

University of Wollongong



Practising Research Supervision

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**Report of the Educational Strategies Development Fund
(EDSF) Project on Research Supervision**

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The project is an Educational Strategies Development Fund (EDSF) initiative of the University of Wollongong.

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Abbreviations

CAPA	Council of Australian Postgraduate Associations
DEST	Department of Education, Science and Training
DETYA	Department of Education, Training and Youth Affairs
ESDF	Educational Strategies Development Fund
FIRST	for Improving Research Supervision and Training (web-site)
FRC	Faculty Research Committee
FRTMP	Faculty Research Training Management Plan
FTE	Full-time Equivalent
HPS	Head of Postgraduate Studies
OoR	Office of Research
OH&S	Occupational Health and Safety
PRPC	Postgraduate Research Policy Committee
RRTMR	Research and Research Training Management Report
RTS	Research Training Scheme
SMP	Student Management Package
UOW	University of Wollongong
URC	University Research Committee
URSC	University Research Standing Committee
WUPA	Wollongong University Postgraduate Association

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Executive Summary

The University of Wollongong is proud of its tradition of providing a quality research training environment and superior supervision to postgraduate research students. In its regular surveys of research student opinion, the University consistently scores highly on all measures of student satisfaction. In the most recent internal survey of all postgraduate research students, 74% reported that they were satisfied with the quality of supervision (see Attachment A).

In recent years, however, the funding and policy environment for postgraduate research training and education has undergone considerable reform. The Research Training Scheme (RTS) has placed considerable pressure on universities to review and improve their research training management policies and practices. In 2002, as part of its ongoing commitment to quality assurance, the University sponsored a project to further examine a range of issues influencing the quality of research supervision. This report presents the project's findings and provides specific recommendations to enhance the University's current strengths in research supervision practices as well as to address some problematic areas in research supervision.

The Project's aims were:

- (i) *To gain a better understanding of the needs of both research students and supervisors in relation to research education and training.*
- (ii) *To develop a framework for the appropriate and effective professional development of supervisors.*

To meet these aims, the project team canvassed the views of University of Wollongong supervisors and research students using a range of methods including focus groups, a survey and an open-forum. This report is based on data gathered via all these sources as well as a review of current literature (including the policy documents of other Australian universities) concerned with the nature and experience of research supervision practices. The purpose of this report is to inform the development of University of Wollongong research supervision policy especially in regard to the Code of Practice-Supervision, and develop the scope for provision of appropriate professional development for the University's supervisory staff.

The report is organised around four topics: the Code of Practice-Supervision; Professional Development of Supervisors; Supervision Workloads; and Graduate Attributes and Research Training. Our recommendations are provided in full at the end of this summary.

Code of Practice-Supervision

The Code of Practice-Supervision delineates the multiple responsibilities concerned with research supervision and provides the institutional context from which academic units and individuals practise research supervision. The University of Wollongong's *Research and Research Training Management Report* (2001) stated, "all research

supervision is guided by our Code of Practice-Supervision". However, one of the most compelling findings of the project was the limited use of the Code of Practice-Supervision by research supervisors and research candidates. While knowledge about and use of a Code of Practice-Supervision alone does not guarantee quality, we are concerned that there is such limited knowledge of supervisory responsibilities. The Code provides both a 'general' context (the University) and a 'specific' context (the Faculty) for research supervision. It is both a platform for establishing a formal arrangement for all research candidacies as well as a benchmark for good practice in supervision.

Professional Development & Accreditation of Supervisors

Many Australian universities are moving towards specific training in techniques of postgraduate supervision coupled with ongoing professional development for research supervisors. These universities recognise or reward the demonstration of those skills through accreditation. Several Australian Universities hold a 'Register of Research Degree Supervisors' and have implemented policies regulating admission to, and removal from that register. We found strong support for supervisor training, recognition of supervision workloads and a range of other collegial practices that contribute to ongoing academic professional development among both academic staff and students at UOW. Academic staff expressed a desire for the introduction of various measures to equip them for, and support them in, their role as research supervisors. At this time, we consider that it is more productive to implement a range of opportunities for professional development at both the University and academic unit levels, and to reward participation through the career development and promotion process, than to adopt formal registration of supervisors, although we consider that the University should explore further the possibility of introducing some form of registration.

Supervision Workloads

In the current context of competing demands on academics of teaching, research, supervision and academic governance, the question of how supervision workloads are formulated is foundational to the ways in which academic staff carry out their supervisory role. Supervisors, as well as students, pointed to time related factors as a major constraint in the quality of supervision. It would seem that any moves to improve the quality of supervision and completion times must take into account the time intensive work required to do supervisory work well. The *University of Wollongong (Academic Staff) Enterprise Agreement 2000 to 2003* makes no specific reference to supervision as a proportion of the academic workload and consequently supervision occupies an unspecified place within teaching, research and scholarly activity. Rather than privileging research or teaching, we argue that what is needed is an explicit recognition of the work involved in supervision as part of academic workloads.

Graduate Attributes and Research Skills

As part of a Federal Government push towards quality assurance in higher education, universities are now being asked to report on the breadth and extent of research training

provided to postgraduate research students. As part of its annual Research and Research Training Management Report (RRTMR), the University must report on strategies to ensure that the attributes and competencies of its graduates are achieved. Supervisors, student support services staff, and research students were consulted about the means that are employed in higher research degree programs to equip candidates to become independent researchers. Their responses suggested that there is significant uncertainty, among both students and staff as to what 'research training and education' means in the context of supervision.

Nature of the Recommendations

The University has recently started updating its research supervision policies. However, the RTS imperatives now create immediacy for us to rigorously address research supervisory practices. In light of this project's research findings, our recommendations are focused around two major areas:

- The Code of Practice-Supervision and its relationship to faculty, academic unit and research unit procedures related to research supervision
- The introduction of support measures for research supervisors

The recommendations in this report are designed to improve the practice of research supervision for all parties. Importantly, these recommendations are informed by suggestions and proposals put forward by both supervisors and students making them, in effect, peer recommendations. One experienced supervisor suggested that a good outcome for this ESDF project would be "developing benchmarks and good practice guidelines without making reporting, bureaucratic requirements too onerous and allow a system for people to do things in their own way". Our recommendations acknowledge the importance of maintaining flexibility in order to accommodate differences in the style of individual supervisors and the differing needs of students.

The background to all the issues discussed, and the rationale underpinning the recommendations, are dealt with in detail in the remainder of this report. The challenge for UOW is to recognise the complexities of research supervision and to give support through manageable structures. In summary, the project proposes that the University review its current Code of Practice-Supervision and implement policies that are geared towards improved supervisor professional development.

RECOMMENDATIONS

Recommendations – Code of Practice-Supervision

1. That the University Research Committee (URC) revise the Code of Practice-Supervision by the end of 2003, to:

- *include the responsibilities and expectations that are common to all units and individuals involved in the supervision process;*
- *ensure that good management practices are clearly described for research units and academic units;*
- *include a statement of minimum resources for all students;*
- *define the meaning of supervision in the context of research training and education;*
- *include a glossary of supervision containing broad definitions of the ways in which supervision may be practised (eg. co-supervision, joint supervision, supervisory committees etc.); and*
- *include a glossary of terms associated with candidature (eg. on-campus, off-campus, off-shore, distance).*

Recommendations – Information for Students

2. That the URC develop a template for Academic/Research Units to use in the development of Unit-specific web-sites for postgraduate research students by August 2003.

3. That all Academic/Research Units use the URC template to develop and/or review their current candidacy guidelines or handbooks and place this information on the web by the end of 2003. These guidelines should spell out:

- *how supervision happens in the unit (interpretation of general rights and responsibilities of Code of Practice-Supervision; what the Unit's practice is in relation to co-supervision, the use of supervisory panels, etc.);*
- *expectations of candidature milestones and how these are to be met;*
- *specific research requirements (eg. OH & S; work in progress seminars);*
- *provision of Unit resources for research students and resource restraints in relation to potential projects;*
- *how the Unit manages off-campus and off-shore candidates, including supervision and resource issues.*

4. That the Office of Research (OoR), in conjunction with Academic/Research Units, develop an Induction Folder for distribution to all candidates in Autumn Session 2004. The folder should contain as a minimum:

- *an index to the University's web-site for Postgraduate Research Students;*
- *an index to Unit-specific web-sites;*
- *a copy of the Code of Practice-Supervision;*
- *a statement from the Academic/Research Unit about how the Code of Practice-Supervision is articulated at unit level;*
- *a list of Unit level contacts;*
- *a statement from the Academic/Research Unit about how off-campus/off-shore candidature is managed;*
- *a copy of the 'Confirmation of Candidature' form (see 5 below); and*
- *information about support services.*

Recommendations – Management of Candidature
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5. That the Office of Research develop a 'Confirmation of Candidature' form to be implemented in 2004. This form is to be completed by all research students within the first six (6) months of enrolment and lodged with the OoR as a condition of continuation of candidature. The form should specify:

- *candidate details;*
- *individual acknowledgment by supervisors of the capacity in which each will act (based on the glossary of supervision);*
- *reasons for proposing sole supervision if this is the case;*
- *the agreed date for completion of the research proposal review;*
- *statement of facilities and resources required for the first and subsequent years of candidature;*
- *requirements for the management of off-campus/off-shore candidature if applicable (eg. frequency of on-campus visits, access to library and other facilities at the remote location, external supervisor details); and*
- *commencement and intended completion dates of the candidacy.*

6. That as part of the review of the Code of Practice-Supervision, the URC delete Appendix A and replace it with a series of questions aimed to assist students and supervisors to complete the 'Confirmation of Candidature' form.

Recommendations – Supervisor Professional Development

7. That the URC develop and implement a comprehensive professional development program for supervisors beginning in 2004. This program is to be built into the Career Development Record and should include:

- a comprehensive web-site of information for supervisors;
- an information session on supervision as part of the Career Development Unit (CDU) induction program for new staff;
- a mentoring program for new supervisors;
- workshops and information sessions for all supervisors; and
- training sessions for HPS and Heads.

