or 1997, well past time for the national quality audit (in 1994) focused on teaching and learning, and with no guarantees (as yet) that specific monitoring and evaluative needs will be satisfied by the system ultimately designed.

### **Postgraduate Student Progression Project**

Early in 1993 the University secured finance from the National Priority (Reserve) Fund to conduct a Project to Improve the Quality of Management in the University through User Participation. One main dimension of this initiative is the Postgraduate Student Progression Project which was devised primarily to draw key academic and administrative staff into a highly consultative process through which a system to assist with analysing postgraduate student progression would be established in the University for the first time.

As this project evolved during 1993, three distinct objectives were defined:

- To design and implement in 1994 a basis system for analysing postgraduate student progression which will draw upon data and procedures already existing in the University's Student Information System;
- To prepare specifications for a comprehensive system for monitoring and evaluating the effectiveness of postgraduate programs, teaching and administration in the University, in the form of recommendations to the CASMAC Project;

- To review and improve the procedures involved in the handling of postgraduate students in the University from their initial inquiries to the completion of their theses and graduation.

The purpose of the rest of this presentation is to describe the main features of the data bases and procedures proposed under the first two of these objectives, which have been taken about as far as they can be within the limitations imposed by the University's resources and the time frame for the CASMAC Project. The third objective, concentrating on the processes of selection and quota-filling and of annual review and reporting of progress, is still under way, and need not concern us further here.

The outcomes of the Postgraduate Student Progression Project, across all three objectives, will feed into a new initiative which the University will be undertaking during 1994 and early 1995, also supported by the National Priority (Reserve) Fund. This will entail the development of management systems, including new or revised data bases and procedures, through which the day-to-day operations of the three sections of the Research and Graduate Studies Branch will be integrated, and communication and cooperation will be improved between these sections and, on the one hand, the Departments and other relevant academic and support areas of the University and, on the other hand, all the other related administration units and the main information systems and networks.

### **Developing a System for Analysing Postgraduate Student Progression**

Much of the work for the Postgraduate Student Progression Project between about May and November 1993 was concentrated on deciding what information the Project Team considered should be collected, over and above the personal and other data routinely gathered when students enrol or at other stages of administrative processing, and then in consulting with a broadly representative set of academic and administrative areas across the University in order to gain some idea of the relative importance which staff at large believe should be attached to each item we identified. This consultation was important not only to spread awareness of and achieve support for the initiative we were pursuing, but also to provide us with a means of putting the items into priority order in case it should prove impossible, because of resource constraints in the University's Information Systems Branch, or pressure from other priorities in management information, to accommodate all of the desired items into the system.

Essentially, the items identified for inclusion in the data base planned by the Project Team constituted operational factors which members of the Team, from their own experience or on the basis of such research findings as we were able to draw upon, believed were likely to exert some significant influence upon the quality of the design, organization, delivery and support of postgraduate programs, and hence upon their effectiveness in meeting the needs of students and in assisting them to graduate in reasonable, if not minimum, time.

As it turned out, the CASMAC Project hijacked this intention to a large extent. It became clear that the best we could hope to achieve with the comprehensive, detailed and no doubt somewhat idealistic system we were busily inventing and promoting would be to try to ensure that the Student Information System established within the next few years by the CASMAC Project would be as capable as our recommendations and representations could make it of carrying out the analyses, making the comparisons, and doing the other procedures which we felt were important. This has been done, but we will not know until at least 1996 whether, and how far, the reality of what is then implemented satisfies our expectations and desires.

In order to ensure that something concrete will be achieved within the framework and time line established by the requirements of the National Priority (Reserve) Fund, the Project Team is pressing ahead urgently with the development of a basic system to assist with analysing postgraduate student progression which can be implemented more or less immediately in 1994 without requiring any expansion or modification to the University's existing Student Information System. This objective partly anticipates the kind of reporting the University will be expected to provide as part of this year's quality audit focused on teaching and learning, but it is concerned mainly to provide the means for the key academics

and administrators responsible for postgraduate programs to monitor the graduation and attrition rates for postgraduate students on a regular and objective basis, both to assist with managing student load and to identify areas where improvements should be made in the effectiveness of programs.

