ZEN AND THE ART OF TRANSDISCIPLINARY POSTGRADUATE STUDIES: FINAL REPORT
ZEN AND THE ART OF TRANSDISCIPLINARY POSTGRADUATE STUDIES

FINAL REPORT
2006 Fellowship

For the Australian Learning and Teaching Council

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Institute for Sustainable Futures
University of Technology Sydney
2009
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2009

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I would like to acknowledge the considerable insights and contributions of my colleagues and collaborators to this project. My approach was one of co-creation, operating at a number of levels.

First and foremost in this group are my ISF colleagues, Dr Juliet Willetts and Dr Kumi Abeysuriya.

Secondly, some special specialist researchers who engaged deeply and repeatedly with the ideas and concepts behind this work: Dr Anna Carew (UTas), Associate Professor Simon Barrie (USyd), Dr Kath Fisher (SCU), and Dr Catherine Manathunga (UQ).

Thirdly, the willing and highly engaged additional participants in the two day retreat: Professor Ray Ison (UMelb/Monash/The Open University UK), Professor Dora Marinova (Curtin), Professor Brian Martin (UoW), Dr Chris Riedy (UTS) and Jane Palmer (UTS).

Finally, the many willing and engaged participants in the series of workshops held in Brisbane, Sydney and Melbourne, as well as Sweden, that made up the core of the work of this Fellowship.
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Executive Summary

Increasingly, researchers and research students are engaged in problems that require approaches that transcend disciplines, at least in part because problems of society are increasingly complex and interdependent and cannot be tackled adequately from specific individual disciplines. In these realms, the whole must be greater than the sum of the parts. Supervising research students working in these ways brings particular challenges. Prominent among these challenges is the question of how to recognise and ensure quality in the processes and outputs of their labours when they are drawing on disciplines, theories, and methodologies with deeply different ways of understanding the world around us. This Fellowship sought to shed light on both the summative criteria that might be helpful for evaluating the outputs of such research – a thesis, papers, etc – as well as the formative processes supervisors and students might use to engender such criteria. The approach in the Fellowship was deeply collaborative – an action research, iterative co-creation with colleagues from around the country who share a passion for high quality inter and transdisciplinary research that makes a difference in the world at large. The outcomes are

- Seven quality criteria for inter- and trans-disciplinary research outputs, explored and explained in a resource document.
- A set of 50 or so ideas for good practice that help students and supervisors develop the necessary skills and insights to be able to demonstrate the criteria. These too are explored and explained in a resource document.
- A set of workshop resources that can be used by individual academics or academic developers to explore and extend participants’ experiences and skills in this type of work.

I expect to publish two journal papers from the work, and to deliver a train-the-trainer workshop at the Quality in Postgraduate Research conference in 2010.

The dissemination process is comprehensive. Firstly, the resources will be shared with project’s 60 or so participants from 12 universities. Secondly, a presentation was given to a biannual meeting of the Deans and Directors of Graduate Schools. Thirdly, the resources will be made available on the web – a distinct url will be set up, with direct linkages from ALTC, the Consortium for Improving Research Supervision and Training, and the Institute for Sustainable Futures at UTS.

As this type of research becomes more prevalent, the need for better resources will grow. The ideas for good practice document from this Fellowship is a starting point – it could usefully be enriched and extended, and published in a more accessible form. Equally, the quality criteria have implications for examination processes in particular, but also for development programs for students and supervisors. I hope ALTC continues to expand its work in the graduate arena in general, and in improving the experiences and outcomes for inter- and trans-disciplinary students and supervisors in particular.
Abbreviations

ALTC  Australian Learning and Teaching Council
DDoS  Deans and Directors of Graduate Schools
fIRST  Consortium for Improving Research Supervision and Training
ID  interdisciplinary
ISF  Institute for Sustainable Futures
QPR  Quality in Postgraduate Research conference series
TD  transdisciplinary
UTS  University of Technology, Sydney
1 Introduction