8. That, as part of this program, a Professional Development Folder for Supervisors be developed and distributed to all supervisors. The folder should contain as a minimum:

- a copy of the Code of Practice-Supervision;
- Thesis Pack;
- an index to University web-sites for students and supervisors;
- information on professional development at the university and faculty level;
- current short readings on supervision;
- useful URLs on supervision and student support;
- information on how to access the fIRST web-site (for Improved Research Supervision Training);
- space for supervisors' own reflections and experiences; and
- case studies exemplifying good practice.

9. That, in consultation with WUPA, a Supervisor of the Year Award be made part of the Vice-Chancellor's awards as a way of recognising and rewarding excellence in supervision.

Recommendations – Supervision Workloads

10. That research supervision is adequately recognised through:

- supervision being included in workloads at Faculty/Unit level; and
- allocation of workloads that reflects the actual work associated with supervision.

Introduction

During the mid-1980s, Australian higher education literature critically addressed many aspects of research supervision. *Supervising Postgraduates* (Moses 1985, p. iii) aimed to "give the inexperienced supervisor some background, a 'feel' for supervision as well as practical suggestions". Connell (1985, p. 38) argued, "supervision has to be seen as a form of teaching. Like other forms it raises questions about curriculum, method, teacher/student interaction, and educational environment". Ten years later Yeatman (1995, p. 11) proposed greater formalising of the supervisor/candidate relationship through the keeping of supervision logs to incorporate "structure and reciprocal accountability in the relationship, as well as laying a paper trail for its conduct". The questions raised by these three authors - training for supervisors; understanding whether supervision is teaching or research; and tying supervision to a structure outside the interpersonal relationship to make the supervisory relationship both 'public' and accountable - remain central to research supervision in 2003. Current literature, especially the proceedings of the biennial *Quality in Postgraduate Education* conferences (since 1994), describes and evaluates many procedures Australian universities employ to address these questions.

Since the 1990s, the Commonwealth Government has given increasing prominence to universities as sites of research training and stipulates a critical need for universities to review their training practices for research supervisors (DETYA 1999a, 1999b). The Research Training Scheme (RTS) introduced in 2001 aims to increase completion rates, shorten completion time and reduce research student attrition and indicates that this should be done by focusing on student induction processes and supervisor training (DETYA 1999b).

The maintenance of research student numbers was identified as a priority in the University's Strategic Plan in 2001. The increasing number and diversity of research students has implications for the ways in which research supervision is practised (Pearson & Ford 1997). According to Pearson and Ford (1997, p. 9) "candidates may be using higher degrees for a range of purposes, including vocational purposes outside academia, to consolidate their expertise, reflect on their professional practice, or change career during their employment life". In light of an unequivocally altered research population, it seems that retaining former supervisory practices and related policies is to infuse current practices with outdated methods. In combination, these two major factors present direct challenges to the existing environment of higher research degrees and to prevailing patterns of research supervision and research training.

The University of Wollongong responded to the government's imperatives with a number of initiatives, including the creation of a Postgraduate Research Policy Committee (PRPC), Faculty Research Training Management Plans (FRTMPs), the appointment of a Postgraduate Research Student Manager, and the centralisation of research student administration in one office. In 2000, the University joined a national consortium of universities to develop the website FIRST (for Improving Research Supervision and Training) to provide supervisors with a range of professional development opportunities and resources. The Office of Research also introduced a series of supervision related workshops at faculty level. In 2002, the Educational Strategies Development Fund established a Category 4 grant to examine issues related

to research supervision. This report presents the findings of that study. The Project's two primary aims were:

(i) *To gain a better understanding of the needs of both research students and supervisors in relation to research education and training.*

(ii) *To develop a framework for the appropriate and effective professional development of supervisors.*

This study builds on the work of an earlier project which identified three interrelated issues as crucial for improved research supervision at the University of Wollongong: (i) supervisor training; (ii) accreditation and/or registration for supervisors; and (iii) research students acquisition of generic skills and attributes (Wright et al. 1997). That project recommended, "that the compatibility of supervisor's and supervisee's expectations not be taken for granted and that there is a need for explicit University wide and Faculty based guidelines" (Wright et al 1997, p. 35).

There are many factors that influence research supervision practices and Liston's (2001) study of postgraduate research supervision usefully divides these into "internal and external factors". The internal factors include supervisors' personal and professional attributes, while the external factors include workload, facilities and resources, research culture, and university structures and policies. A comprehensive body of literature already deals with the range of internal issues (cf Acker 1999, Delamont et al 1998, Elphinstone & Schweitzer 1998). We recognise the importance of the internal aspects and acknowledge that ultimately the candidature rests on the personal and professional approaches brought by all parties to the relationship. However, the direct impact of the RTS makes the external or systemic factors more pertinent for this project.

The importance of addressing the external factors impacting on research supervision is emphasised by Margot Pearson who conducted a large two-year study for DETYA *Open and Flexible PhD Study and Research* (Pearson & Ford 1997). Pearson says,

Without a framework which conceptualises doctoral education as more than an aggregation of individual supervisory relationships, there remains the danger of reducing it to a collection of tasks carried out by individuals, and to an over emphasis on rules and procedures to regulate their behaviour (Pearson 1999, p. 283).

Using such a framework, this project focuses on the 'context' of research supervision rather than on the supervisory relationship. Consequently, all matters related to the professional development and support of supervisors, and the research training of postgraduate research students, are discussed in terms of institutional structures and not the characteristics or personalities of individuals. Taking these internal/external distinctions into account we selected the following four categories as germane foci: Code of Practice-Supervision, Professional Development of Supervisors, Supervision Workloads, and Graduate Attributes and Research Training. These categories are not restrictively bounded; there is considerable overlap as demonstrated in the later discussion of each topic. The question of co-supervision, for example, is pertinent to every category but, for this report, it is presented mainly under supervision workloads.

Methods

To gain a better understanding of the needs of supervisors and research students, the project team conducted focus groups and web-based surveys, and sought feedback via a one-day open-forum. The data collection was undertaken during July to September 2002. Research supervisors and research students were included in all these data collection methods.

Focus Groups

Twelve focus group interviews were conducted.¹ Six focus groups of eight to ten participants were held with supervisors and one group was held with Faculty Research Committee (FRC) Chairs and Heads of Postgraduate Studies (HPS). Supervisors were recruited via a purposive sample in which project members nominated faculty staff as potential participants. The key criteria determining the selection of participants were: spread of disciplines and/or academic units; and division into two categories – 'new' supervisors and 'experienced' supervisors (more than 5 supervisions to completion). A general e-mail invitation to all academic staff was also used to reduce bias in the original sample.

The policy research and advocacy officer for Wollongong University Postgraduate Association (WUPA) organised and convened five student focus groups comprised of first year research students, near-completion students and International students. In addition to the focus groups, two project team members attended a Deans' Breakfast meeting and a URSC meeting where the matter of supervision workloads was discussed.

Anonymity was assured in approaches to all participants and is maintained throughout the data collection.² No individual person or his/her academic affiliation is identified in this report. To make participants' views visible and to demonstrate the complexity of issues concerned with research supervision direct quotations are interspersed throughout the report. All quotations used are representative of a range of similarly expressed views in each group unless otherwise stated. This does not indicate that all the views were shared but that participants seemed to accept that the responses that they were hearing from their peers were legitimate in their contexts. Contrary views are given where applicable.

Focus groups are an appropriate vehicle for gaining an understanding of the needs of both research students and supervisors in relation to research education and training because they provide a forum for participants to express views and raise issues with their peers. These forums, however, differ from in-depth or unstructured interviewing in that participants are not directly questioned about those views.

Web-based surveys

The project team was specifically interested in staff members' views on the issue of accreditation and/or registration of supervisors. To canvass their views, an anonymous web-based survey instrument was used. A similar instrument was used to survey the

¹ Attachment B shows the range and composition of these focus groups.

² Direct identification of the sex of any specific person is altered to read [s/he] or [his/her].

views of off-campus research students in relation to their experiences of supervision conducted at a distance. Staff and students were invited to participate in the survey via general e-mails. In total thirty-nine academics and twenty-two off-campus students responded.

Open-forum day

The project team organised an open-forum day on 27th September 2002 at the University to which all academic staff and all postgraduate research students were invited. There were over 100 participants (approximately 70% academic staff and 30% research students). The following papers were presented:

- Keynote papers:**
- Dr Angela Brew (University of Sydney) – 'Is research higher degree supervision teaching or is it research? What difference does it make?'
 - Dr Gerry Mullins (University of Adelaide) – 'Throwing light on the postgraduate experience: the assessment of research theses'.

- Presentations:**
- Dr Mary Medley – 'ESDF Project Findings'.
 - Dr Lenore Lyons – 'Professional Development Resources for Supervisors'.
 - Ms Sarah Lambert – 'Using SuperVise Software'.
 - Dr Jan Skillen – 'Postgraduate pedagogy: thesis writing and research training responsibilities'.

Opportunity was made available for the forum audience to participate in a dialogue session during which staff and students contributed their views on all aspects of research supervision practices. One fruitful aspect of this discussion is that very few matters emerged that focus group participants had not already raised.

The results of our study are presented in the following sections.

Code of Practice - Supervision

Codes of Practice-Supervision delineate the multiple responsibilities of all parties concerned with research candidacy. These regulatory documents are integral to higher education quality assurance frameworks. The University of Wollongong's current Code of Practice-Supervision (Preamble) states:

The responsibility to ensure that research is conducted in the most beneficial, efficient and effective manner is shared by the University collectively, its Academic units, its staff, and its students.

Further, the University's *Strategic Plan – Educational Development & Quality Assurance* (1997) stated that the Codes of Practice, including Supervision, "provide a contract between the student and the University and which act as the benchmark for best practice". The University's *Research and Research Training Management Report* (2001, p. 6) further stated, "all research supervision is guided by our Code of Practice-Supervision".