The system will enable the staff to do this work at their own computers, utilising software which facilitates access to files constructed especially out of the data held in the Student Information System and down-loaded to their machines at request. That is, they will not have to wait upon members of the central, or even the Faculty/Department, administration to produce standardised reports, and still less for these people to find the time to undertake the analytical work. Moreover, the system will offer staff the capacity to manipulate the downloaded data files on their own computers, generating analytical reports according to information needs which they have individually identified.

### **The "Ideal" System**

The essential features of the data base for the full-scale system which the Project Team hoped to devise, and which have been recommended for eventual implementation by the CASMAC Project, are set out in the attached extract (Part B) from the questionnaire used to survey opinion and canvass support throughout the University. Our crucial intention was that the system would enable staff to analyse whether, and to what extent, a very wide range of factors presumed to have a bearing on the quality of postgraduate programs and the performance of students in them were, in fact, significant contributors to the outcomes and effectiveness of the programs offered by particular Departments, or to different categories of students, or under particular supervision or administration arrangements.

[There will be opportunity to question and discuss these information items during the session.]

### **Academic Staff Response to the Questionnaire**

It is interesting to note the response of academic staff to the questionnaire inviting them to score each possible data item according to the level of importance they attached to it as an information element to be incorporated in the postgraduate student progression analysis system and therefore, at least by inference, as a factor which the staff considered may have a significant influence upon the progression of postgraduate students through their courses.

From the more than 70 responses received (response rate not calculated) all the data items were ranked according to the degree of importance scored for each expressed as a percentage of the respondents. The following items, arranged in percentage order, were ranked as "very important" to "extremely important" by half or more of the staff and students who responded to the survey:

1. Recommendations by each examiner (item 36)
2. Written English language competence (item 5)
3. Intermissions and leaves of absence (item 2)
4. Provision of funding from the Department budget to support the research project (item 27)
5. Whether supervision is a shared responsibility (item 15)
6. Spoken English language competence (item 4)
7. Stage reached in candidature at specified times (item 1)
8. Whether the student's research project is supported by the supervisor's research grant (item 28)
9. Examiner's academic qualifications (item 35)

10. Relevance of the supervisor's research activities to the student's research topic (item 14)
11. Completion rates of postgraduate students by Department (item 19)
12. Whether the Department offers an induction program for postgraduate students (item 24) (Note: Since the survey was conducted, the University has decided that such programs will be offered by all Departments with students undertaking the PhD.)
13. Examiner's institution (item 34)
14. Comments from annual reviews by supervisors and postgraduate coordinators (item 3)
15. Number of students per supervisor (item 13)
16. Completion rates of postgraduate students per Faculty (item 20)
17. Policy and procedure for up-grading Masters to PhD (item 12)

It cannot be claimed that these results are very significant in statistical terms, and a good deal more work along the lines of the survey would need to be done before the University would have a solid objective basis for justifying or supporting any major shifts in policy directions. (For example, the postgraduate student population at large was not surveyed for lack of time and resources; yet it would obviously be important to identify and understand major differences between the scores given to certain items by students as against staff.)

Nevertheless, the Project Team found the results very encouraging. Taken all in all, there is clear and strong support for systematic investigations to be undertaken into the factors which may affect the progression of postgraduate students. The items identified as most important are quite well spread across the several different categories of data listed in the questionnaire, suggesting that a comprehensive understanding exists in the University about the complex nature of postgraduate education and research training and the difficulties which may beset particular students. It is also evident, particularly from the high ranking given to the factors of written and spoken English competence, and to the role of induction programs, that staff well appreciate the need for targeted support activities.

Even more encouragingly, respondents to the survey accorded high recognition to a number of factors which are related very obviously and directly to the quality of the contributions made by the institution and by individual staff to the success or otherwise of a research project - e.g. budgetary provision, annual reviews, the competence of examiners, sharing supervision loads. Indeed, the Project Team expected some of these kinds of items to be challenged, or even rejected, by respondents, because ameliorating the adverse influence for students which such factors often impose will entail a considerable capacity for self-criticism on the part of Faculties, Departments, and individual postgraduate coordinators and supervisors, and a willingness to embrace major change in the organisation and delivery of programs.

#### **The Basic Analysis System (1994)**

A second attachment describes briefly the system now being designed for implementation in 1994 which will assist with analysing postgraduate student progression by utilising only data elements which already exist in the University's Student Information System, and by applying straightforward cross-referencing and computational procedures to the data in order to produce a single composite file which may be downloaded at request to individual staff computers in the Faculties and Departments.