Increasingly, research students are engaged in problems that require approaches that transcend disciplines, at least in part because problems of society are increasingly complex and interdependent (Thompson Klein 2004), and cannot be tackled adequately from specific individual disciplines (Mitchell et al. 2004, Max-Neef 2004). Contemporary government and society is calling on researchers and researchers-in-training to generate outcomes that contribute to resolving manifest and pressing problems embedded in complex, real-world contexts (Brainard 2002). Such calls are leading to rapid expansion in rhetoric and practice relating to interdisciplinary research (Lin 2008, Jerrams 2008). Internationally, within the Cooperation Program, which is the core of the European Union’s 7th Research Framework Program, ‘special attention is also being paid to multi-disciplinary and cross-theme research’ (European Union, 2006, p39).

Our capacity to assess this kind of work is at a fledgling stage. Wickson et al. (2006) note that critically robust ways to discuss and evaluate the quality of transdisciplinary research are underdeveloped and insufficient, in part because of the lack of an established peer community and in part because of the contextualised nature of the work itself. At the same time, pedagogical understandings of interdisciplinary doctorates are just emerging (Manathunga et al. 2006).

Transdisciplinary research is different from other forms of mixed discipline research, and this has implications for those who undertake it, and the nature of the outcomes it provides. Wickson et al. (2006) surveyed the literature on transdisciplinary theory and practice, and determined three key characteristics that set it apart: a problem focus, an evolving methodology, and collaboration. Max-Neef (2005) states that ‘an integrating synthesis is not achieved through the accumulation of different brains. It must occur inside each of the brains….’. Max-Neef clearly believes that it is possible for an individual to undertake transdisciplinary research. I agree, and am equally clear that diverse relationships are a core component and enabler of the synthesis he alludes to i.e. transdisciplinary research cannot be undertaken in isolation.

An emerging idea from our transdisciplinary praxis at the Institute for Sustainable Futures (ISF), and confirmed through this Fellowship, is the concept of the three distinct outcome spaces depicted below (see Figure 1). Our terminology in this figure is quite deliberate and draws on insights for the practice of appreciative inquiry (e.g. Cooperrider and Whitney 2005) and soft systems methodology (e.g. Checkland 1999). It has also evolved somewhat since the original Fellowship.

We use the term ‘situation’, rather than ‘problem’, because we want to avoid both the negative connotations of a ‘problem’ and the simplistic idea of a ‘problem’ being ‘solved’. The idea is that there should be a discernible difference, preferably an improvement, in the situation as a result of our transdisciplinary research activities, such as a shift in policy or investment or action.

‘Knowledge stocks and flows’ is intended to capture the idea that knowledge is anything but static, and that knowledge itself is a system, and that there are many forms of knowledge. One of these forms is peer-reviewed knowledge that is at the core of formal public research. There are many others.

‘Transformational learning’ refers to the people involved in the situation and therefore engaged in the research process – the concept here is that something should shift for them – that they come

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1 The Excellence in Research Australia initiative is somewhat at odds with international moves: here, interdisciplinary research will be disaggregated to its disciplinary components for assessment (ARC 2008).
away from the research with a new and different insight that influences their practice towards the improvement of other situations. This is an adaptation of how the term has been used in the educational literature (Taylor 1998, Palmer et al. 2007).

Figure 1 Transdisciplinary research outcome spaces

There are obvious tensions for a postgraduate researcher to make contributions across all these spaces. In our praxis, we recognise that knowledge stocks and flows will likely take precedence for students and universities working within the relatively tight timelines for scholarships and funding imposed by the federal government.

The follow-up question about what constitutes high quality outputs in each of those spaces is challenging, particularly for knowledge stocks and flows. The notion of validity is core to evaluation and determining quality, and is determined by widely varying and evolving yardsticks in different epistemological domains (see, for example, Ison (2008) and Mallard et al. (2009).