Informed by these statements, we consider the Code of Practice-Supervision (hereafter the Code) to be the common, university-wide context within which research supervision is practised. It provides the 'general' context while faculties/academic units' specific guidelines provide the 'specific' context of supervisory practices. We take this approach in order to focus attention on the system, rather than individual supervisors and students in relation to supervisory practices and related problematic issues. Our recommendations, therefore, address institutional structures.

Whittle (1994, p. 42) argued that a Code of Practice is important primarily because it "delineates the locus of responsibility for maintaining and monitoring academic quality and standards in research degrees". It does this by stipulating a university's rules and regulations in terms of the responsibilities to be exercised by the university, the faculty, the supervisor, and the candidate. Many Australian universities supplement their Code of Practice-Supervision at Faculty level with discipline specific procedures and conventions. At UOW such supporting information, where it exists, fails to stipulate how such arrangements are related to the provisions of the Code. We argue that if the Code is to become the central framework informing research candidacy and supervisory responsibilities, then supervisors and students must understand how it is translated into practice at the unit level. It becomes meaningless as a document if this is not the case.

The University: a 'general' context for research supervision

Based on the premise that the Code of Practice-Supervision underpins all supervisory practice the fundamental requisite is that all parties know about and have access to it. The University's Code (s1.7) states that "The University will provide each student with a copy of the relevant policies at enrolment, including: a copy of this document". Further, the supervisor (s3.1) is required "to advise students of their procedural and substantive rights and responsibilities contained in this Code of Practice-Supervision". The Code is available on the University website. Starting in 2001, a one-hour session, to provide research students with "an understanding of your rights and responsibilities under the Code of Practice-Supervision", was introduced into the twice yearly

Postgraduate Research Student Induction Program. The Office of Research also runs a one-hour information session on the Code for staff at faculty/unit level, and most faculties undertook such training in 2000/2001.

We found, however, that the Code seems to be little used by supervisors, as the following statements indicate:

Many academics are not aware of the Code of Practice or familiar with its contents. [New Supervisor]

The question is not 'how' is the Code of Practice used – but is it used? [Experienced Supervisor]

The system exists but many people do not know about it let alone abide by it. [FRC Chairs and HPS]

A few experienced supervisors reported that they responded to the recent "push" to use the Code and "followed it to the letter". They conclude that the current Code (especially Appendix A) is not "user-friendly". Their views also reflect how vaguely the Code is situated across the faculties as shown in these comments:

The Code should be a generic document containing general principles, and what to do when principles are not being met. Then some articulation of how general principles might work in practice. Then refer to the department or program for specifics;

The Code is flawed because it should protect students from bad supervision and there is great uncertainty about whether it does this;

The Code (including Appendix A) may be more effective if introduced to students in stages rather than as a first meeting requirement;

There are questions about its legal status that need to be addressed because some quasi-legal issues about responsibility raise anxiety. [Experienced Supervisors]

Some new supervisors found that the Code gives them a good framework or starting point and also works as a support reference for unforeseen problems. They regarded it as an improvement over what one described as "the trial and error system" that marked their own recent (or even current) supervision experiences. Others suggested that it is "only used in a reactive way for issues such as thesis examination procedures" and "addressing grievances". There was general agreement, in the new supervisors' focus group, with a statement that the Code suffers from a lack of clarity particularly regarding the distinction between guidelines and obligations. Two participants posed central questions that no other group participant was able to answer: "To what extent are UOW staff 'regulated' by the Code of Practice?" and "Which parts are guidelines and which parts will supervisors be held accountable for?"

A parallel lack of familiarity with the Code prevailed in the three student focus groups, although more recently inducted students were more aware of it. Half of the first year student participants knew of the Code; one near completion student was shown it by a supervisor; and one International student received it at orientation and another had it included in a faculty handout. However, as a first year student pointed out:

It needs to do more than just be handed out – there needs to be discussion about what it actually means - and what it means in practice - and how this will affect you.

Although most students saw the Code for the first time in the focus group, they were nonetheless prepared to comment on its purpose and potential use:

It is just a lot of motherhood statements that might be taken seriously by some people but it leaves room for slackness as well. What does access to a computer or regular meetings mean? [First year student]

It is just a document for recourse to in cases of problems – a sort of last resort. [Final year student]

It is a useful tool whose usefulness is limited to the extent it is known. [International student].

Similar views were expressed in the 1997 University of Wollongong *Supervision Working Party Report*:

A substantial number of students asked that more information be made available about 'contracts, rights and responsibilities, details of department/faculty equipment, supervisory guidelines/responsibilities and other entitlements', including policies, rules, procedures (Wright et al, 1997).

It seems fair to say that, since that 1997 report, few steps have been taken towards meeting students' demands and current students continue to seek greater formalisation and structure of their candidature.

Despite widespread support for the need for a Code of Practice-Supervision, there is one statement of resistance to it. One FRC Chair said, "hard and fast rules are short-sighted – students learn from each other and therefore need little supervision". However, staff and students in all the groups were generally, and in some instances strongly, supportive of clarification and formalisation of the supervisory relationship through adherence to a universal set of standards framed within a Code. They further argued that such a Code must be clearly linked to and supported by faculty-specific requirements.

The Faculty: a 'specific' context for research supervision

We argue that the Code must be supplemented with faculty-based documents to clarify unit level conventions, procedures and facilities. Furthermore, such documents must be widely available to students and staff. Without such supporting documents, the 'specific

context' of research supervision is concealed. A decade ago, Parry and Hayden (1994, p. 21) found that "only one-third of departments provide their students with specifically developed written guidelines". More recently Mullins and Kiley (1998, p. 3) pointed out that "there is very little on how these processes and systems operate effectively at the department level". They argued that:

the real challenge was to carry quality assurance processes through to a departmental level. There was no doubt that excellent supervision took place, but this was the result of a fortuitous coming together of good supervisors and suitable students. There were few processes in place to ensure that all postgraduate students in a department, not just those allocated to a good supervisor, had a quality experience (Mullins & Kiley 1998, p. 3).

The Council of Australian Postgraduate Associations, *A Strategy Guide to Postgraduate Supervision including the 1998 Model Code For The Conduct Of Postgraduate Research and Statement of Minimum Resources*, stated:

departmental guidelines is one of way helping to ensure that the actual practices of supervisors, departments and research centres are consistent with the obligations laid down in a university wide code of practice on supervision (CAPA 1998, p. 5).

We found that all faculties provide web-based information, including course rules, for research candidates. In some instances, the material is comprehensive. In others it is simply a list of names of supervisory staff who are current or potential supervisors. The information is often out-of-date or incorrect. The Office of Research website defines the roles and responsibilities of research supervisors with a link to the Code of Practice-Supervision and yet, supervisor and student participants in this study were unaware of this web-based material. This points to a communication problem that seems to have occurred with the shift from previously available faculty handbooks to the web-based format.

Experienced supervisors told us that they saw a need for documents that spell out how their unit's specific procedures are related to the generic Code of Practice-Supervision. They argued that, currently, both supervisors and students "miss out on the commonsense stuff that was included in previous faculty-based incarnations". The systemic flow-on from provision of faculty-based procedures, they said, would be "shared knowledge between supervisors from different areas rather than everyone reinventing the wheel". A new supervisor pointed out that the increasingly common practice of inter-disciplinary supervision adds further pressure for provision of faculty-based documents to give "greater consistency and common points of reference between faculties".

Academic staff highlighted that the many disciplinary differences in the conduct of research necessarily influence faculties/academic units' supervisory practices and thus make faculty support for a generic Code a vital requirement. Evans and Pearson (1999, p. 186) depict differing supervisory approaches as ranging from "overseeing to benign neglect". DETYA described the disciplinary differences this way,

the experience of science students is typically within a tight knit community of researchers among whom the supervisor is but one (albeit important) source of guidance and support. At the other end of the scale, social sciences and humanities' students tend to work in a more intense relationship with their supervisors in the absence of highly integrated research cultures (DETYA 2001, p. 6).

The practical implications of such disciplinary differences for supervisory practice arose many times in the focus groups. One of the main issues concerned supervisory 'meetings'. Some science students and supervisors 'see' each other on an almost daily basis 'at the bench' and supervisors and students were unsure about requirements for any other 'formal' meetings. In contrast, social science and humanities students wanted, in the words of a near-completion student, "a precise elaboration of the minimum standards for frequency, duration and spread of meetings". A first year student (reflecting his/her experience) laughingly asked, "if you see your supervisor going down the corridor does that constitute a meeting?"

There is a considerable lack of basic information among research students about their entitlements within the academic/research unit. Students reported that their supervisors were frequently unable to answer their questions and consulting other students is often their only means of obtaining (mis)information. Their queries ranged from matters as simple as provision of disks and photocopying allowance, to access to resources (particularly computers and specialist software) and conference funding. Faculty clarification of these issues would reduce frustration and time wasting. Students also raised the far more serious matter of intellectual property and their uncertainty about how this is dealt with by their faculty.

Off-Campus Research Supervision

There is now substantial evidence that, in the broad context of Australian universities, the research student profile has changed and the practices of research supervision must accommodate those changes. Evans and Pearson (1999, p. 185) contended, "the future of postgraduate research is going to be based on research students who complete their doctoral research and study in varying forms of 'flexible' or 'mixed-mode' study". To date, however, the explicit needs of part-time research students and their differing supervisory needs have not been addressed "except in terms of professional doctorates" (Evans 2002, p. 161).

In many respects, both part time and off-campus research students have existed at the margins of established research degree traditions, although this has typically been through informal or *de facto* means, for example, university staff members 'working' full time at their university (Evans & Pearson 1999, p. 194 emphasis original).

Margot Pearson (4/2/03) said that what is needed is a systemic response to student diversity is needed that does not regard employed or part-time candidates as 'problems'. Terry Evans referred to part-time research students as a "reserve army of research labour" and added,

they have generally been invisible in government policy on research training, and have rarely been the focus of specific treatment in universities, where the full-time scholarship holder is the norm (Evans 2002, p. 138)

To examine the implications of the changing research candidate population for supervision at UOW, we used a web-based survey to canvass the views of off-campus students (those who are either geographically at a distance from this campus or are seldom on-campus because of employment or other circumstances). Twenty-two respondents self-identified as off-campus research students³ and answered these three questions: -

- What does the University of Wollongong do well in regard to research supervision?
- What issues or problems do you face as an off-campus student?
- How could supervision for off-campus students be improved to provide you with better support?

The majority of respondents were positive about both individual supervisors and UOW support services. Several respondents indicated that their supervisors accommodate personal, professional and shift-work circumstances particularly in regard to meeting times. These respondents also acknowledged, their supervisors' workload. Library staff were acknowledged as "excellent" and the Orientation Program as providing "extensive information", "academic contacts" and "confidence to embark on studies". These are indicative examples:

I have two excellent supervisors. They both are very supportive of my particular situation (working full time in Sydney while completing MA). They have gone out of their way to ensure that I can continue with my work. We meet regularly, but in the evenings. These regular meetings are absolutely vital for me to maintain my enthusiasm and motivation, and to keep on track with my work. My supervisors risk having their work with me overlooked. ... Spending extra time in the evenings working with me is great, but I'm aware that this kind of work is probably invisible to their colleagues and is done in addition to an already overfull working day [Off-campus student].

I think the whole infrastructure here is really quite sound and comprehensive. Everything that I need to do this research work exists somewhere within this organisation (i.e. UOW). I feel also that the calibre of the academic staff and support that I have come in contact with is also quite sound [Off-campus student].

While the favourable assessment by off-campus students of their supervisors was encouraging, it must be noted that their responses were related to what we earlier described as the 'internal' attributes of individual supervisors. When we asked, "what

³ Presently the percentage of off-campus research students (full-time or part-time) cannot be identified in the whole research student cohort. It would be to the University's advantage to hold accurate information regarding this mode of candidature and consideration should be given to future inclusion of this data as part of the enrolment process.

issues or problems do you face as an off-campus student?" the responses pointed to 'external' or structural issues. Seven respondents had difficulties related to supervision meeting times, particularly cancelled meetings due to a supervisor's other University commitments. For example,

1. Contact with supervisors. It is difficult to make a time and not unusual for the meeting to be cut short or cancelled due to faculty meetings or commitments. This has been frustrating when I have driven from Sydney for the meeting. 2. Getting feedback from my supervisors. There seems to be about a 5-6 week lead-time required because of their other commitments! [Off-campus student].

I made an appointment to see my supervisor last week. I was only in [his/her] office for 5 minutes and there was a long queue outside [his/her] office. I left after 15 minutes, as I felt uncomfortable with people waiting outside the office, waiting for their turn. This is not the first time this has happened. This is so frustrating for me as I had to make an early appointment and took a day off to see my supervisor [Off-campus student].

The problem is not being off campus but rather the availability of supervisors to talk to or to give feedback. It appears their load is too large to meet the needs of students. Supervisors should not accept more students than they are physically able to work with [Off-campus student].

The other most frequently reported difficulty related to a lack of contact with the Faculty and other research students. The term 'isolation' and expressions, such as, "I feel isolated – out of touch with the University" were thematic in the responses. For example,

Lack of contact with other people in the department. Often I don't feel like I am part of University life. In some ways, this is a bit alienating. I feel I could contribute more, but I am never asked to do so, because I work alone and don't get to meet anyone other than my supervisor. I even asked to be introduced to the dean, but [s/he] wasn't interested in meeting me [Off-campus student].

My biggest problem is the extreme sense of isolation I experience, due to my lack of contact with fellow students, and lack of any sense of involvement in the departmental community. I really miss the feeling of being an active part of a research group, and the intellectual stimulation and camaraderie that goes with it. It is also easy to lose sight of how my research fits into the wider scheme of things when I cannot discuss my own or others research with other people [Off-campus student].

Another important issue is that I am unable to take advantage of the various workshops that are held on campus, such as on writing techniques, getting research published, etc. I also wouldn't mind

betting that more off-campus post-grad students (at least those who left most of their support networks behind when they left Wollongong) might be in need of student counselling services more than on-campus students. On-campus students are more likely to discuss their problems with fellow postgrad students; off-campus students usually don't have that option [Off-campus student].

Some other difficulties that students experienced were related to support services: returning/borrowing library books within the allowed times, lack of essential software (for either the student or supervisor) and unsatisfactory email service. Other difficulties were of an individual nature and therefore more a matter of individual negotiation than policy. These included issues such as the financial burden of accommodation for students travelling a long distance to campus for supervision meetings or the difficulty in finding parking in the limited amount of time employers allow to attend supervision meetings.

The University needs to address how it might better facilitate supervisory arrangements for off-campus students. Pearson and Ford (1997, Ch 3) discussed a range of "flexible structures and mechanisms for PhD supervision" that UOW faculties could take into consideration in developing policy appropriate to their discipline specific procedures. Their examples showed a number of universities' strategies that are "primarily a matter of being more adaptive and attentive to the needs and interests of the individual student, through the provision of programs of research and study which are differently structured from traditional ones" (Pearson & Ford 1997, p. 37). Ways of assisting off-campus students (and indeed full-time on campus students) to overcome a sense of professional, social and intellectual isolation need not all devolve to supervisor/s.

Where students are mature professionals, some of their need for intellectual exchange can be met most productively from peer exchange. ... Contact with other researchers, the more junior and the established, will expand their intellectual horizons. These approaches provide that critical mass for intellectual development which otherwise can be absent for an off-campus student (Evans & Pearson 1999, p. 200).

Given the growing trend towards off-campus research training and education it is in the best interests of the University to address the issues facing these students. It is especially important to implement faculty level measures geared towards greater inclusion of these candidates into a collegial environment and to address the specific impact of these students in supervisory workloads. Terry Evans stated that this form of education ultimately produces doctoral graduates who

are very impressive people, whose work gets published, some have a profound effect in their workplaces, and a few (especially international students) even affect national and international practices. ... They are not 'doctored' washers-uppers of dishes or taxi-driving PhDs, they are doing important jobs for the community and/or economy (Evans 2002, pp. 138-139).

This overview of factors related to the Code of Practice-Supervision and their specific impact on research supervision at the University, leads to our recommendations:

1. That the University Research Committee (URC) revise the Code of Practice-Supervision by the end of 2003, to:

- *include the responsibilities and expectations that are common to all units and individuals involved in the supervision process;*
- *ensure that good management practices are clearly described for research units and academic units;*
- *include a statement of minimum resources for all students;*
- *define the meaning of supervision in the context of research training and education;*
- *include a glossary of supervision containing broad definitions of the ways in which supervision may be practised (eg. co-supervision, joint supervision, supervisory committees etc.); and*
- *include a glossary of terms associated with candidature (eg. on-campus, off-campus, off-shore, distance).*

2. That the URC develop a template for Academic/Research Units to use in the development of Unit-specific web-sites for postgraduate research students by August 2003.

3. That all Academic/Research Units use the URC template to develop and/or review their current candidacy guidelines or handbooks and place this information on the web by the end of 2003. These guidelines should spell out:

- *how supervision happens in the unit (interpretation of general rights and responsibilities of Code of Practice-Supervision; what the Unit's practice is in relation to co-supervision, the use of supervisory panels, etc.);*
- *expectations of candidature milestones and how these are to be met;*
- *specific research requirements (eg. OH & S; work in progress seminars);*
- *provision of Unit resources for research students and resource restraints in relation to potential projects;*
- *how the Unit manages off-campus and off-shore candidates, including supervision and resource issues.*

4. That the Office of Research (OoR), in conjunction with Academic/Research Units, develop an Induction Folder for distribution to all candidates in Autumn Session 2004. The folder should contain as a minimum:

- *an index to the University's web-site for Postgraduate Research Students;*
- *an index to Unit-specific web-sites;*
- *a copy of the Code of Practice-Supervision;*
- *a statement from the Academic/Research Unit about how the Code of Practice-Supervision is articulated at unit level;*
- *a list of Unit level contacts;*

- a statement from the Academic/Research Unit about how off-campus/off-shore candidature is managed;
- a copy of the 'Confirmation of Candidature' form (see below); and
- information about support services.

A formal arrangement for research supervision

As universities implement quality assurance frameworks to ensure that their practices and policies are both transparent and evidence-based, there is a move towards introducing greater accountability into the supervisory relationship. Recent innovations, especially those presented in the *Quality in Postgraduate Research* conference papers (1998, 2000, 2002), indicate a trend towards greater management of candidature through administrative structures. In his keynote address to the *Quality in Postgraduate Education Conference* Green (2002, p. 12) made a clear case for "guidelines for supervisors and for students setting out their respective responsibilities, with the arrangements to be embedded in institutional procedures".

Traditionally, research supervision was practised within a master/apprentice system. Such an approach was established in times of fewer research students and fewer government completion time requirements. Yeatman (1995, p. 9) described the master/apprentice system as a formula:

which has prevailed until now, and which has been accepted custom and practice ... contextualised within, a traditionalism, that is, a customary set of norms accepted *because* they represent the way things have always been done.

Within such a system, idiosyncratic approaches to supervision prevailed and "academic staff have assumed responsibility for supervision on an *ad hoc* basis ... this has resulted in the quality of supervision ranging from excellent to very inadequate" (Whittle 1994, p. 43). Moodie (2003, p. 25) reported that, "traditional university research and research supervision has been individualistic and somewhat laissez faire". That is, candidature appears to be established extemporaneously with few clearly formalised arrangements. Also arguing for reform Love and Street (1998, p. 150) claimed that the master/apprentice system produces "approaches to research supervision [that] come laden with implicit assumptions and values about the nature of learning, the goals of research degrees, and the best ways of achieving these goals. The golden age, if it ever existed, has well and truly passed". Similarly, Pearson and Ford (1997, p. 106) stated:

Good practice is to have a clearly articulated framework of policies and procedures, well documented, with clearly defined accountabilities, support for supervisors and students, and coordination of practice. Laissez-faire approaches create fissures and disharmonies which will lead to problems for both students and the institution. In addition candidates need to have a clear presentation at entry as to what is expected, rules and requirements, entitlements and opportunities.

Staff and students who participated in the UOW study suggested that the quality of supervision within the University varies considerably and that it continues to rely in large part on supervisors' individual attributes. Many students feel that their negative experiences could be directly attributed to a lack of adherence to the Code. To take just one example, a near completion student reported s/he experienced active faculty encouragement to enrol as a PhD candidate and was then allocated a sole supervisor who was overseas for the first six months of the candidature. This explicitly contravenes several Code responsibilities: that academic units "ensure that high quality supervision is provided continuously throughout the research period" (2.7), "the overriding responsibility of supervisors is to provide continuing support to students ... (3) "to maintain regular contact with the student ... (3.5), and "arrangements to be made to provide for supervision during absences" (6).

Attempting to move away from the inherited master/apprentice system and implement changed supervisory practices, Yeatman (1995) proposed a system of 'contracting' between supervisors and candidate and the provision of 'graduate student logs' where candidates write for their supervisor a two-page account of the supervision meeting. She (1995, p. 10) described these as, "infra-legal mechanisms of contractual relationship, which, within the relationship concerned, embed ways of making both parties accountable to each other for their respective parts within a shared project".

In 1999, UOW designed Appendix A (in the Code of Practice-Supervision) to afford a level of formal contract or agreement between supervisors and candidates. Like the Code itself, it is little used. Where it has been used this was done in a 'private' way between candidate and supervisor without any external or structural involvement. Research supervisors expressed the following opinions about current use of Appendix A and its potential impact for supervisory arrangements:

Appendix A could be useful because familiarity with the Code of Practice is central to it. [new supervisor]

There is good use for Appendix A but people have to be encouraged to use it. [experienced supervisor]

Appendix A is not used – it should be distributed to supervisor and student at each new student enrolment as a trigger for raising awareness. [FRC Chairs & HPS]

This sort of model is problematic in that is given as a stick and not a carrot. [FRC Chairs & HPS]

Quality of supervision is not the issue – it is the personal problems of candidates. We need to provide supervisors with the skills to manage students with these problems. [Dean]

Obviously, because the student groups reported very little exposure to the Code, Appendix A had very limited use. In each group, however, some realised that in looking at Appendix A for the first time, some of the issues it covers were dealt with in their supervision in an informal way. There was general agreement, with some reservations in all the student groups, that greater formalisation of their candidatures would be an

advantage. From their perspective, near completion students, with a number of years' supervisory experience, said:

There'd be no problem with having Appendix A as the basis for a formal, contractual relationship.

Contracts can always be varied by agreement.

Core minimum standards regarding intellectual property are very important for students and this needs to be clearly spelt out at the beginning.

A contract or checklist, signed at the beginning, would be a good way of making sure you're aware of rights, issues etc and this would be right from the start.

There was consensus from the International students group that a formalised agreement would be to their advantage for a number of reasons including:

formalisation could be a means for us [International students] to keep a focus on the project because we have more limited course time;

Appendix A could make clear what the minimum standards are re meeting arrangements and guidelines about feedback on written work.

The reservations student groups expressed were:

contract has some worrying legal implications because students are not always aware of the full implications of what they are signing at the beginning of candidature. [Near-completion student]

the power imbalance of student and supervisor should be kept in mind. Students are not always able to negotiate with them. [International student]

academic units should give people a list of what they should have access to – so they [students] are not afraid to ask. [International student]

there can be a danger in focusing on an instrument like that [Appendix A] when staff development in supervision might be more productive. [First-year student]

Registering candidacies (through confirmation of candidature) may be a fruitful way to ensure supervisory arrangements become formal, 'public' and explicit rather than implicit and also eliminate establishment of 'private' or 'ad hoc' arrangements. Furthermore it is, as Yeatman (1995, p. 10) argued:

in a department's interests to provide good ('quality') service to its graduate students, both to hold onto them and to gain a reputation for

good completion rates in a context where there is increasing scrutiny of this aspect of academic performance.

A statement made at the FRC Chairs and HPS meeting suggested "formalising supervision arrangements should aim at encouraging good management practice without being too prescriptive and without creating a climate of fear". Under our proposed *confirmation of candidature system* current supervisors' satisfactory practices would not be held up for scrutiny and at the same time fears of bureaucratic intrusion into supervisory relationships should be assuaged. In order to achieve this, we contend that it is timely to set in place a documented supervisory arrangement, agreed to by every party, drawn up within the terms of a faculty-based supplement to the Code of Practice-Supervision, and formally linked to an external structure. Therefore, we recommend:

5. That the Office of Research develop a 'Confirmation of Candidature' form to be implemented in 2004. This form is to be completed by all research students within the first six (6) months of enrolment and lodged with the OoR as a condition of continuation of candidature. The form should specify:

- *candidate details;*
- *individual acknowledgment by supervisors of the capacity in which each will act (based on the glossary of supervision);*
- *reasons for proposing sole supervision if this is the case;*
- *the agreed date for completion of the research proposal review;*
- *statement of facilities and resources required for the first and subsequent years of candidature;*
- *requirements for the management of off-campus/off-shore candidature if applicable (eg. frequency of on-campus visits, access to library and other facilities at the remote location, external supervisor details); and*
- *commencement and intended completion dates of the candidacy.*

6. That as part of the review of the Code of Practice-Supervision, the URC delete Appendix A and replace it with a series of questions aimed to assist students and supervisors to complete the 'Confirmation of Candidature' form.

One of the difficulties in moving away from past practices is that a change of existing culture is as necessary as the introduction and communication of new policy. For this reason, urgent attention should be given to professional development of supervisors.

Professional Development & Accreditation of Supervisors

An effective supervisor-training program is recognised as a core component of professional development for academic staff (Elton 1994, Johnson 1995, Brew & Peseta 2002). With the introduction of the RTS in 2001, universities are now required to document the level and extent of supervisor training as part of their Research and Research Training Management Plans. The University of Wollongong's *Research and Research Training Management Report 2001* specifically identified supervisor training as one of its key objectives for ensuring a Quality Research Training Environment. While most of the university-wide arrangements for research students are the responsibility of the University Research Committee, the task of executing these arrangements rests with the faculties, and specifically Deans who are required to document the level and extent of supervisor support and training in their FRTMPs. The importance of supervisor training is expressed in the following statement:

Supervision is a teaching activity and academics traditionally learn how to teach, not through training, but from their experience as students and teachers. ... At the level of research supervision, where there is usually a unique student experience ... learning from experience can hardly ever be an adequate preparation (Elton 1994, p. 26).

The University's *Enterprise Agreement (Academic Staff) 2000 –2003* (24.6) states, "the parties agree that training supervisors to effectively perform their role is vital to the success of the career development system". Furthermore, the University will ensure that:

- the supervisor training program is run annually;
- all supervisors who have not been trained previously will be required to attend such training;
- supervisors will not perform supervisory functions until they have received training or interim training pending attendance at the next annual program;
- previously trained supervisors will be required to attend an update session every 3 years;
- the Union is invited to participate in and contribute to the training of supervisors; and
- supervisor training should incorporate explicit attention to equity issues.

With professional development so clearly set into the University's academic Enterprise Agreement policy, it is no longer an optional extra. We found, however, that there is a major disjuncture between the EB agreement and *deployment* of its claims into practice in relation to supervisor training and professional development for supervisors. No academic focus group participant, URSC member or Dean gave any indication that they had received, or were aware of, any supervisor-training program at the University. Academic responses to the web-based survey indicated desire for supervision training, again without any awareness that such training is, or should be, available to them.

Supervisor perceptions

The following two responses are indicative of many responses received via the project's web-based survey question – "What would best support you with issues or problems in your supervisory role?"

A training program for supervisors.

Adequate training in all aspects from processes and procedures through to more stylistic and philosophical issues. I think that this will only be done well if there are training opportunities geared to each level of the uni hierarchy ie. University-wide, faculty-specific and discipline oriented. This should include the opportunity for new supervisors to mix and discuss issues with experienced supervisors.

Two new supervisors, who had previously worked in other universities in which supervision training was obligatory, expressed surprise that this is not the case at the University of Wollongong. From this group, it was also suggested that, "learning to be a supervisor is an ongoing process, therefore the professional development should also be ongoing". A very apposite analogy was given by a new supervisor reflecting on having to learn, as a parent, about an unknown team sport recently taken up by his/her children. "You can't understand the game just by reading the rules. You also understand through a description of how to play the game".

Overall both new and experienced supervisors were open to the idea of supervisor training. A minor distinction between the two groups was that new supervisors took a broad view of professional development as encompassing a range of methods including formal training, mentoring and guidance from experienced peers and, most importantly for them, collegial engagement. Experienced supervisors, on the other hand, saw supervisor training more in the form of mandated formal instruction. Several in that group quickly reiterated one participant's expression, "more hoops to jump through".

New supervisors expressed keenness for a mentoring system that, in the words of one, "is not just a matter of being allocated to someone. Guidelines on what to look for in a mentor would be useful". Another added, "mentoring does not necessarily need to be faculty-based. Sometimes it's helpful to get advice from someone removed from the situation". Survey respondents also nominated collegial engagement as the aspect of professional development they would most like to see. Eleven respondents made statements such as "access to colleague support" or "a talk to the head of department or another experienced supervisor would be very useful".

To an extent, the supervisor focus groups exemplified why supportive collegial activity is highly regarded as an aspect of professional development. The group of new supervisors asked that an e-mail list of the group be compiled and distributed as a way of enabling academic discussion between them about issues they encounter in practising research supervision. In the experienced supervisors' group, a cordial exchange between two colleagues demonstrated how two diametrically opposed supervisory actions to a particular student issue, each effectively achieved its aim. That engagement ideally illustrates a number of points, (i) that research supervision is not restricted to a single approach, (ii) there is not 'one right way' to practise supervision thus 'prescription' is not

useful and, (iii) that collegial engagement functions as an effective means of professional development.

Some members of the experienced group voiced wariness that a "requirement" for training might "produce robots" or a voluntary system where "those people needing help the most are least likely to seek it out". Workshop models of training, one experienced group member said, "can create dilemmas for participants in conceiving of that thing which has to be learned". One of two participants who had experienced professional development at other universities said, "acknowledging one's own supervisory limitations in a public environment may be daunting but it is a very useful reflective act". One experienced supervisor expressed a view quite opposed to supervisor training on the grounds that, "research supervision is a creative exercise. Generic training takes the creativity out of the process".

At the heart of the tensions surrounding supervisor training is the question of whether research supervision is classified as 'teaching' or 'research'.⁴ Angela Brew argued the one-to-one supervisory process is influenced by whether supervisors think of their role as a form of teaching or an extension of their own area of research: "So if we are to improve research higher degree supervision we need to understand more about the relationship between teaching and research at the postgraduate level" (Brew 2002). Supervisors' views of the relationship between teaching and research at the postgraduate research level are influenced by their own experiences of supervision. Shannon (1995, p. 14) claimed that:

Supervision clearly involves research, but I would claim that it also involves teaching: teaching of a special sort. Like other teaching, it is sometimes approached in the same way a supervisor was supervised (or diametrically opposed to it, depending on the experience).

Shannon's statement, however, assumes that all supervisors have a research degree themselves and therefore have experienced supervision. This is not always the case. Many UOW supervisors noted that they received poor or no supervision in undertaking their own research degree, seemingly without recognising the inference that a higher research degree can be achieved without appropriate supervision.

Student perceptions

CAPA (1998, p. 8) proposed "CAPA and its affiliated postgraduate associations should be consulted on academic training where it impacts on postgraduates". In line with this a focus group was held with near completion students on Professional Development for Supervisors. Participants suggested, "it would be useful to get them [supervisors] together to discuss approaches" and "maybe it shouldn't be compulsory but a package of resources and support materials would be good". When asked, 'what is good supervision?' the group made a number of comments. These equally divided around functions (eg. providing timely, quality feedback, able to define/refine the project, knowing what constitutes specific parts of the thesis) and relationship issues (eg. having interpersonal skills for the relationship, basic training in conflict resolution, higher

⁴ This question is dealt with in more detail in the following section Supervision Workloads.

awareness that different students having different needs).

The majority of students in the focus group claim that they had not experienced 'good' supervision. And their accounts of supervision experiences illustrated this. They reported: a lack of supervision meetings, lack of feedback on written material, supervisors' poor written English. The single satisfied participant had three sole supervisors during his/her candidacy and said that each of the three was "exactly the right person for the stage that the thesis was at". However, s/he went on to attribute this to "good luck" rather than faculty practices of allocating appropriate expertise or meeting contingencies, such as staff leaving the university.

Accreditation of Supervisors

If postgraduate supervisors undergo a program of supervisor development, how can this be recognised and rewarded? Supervision is, after all, intended to lead the student to success in their thesis examination. The assessment of performance on a supervision development program thus presents interesting challenges (Brew & Peseta 2002, p. 190).

The issue of professional development for supervisors leads to a number of contentious questions:

- Should supervisor training be conceptualised as a supportive entitlement for academic supervisors or a bureaucratic imposition?
- Should undertaking prescribed professional development result in recorded accreditation?

Discussion about the benefits of professional development for academics and its flow-on effects of improved supervisory practices for supervisors and students is beginning to appear in the higher education literature. However, there is limited information around the related question of Accreditation and/or Registration of Supervisors. In fact, the terms are often used interchangeably although they are clearly not synonymous. Accreditation appears to have two meanings. In the first, which is the one most commonly used, simply being a university staff member infers accreditation. In the second, an accredited supervisor is one who is formally entered on a Register. Taking a step beyond accreditation many Australian universities have established a 'Register' of research supervisors (eg. Swinburne, UTS). In some instances, this raised problems associated with the process governing removal from such a Register.

At UOW, thirty-nine academics responded to the web-based survey question, "Are you supportive of formal accreditation and/or registration as a requirement for supervisors?" Five respondents gave an unqualified "Yes" response and there was one unqualified "No". The qualified yes/no responses were exemplified by these three examples:

YES - If it is conducted in a skill building way – ie. if staff are accredited through a process of workshops (beginners, experienced, new rules and requirements) and requirements for joint supervision to build and share skills.

YES - Very much so, but it needs flexibility and adaptability eg. training could be tailored such that experienced supervisors take on the role of mentors – that might address the reluctance to undertake accreditation because it recognises and values past experience.

YES - But only using 2 criteria applied to newly appointed academic (and research-only) staff:

(i) Quality of their research track record, assessed by a small panel at University level (perhaps via research committee). Do they have a doctorate themselves? Have they published? In strong international journals? Do they have at least one clear line of research activity? If not, they should be qualified to supervise only as a member of a supervisory panel until these base-line criteria are met.

(ii) Supervisory ability and support for the student. Have they successfully supervised Honours research or postgraduate research students before? If not (but if (i) above is satisfied), then the Head of the Academic Unit should be required to certify that there is a supervisory committee for each of their students, including at least one experienced supervisor.

NO - Supervision is a matter of personal style within guidelines. Postgraduates have consumer choice – they can always change to another supervisor.

NO - There is a mistaken belief prevalent in some parts of the university that form filling can be equated with quality. The more time we spend trying to improve measuring of quality detracts from producing quality.

NO - This seems to me to have the potential to become another process like the compulsory ITT course, which has been a waste of my time and difficult because of the incredible workloads at this university. For this reason I suggest that it be carefully considered whether yet another initiative, founded on a 'deficit' or acting on the minority who are not doing well should be imposed. To my mind, it is much better to work from a positive perspective, and encourage people to engage in these 'enriching activities'. Compulsory measures work against this sort of ideal.

Students in the focus groups strongly supported the idea of a register. They agreed that "a register would encourage students to go to registered supervisors, then other supervisors would get fewer students, which would encourage them to do professional development".

We consider that the university should consider introduction of a system of accreditation of supervisors, but should not do so immediately. However, we propose that a program of professional development for all supervisors, and a stronger emphasis on the administration of candidature will address many student concerns about the formalisation of supervisory arrangements. When these measures are both in place and

functioning the University must then give attention to the question of accreditation of supervisors and how best to implement this. Our recommendations on these issues are:

7. That the URC develop and implement a comprehensive professional development program for supervisors beginning in 2004. This program is to be built into the Career Development Record and should include:

- a comprehensive web-site of information for supervisors;
- an information session on supervision as part of the Career Development Unit (CDU) induction program for new staff;
- a mentoring program for new supervisors;
- workshops and information sessions for all supervisors; and
- training sessions for HPS and Heads.

8. That, as part of this program, a Professional Development Folder for Supervisors be developed and distributed to all supervisors. The folder should contain as a minimum:

- a copy of the Code of Practice-Supervision;
- Thesis Pack;
- an index to University web-sites for students and supervisors;
- information on professional development at the university and faculty level;
- current short readings on supervision;
- useful URLs on supervision and student support;
- information on how to access the *FIRST* web-site (for Improved Research Supervision Training);
- space for supervisors' own reflections and experiences; and
- case studies exemplifying good practice.

9. That, in consultation with WUPA, a Supervisor of the Year Award be made part of the Vice-Chancellor's awards as a way of recognising and rewarding excellence in supervision.

Supervision Workloads

Brew's (2002) argument for a greater understanding of the relationship between teaching and research at the postgraduate level reaches beyond the interpersonal supervisory relationship and the manner in which research supervisors engage with their students. Understanding the balance between research and teaching, and clearly situating research supervision within these, is vitally important at the structural level for formulation of Faculty Workload activities. As a University of Wollongong academic at the open-forum day pointed out: "supervision does not have its 'own space' in the academic workload".

The management of supervision and the management of supervisors themselves are separate processes which have administrative and pedagogical sides. (Shannon 1995, p.14)

This section is about the management of supervision through supervision workload policy and draws on Shannon's distinction between the management of supervisors, as academic persons, and management of supervision workload as university and/or faculty policy. We regard individual supervision workloads as a Faculty matter. Therefore, this report refers to **supervision workload** rather than **supervisor workload**. It begins, however, with a notable emphasis concerning supervisors: *no supervisor in this study expressed dissatisfaction at being a supervisor*. What supervisors did acknowledge is that many of the difficulties underpinning their research supervision directly relate to the ill-defined place of supervision in academic workloads. An experienced supervisor in the focus group expressed it this way: "the nebulous state of supervision allows it to be put aside". An academic participant in the open-forum proposed that the key problem this project should address was "workloads and adequate support for supervisors; that is recognise the importance and value of supervision". These comments typified much of the discussion around workloads at the forum. A recurrent theme was the lack of time to do supervision well and how academic work was prioritised for survival in ways that left supervision behind other more pressing demands on an academic's time.

In the focus group interviews, students, as well as supervisors, also pointed to time as a major constraint influencing the quality of supervision. At the same time, participants in the experienced supervisors' focus group indicated again and again that they do not see time spent on the actual nature of supervision as a problem. All of those experienced supervisors gave clear evidence of Manderson's (1997, p.132) assertion that,

A student can expect her supervisor to give generously of her time. ... supervision is part of the job description of an academic as basic as teaching, research or publication. ... supervision of students is not a chore but a privilege. ... A teacher can always refuse to supervise a student if she does not have the time or interest. Once accepted, however, supervision is time intensive. This is its nature, not its problem.

Supervisors do give generously of their time, but from the supervisors' and the students' point of view this is a constant pressure and one where it is often difficult to keep, when there is pressure to take more students and to fit them into existing work loads. One

experienced supervisor, for instance, spoke about conducting weekend supervision meetings at home because his/her entire weekday on campus time is allocated to other work.

Any moves to improve the quality of supervision and increase timely completions must take into account the intensive work that good supervision involves and then precisely ascribe appropriate time for supervisors to undertake that work. Whereas the *Enterprise Agreement (Academic Staff) 2000 – 2003* pays specific attention to **supervisors** in relation to professional development, no explicit reference is made to **supervision** as part of a workload. Supervision occupies an unspecified place among the elements of 'teaching, research and scholarly activity'.

Higher education literature in general offers little material about supervision workload. Shannon (1995, p. 14) stated that, "a thorny issue is recognition of supervision as part of the workload of an academic, and then giving credit for it when teaching duties are allocated". However, he did not elaborate any solution. Melrose (2002) reported on an audit she undertook of supervision workloads in New Zealand universities and provided examples of Workload Guidelines for Postgraduate Supervision (Melrose 2002, pp. 96-97). She commented that, while supervisors perceive a difference between areas of their research and teaching in supervision, they often also recognise that there is an overlap.

The discussion about whether supervision is research and/or teaching has been a feature of much of the recent literature on the nature of supervision. While this literature is primarily concerned with the relationship between the supervisor and candidate, it also has implications for the 'workload' debate. Although higher education literature seems to support Green and Lee's (1999, p.209) statement, "a deep-seated prejudice exists in the modern university which systematically privileges research over teaching", the participants in the focus group of experienced supervisors expressed the view that, at this University, teaching is the privileged option. What they were suggesting perhaps was that when it comes to prioritising time and allocating load, coursework teaching has first preference. The privileging of either research or teaching is problematic in seeking to establish a supervisory workload.

Another approach that has been taken to supervision workload is the assumption that it is primarily (or even solely) about expectations of numbers of students per supervisor. This was particularly evident at the meetings with the Deans and with the members of the URSC (most of whom are FRC Chairs) where most of the comments about workload models seemed to be concerned with numbers of students and/or covering faculty supervisor load. It seemed to be assumed that supervision 'workload' could be dealt with adequately by restricting numbers. In contrast to the comments at the forum and from the focus groups, there were few references to time as a constraint on the quality of supervision. Certainly as Pearson and Ford (1997) suggested, any consideration of workloads however must not become formulaic, but should involve a discussion of what supervision entails. Clarification of this issue may provide a more valuable approach than equating a blanket number of students with a prescribed time allocation. From their study of postgraduate research Pearson and Ford (1997, p.76) confidently said that,

Clarification of the rules can also be accompanied by an effort to spell out more clearly responsibilities and accountabilities at various levels,

and establish what is expected and what is discretionary. This can be done without falling into an abyss of bureaucratisation.

We argue that that it is critical for the well-being of academic staff and for the quality of supervision that faculties discuss the expectations and demands on time associated with supervision and incorporate these into faculty workload models. Given the goodwill prevailing in the experienced supervisor group, we share Pearson's and Ford's confidence, that this can be achieved without falling into an "abyss of bureaucratisation".

We therefore recommend:

10. That research supervision is adequately recognised through:

- *supervision being included in workloads at Faculty/Unit level; and*
- *allocation of workloads that reflects the actual work associated with supervision.*

Co-supervision

University parlance generally uses the term co-supervision to indicate more than one supervisor. There are, however, various categories (e.g. principal and co-supervisor, joint supervisors, supervisory panel etc). To eliminate confusion clear definitions of these need to be developed and communicated across the University. Literature on co-supervision in research education indicates that the one-to-one supervisory arrangement, based on the British model of "intense, highly privatised relationship between student and supervisor" (Green & Lee 1995, p.41), is under pressure for a number of reasons. These include: the vastly increasing numbers and diversity of research students who "bring with them diverse motivations, prior experiences, expectations, commitments and skills" coupled with the greater mobility of students and supervisors (Holbrook & Johnston 1999, p.11). Parry and Hayden's study found that "in an effort to cover the substantive, theoretical and methodological bases for a student's prospective higher degree research, supervisory committees, and joint and associate supervisions were reportedly becoming more common". They added, "the relatively recent evolution of new interdisciplinary areas in research education has meant, however, that more supervisors have had to work jointly to provide appropriate supervision for students" (Parry & Hayden 1999, p.50). The literature at this time, however, is not extensive and raises questions more than it offers solutions.

In line with other Australian universities, the University of Wollongong is moving towards procedures in which there is some form of shared responsibility for supervision. For example, the Code of Practice-Supervision (5.3) states:

The University recommends co-supervision, where two or more supervisors may take differing roles and responsibilities depending on their expertise and experience with supervision. ... Where a supervisor is inexperienced co-supervision is mandatory.

Notwithstanding this recommendation, we found that co-supervision has nominal recognition but is not routinely practised at the University. On one hand, supervisors in the focus groups raised a series of questions about the meaning and nature of co-supervision rather than discussing their co-supervision practices. On the other hand, an academic's opening statement, in response to the survey question, "What does the University of Wollongong (including your faculty and/or department) do well in regard to supervision of research students?" was,

Each research student also has a co-supervisor to whom the student can go if there are problems with the main supervisor or if the supervisor is away. Supervisors are well qualified and don't have too many graduate students each.

In direct contrast to this, and contravening the Code, "where a supervisor is inexperienced co-supervision is mandatory", a recently appointed academic with no supervision experience was identified as a sole supervisor of three new research candidates.

Although very few of the students in the focus groups experienced co-supervision, several said that they had nominated a co-supervisor. Some students reported uneasiness about the regulations (if any) governing the relationship/s while others report receiving conflicting advice/information from the supervisors. An off-campus survey respondent wrote,

My original supervisor indicated I did not need to have an active co-supervisor. [S/he] said; if anyone asks just give this person's name. When eventually I tried to contact this person several times, I received no response. However when I said I had been advised to have a proper co-supervisor [s/he] said, "Don't worry about official guidelines". [S/he] said similar things whenever I brought up guidelines.

A research student at the open-forum day summarised the situation this way, "students tread very warily around co-supervision". S/he went on to explain that research students have no clear understanding about the circumstances surrounding consultation with their supervisor/co-supervisor and they are afraid to ask in case they jeopardise their student position or the supervisory relationship/s. It would seem that there is a lack of clarity on the part of the university, academics and students about 'co-supervision' as a practice.

An overview of other universities' policy showed that most now require joint of higher research degrees (cf UTS, UWS, ANU). The UTS *Code of Practice for Supervisors and Advisors and Research Degree Candidates (2002)*, for example, categorically states:

So that a research degree candidate may be guided and supervised properly, a Supervisory Panel will be appointed. The Supervisory Panel comprises the Principal Supervisor, any Joint Supervisor, and other Advisors as appropriate. There is a minimum of two members on each Supervisory Panel.

We cannot determine the extent to which joint requirements are adhered to at other universities and there is very little published material. A study conducted at Melbourne

University showed "about 70% of masters students and 50% of PhD students have a single supervisor. Around 10% of PhD students have a supervisory panel and roughly 40% have joint supervisors" (James & Baldwin 1999, p. 7).

We raised the co-supervision issue with Deans, URSC members and experienced supervisors and their discussion made evident that a glossary to define supervisory categories and specify related supervisory roles is imperative. Margot Pearson (2000, p. 115) cautioned that moving towards co-supervision while retaining "loose use of the terminology does not lead to any rigorous engagement with the theory and practice of professional education". Without the development of a glossary, co-supervision as an accepted, understood and functioning practice is unlikely to be implemented widely and successfully. The following statements emphasised the need:

I question the adequacy of the term 'co-supervisor'. Terminology makes useful distinctions. (Dean)

Joint supervisors have equal responsibility therefore it is not co-supervision. (Dean)

There may be a need for 'multiple' models. eg. where associated expertise such as statistical input is required to add quantitative material to qualitative. (Dean)

The term supervisor should be used without qualifiers like 'co' or 'principal'. (URSC)

Some Deans expressed reservations about requiring more than one supervisor.

Good applicants could be lost for a 'silly' rule [requiring co-supervision]. e.g. an academic from another university or applicant who wants to work with a particular person at this university. Therefore state the norm is co-supervision rather than mandatory rule.

Co-supervision acts well as a safety net. Why do it if the only benefit is as a safety net?

Focus on the expertise of the supervisor – a co-supervisor may not have expertise.

Identifying the supervision split is important - is it 50/50 or 70/30?;

Co-supervision is not just nominal.

URSC members placed more emphasis on the time aspects of co-supervision.

Co-supervision takes equal time [as sole supervision].

Co-supervision for candidates at other universities also impacts on supervision workload.

The roles and responsibilities of joint or co-supervision are both important and complex and therefore need precise definition for appropriate application to each supervisory situation. For this reason, and given that we found that there is considerable confusion about the nature and practice of joint or co-supervision, we reiterate our first Recommendation. That is, it is imperative for the URC to revise the Code of Practice-Supervision, to:

- include a glossary of supervision containing broad definitions of the ways in which supervision may be practised (eg. co-supervision, joint supervision, etc); and
- include a glossary of terms associated with candidature (eg. on-campus, off-campus, off-shore, distance).

Graduate Attributes and Research Training

It is in the area of graduate attributes and research training that a major reorienting of emphases in research education is most evident. As part of a Federal Government push towards quality assurance in higher education, universities are now asked to report on the breadth and extent of the research training they provide for postgraduate research students as part of their annual Research and Research Training Management Reports. The character and aims of higher research degree education are now distinctively marked by the government's focus on discernible research graduate attributes. The University of Wollongong *Education Policy and Practice - Quality Assurance* (undated) policy states:

The University recognises that the nature of postgraduate research education and training is quite distinct from undergraduate and postgraduate coursework degrees. By identifying the attributes and competencies associated with postgraduate research, the University aims to develop an effective tertiary literacies strategy for research students and a way of measuring the effectiveness of the University's research programs.

Implementing the described measures, however, can be more problematic. A small amount of literature addressed the shift of emphases from graduate education to research education. This literature, like the issue itself, is in a formative stage. It recognised that grasping this issue and then developing conceptual frameworks to accommodate the shift are both problematic and a work-in-progress. A major impediment seems to be that new concepts are being deployed into practice but without a corresponding shift in existing understandings.

Pearson (1999, p. 275) stated "the emphasis on individual research training most significantly puts the focus on the visible elements of "doing" research, the production of a thesis and supervision". The concept of an individual research project facilitated by one-to-one supervision with a thesis as its outcome is the prevailing research degree norm. This convention is entrenched, highly resistant to change and based on a fear that measures such as introducing a research coursework component into the research degree may erode the academic career orientation of the PhD (Lilejgren 1998, p. 53). Transformation of research education into 'more heterogeneous research training' and Government requirements are not the only factors driving these changes. Other pressures come from the introduction of professional doctorates and the general change in candidate profile from continuing honours student to employed professional seeking existing skills enhancement and accreditation.

Central to discussions about the changes in the character and aims of research degrees is a need to (re)consider "whether the value of the PhD lies in its outcome (new knowledge) or its process (training in research)" (DETYA 2001, p. 2). The University of Wollongong directly links one of its documented research graduate attributes, "ability to conduct independent research and report its outcomes to a range of national and international audiences in a scholarly manner", to the 'training in research' aspect of candidature. The University provides a Table listing the competencies, support mechanisms available for achieving these, and evidence of acquisition of research skills. However, in this Table the evidence for research competence is stated as: presentation

of a research proposal, presentation of a conference paper, and timely and satisfactory completion of the thesis. This reliance on traditional methods to substantiate newer research training competencies illustrated, as Margot Pearson (1999, p. 275) stated,

the view of the traditional PhD is entrenched as primarily an individual student's research project and how inherently conservative the response to change has been despite the extent of innovative initiatives.

More recently, Pearson described new conceptual frameworks for research education as leading to 'innovative' rather than 'traditional' research degree education and advocates replacing the term 'research supervision' with 'research education'. Pearson (4/2/03) cited a UK example, in which 60% of first year PhD programs include taught courses on research methods, as one indicator of such changes.

Understanding these (re)conceptualisations of an 'innovative' higher research degree, being focused on research training, may facilitate a move from the traditional research degree approach towards a research-oriented education approach. In discussions with both staff and students, we found that generally the de-emphasising of 'the thesis' in favour of a dual emphasis on thesis (the product) and research training (the process) is not yet apparent at UOW. However, an experienced supervisor participant summed up the distinction in this way, "a thesis equals the product of research, it's not research per se – these are different kettles of fish". Changing conceptions of research training clearly impact on supervisors' professional development. Traditional supervisory practice based solely on a supervisor's own experience of supervision, no longer holds relevance for this revised research education agenda. With a large proportion of higher research degree candidates already employed, or likely to seek employment outside of the academy, a research degree must provide evidence of skills already gained.

Mullins (2002) argued,

University reactions to the RTS have also tended to focus on organisational and administrative processes designed to achieve timely completion. ... but I do query whether they will be very effective without a better understanding of how postgraduate students go about their research, a better understanding of the postgraduate experience (Mullins 2002, p. 1).

The vastly increasing numbers of research degree candidates and their diverse career goals has implications for the nature of research supervision and the ways in which both supervisors and candidates perceive how the 'process' ought to proceed. Systemic responses to the growing student/university diversity will need to recognise these conditions as changed rather than problematic.

We reiterate here the detail of Recommendation 11: that a Professional Development Program for Supervisors includes training for HPS and heads at Unit level to ensure quality research training experience is effectively operational across all Units so that research students and research supervisors may be realistically regarded as collaborators in research training. Only when these conceptual frameworks are satisfactorily

implemented into practice will effectiveness be able to be measured in terms of the attainment of our Research Graduate Attributes.

Conclusion

We are able to state confidently that this study meets its primary goal,

to gain a better understanding of the needs of both research students and supervisors in relation to research education and training.

We engaged with the wide range of UOW academic supervisors and research students who generously responded to our invitations to participate in the study. The data collected from these sources is situated within the current body of higher education literature dealing with the policies, procedures and practices of research supervision. From these sources, broad understandings of the needs of both research students and supervisors were developed and specifically related to the research education and training practices at the University of Wollongong.

We reiterate that the willingness of already busy participants to commit their time and energy to the project is demonstrative of the positive outlook towards supervisory practice prevailing at UOW. Individual supervisors and research students gave examples of good practice in research supervision and also spoke openly about difficulties they encounter. Our study, however, reveals that a major gap exists between policy and practice in regard to several research supervisory issues.

We make specific recommendations to enhance and communicate those steps already instituted by the University to establish and maintain quality as a recognisable feature of research supervision. This report shows that the study's specific topics of examination were germane and our recommendations centre on those areas.

Our recommendations provide the principles for achieving the project's second aim,

to develop a framework for the appropriate and effective professional development of supervisors.

The recommendations are offered to encourage the University, its academic units, and research centres to address and implement changes to supervision issues as identified in this report. We propose timeframes for all the amendments to existing policy as well as the introduction of new practices so that high priority is given to ensuring their implementation into practice. The RTS imperatives compound this urgency.

Implementation of these recommendations is critical for the University as it faces the current challenges offered by a changing research funding environment. The professional needs of both research supervisors and the requirements of the rapidly increasing and diverse student body must be addressed to fulfil the obligations for a Quality Assurance framework.

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Attachment A

Table 1. Levels of student satisfaction amongst enrolled students (2001 Internal Survey) and graduates (2000 PREQ)

	Below Average		Average		Above Average	
	2000 Grads %	2001 Current %	2000 Grads %	2001 Current %	2000 Grads %	2001 Current %
Supervision	14.0	9.2	11.1	16.8	73.7	74.0
Skill Development	1.9	4.8	10.1	13.8	87.6	81.5
Climate	9.8	15.4	17.5	25.0	70.5	59.6
Infrastructure	11.4	18.2	14.9	18.5	70.2	63.3
Thesis Examination	9.1	na	4.8	na	85.7	na
Clarity of Expectations	0	6.7	5.9	12.8	91.3	80.5
Overall Satisfaction	4.8	9.4	4.8	9.4	90.5	81.2

2000 Graduates n=63; 2001 Current Students n=298

Table 2. Levels of student satisfaction amongst enrolled students in 1999 and 2001 (Internal survey)

	Below Average		Average		Above Average	
	1999 %	2001 %	1999 %	2001 %	1999 %	2001 %
Supervision	12.6	9.2	13	16.8	71.8	74.0
Skill Development	6.0	4.8	14.3	13.8	77.9	81.5
Climate	22.1	15.4	23.4	25.0	47.8	59.6
Infrastructure	18.5	18.2	17.3	18.5	54.3	63.3
Thesis Examination	na	na	na	na	na	na
Clarity of Expectations	8.4	6.7	14.2	12.8	76.7	80.5
Overall Satisfaction	15.4	9.4	12.2	9.4	72.0	81.2

1999 Current Students n=286; 2001 Current Students n=298.

Source: University Of Wollongong 2001, *Research and Research Training Management Report*.

Attachment B

This Attachment shows composition of the focus group for each of the four topics.

A. CODE OF PRACTICE-SUPERVISION

Staff focus groups

Participants	Total	Women	Men	Faculty
New Supervisors	6	3	3	Education H B Science Informatics Law
Experienced Supervisors	9	3	6	Arts Commerce Education Science
FRC Chairs & HPS	8		8	

Student focus groups

Participants	Total	Women	Men	Faculty	PhD	Masters	Country
1 st Year	9	4	5	Not recorded	7 1 PD	1	
Final Year	7	4	3	Engineering Science Education Commerce H B Science	6	1	
International	8	5	3	Engineering Science H B Science	6	2	Africa, Sth Africa, Europe, Columbia, Sth America, Sri Lanka, Thailand

Discussion topics

- How is the Code of Practice Supervision used?
- How does it work?
- Could it work better and/or differently?
- How is Appendix A used?
- Other forms of contracting

B. GRADUATE ATTRIBUTES & RESEARCH TRAINING

Staff focus groups

Participants	Total	Women	Men	Faculty
Staff & Support Units	8	5	3	Education Engineering Informatics H B Science Library Learning Dev Centre

Student focus groups

Participants	Total	Women	Men	Faculty	PhD	Masters	Country
Final Year	6	4	2	Engineering Science	6		4 International: Fiji, Sri Lanka, India, Europe

Discussion topics

- What do support units offer supervisors/students?
- Are research students getting the RT they want/need?
- Students' self- perceptions of their employability as independent researchers

C. PROFESSIONAL DEVELOPMENT

Staff focus groups

Participants	Total	Women	Men	Faculty
Staff	8	4	4	Arts Science Engineering Law Learning Dev Centre

Student focus groups

Participants	Total	Women	Men	Faculty	PhD	Masters	Country
Final Year	5	1	4	Engineering H B Science Informatics Science	4	1	1 International - British

Discussion topics

- What would help support you as a supervisor?
- What support would students like to see in place?
- How should this be provided?

D. SUPERVISION WORKLOADS

Focus Group

One group on the topic of Supervision Workloads was held with ten experienced supervisors from across the faculties. The following issues were focused on: -

- How does the Faculty Workload Model treat supervision?
- How should different supervisory contributions be identified/defined (eg. Principal vs co-supervision)?

Deans

Two project team members attended one Deans' breakfast meeting.

University Research Standing Committee

Two project team members attended one URSC meeting.

At those two meetings the question of supervision workloads was an agenda item with discussion focused around these questions: -

- What constitutes supervisor workload?
- Should the University stipulate the number of supervisors?
- Other related issues – e.g. practice of co-supervision.