The question at the core of this Fellowship was ‘what might constitute an evaluative framework for the formative and summative outputs of inter- and trans-disciplinary research training?’.

Linkage to other ALTC projects

This Fellowship is perhaps unusual in that research supervision is an area of pedagogical practice that, to date, has had limited attention in ALTC projects and Fellowships. That said, there are three related projects: the graduate research skills project funded under the auspices of ALTC’s Discipline-Based Initiatives Scheme - see http://www.gradskills.anu.edu.au; a current Fellowship entitled ‘Talking about supervision in technology and engineering’, where Christine Bruce from QUT is exploring supervisory pedagogy – see http://www.altexchange.edu.au/group/pedagogy-supervision-technology-disciplines; and the extension to the fIRST resources aimed at building research supervision and training across Australian and New Zealand universities – see http://www.first.edu.au/public/Carrick/index.html.

Many of the practices of good supervision of research students have their roots in the fundamentals of critically reflective teaching and learning practice, so the implicit linkages that others will make will no doubt be many and varied.
2 Process and intermediate outcomes

The approach to this Fellowship was strongly collaborative from the outset. Informed by earlier versions of the outcome spaces concept explained above, I identified three groups of actors:

- me as the lead researcher assisted and advised by key ISF colleagues, Dr Juliet Willetts and Dr Kumi Abeysuriya (when I use the term ‘we’ in this report, it generally refers to Juliet and me working collaboratively);

- student/s and supervisor/s engaged in this kind of research, at ISF, at other units with UTS, at other Australian universities, and at particular Swedish and English universities;

- specialist education and/or evaluation researchers who accepted my invitation to participate in particular roles and activities, including Dr Anna Carew (UTas), Dr Catherine Manathunga (UQ), Associate Professor Simon Barrie (USyd), and Dr Delwyn Goodrick

An action learning orientation underpinned the work, with successive cycles engaging with theory and practice, developing and co-creating outputs, and reviewing and testing these in successive cycles. These cycles are shown in Figure 2.

Distil criteria from literature and practice

The project began with a distillation and synthesis of the international literature on doctoral processes and products, including examination, particularly in Australia, the UK, and the USA. What this review demonstrated was that different disciplines use much the same terminology to describe the calibre of doctoral outcomes, although the precise meaning of the terms, and how they are demonstrated in the research outputs (theses etc) is highly contextual and likely shifts between disciplines. From this formal literature review, we identified seven summative criteria for the examination and/or assessment of the products of doctoral research.

Figure 2 Action Research Loops in the Fellowship
We then reflected on these criteria through the lens of our own practice and experience (Willetts and Mitchell 2006). We undertook a detailed review of the extensive documentation provided by historical examiners of theses from our Institute – some 30 lengthy reflective reports, from leaders in their fields of theory and practice, including many international professors. We also reflected on and analysed our own supervisory, support, and evaluation practices. We then modified the seven summative criteria to reflect our perceptions and experiences. This was the product of the first action research loop.

Co-create summative criteria and formative practices

The second action research loop had a co-creation focus, and involved a series of events with actors from all three of the specified groups. In short, we designed and conducted a series of highly interactive workshops to test and get feedback on our ideas for summative criteria. The earliest version of the workshop made use of an opportunity to test the ideas internationally, and engaged European academics, practitioners, and senior students. Two major workshops were held in Australia, where the focus was on the summative criteria, and the resonance or otherwise they held for other’s practice and experience.

Participants at these workshops were identified through a snowballing process – that is, I contacted specialist and/or experienced researchers at many universities, explained the intent of the Fellowship in general and the workshop in particular, and sought recommendations for participants. The intent was to ensure that workshop participants brought with them direct and deep experience of working in these ways, as well as the capacity to reflect on these ways of working. Participants came from wide-ranging disciplines and study areas: social sciences, history, indigenous studies, cultural studies, anthropology, education, engineering, science, social ecology, sustainability studies, system studies, and so on. Between them, they had many decades of experience of inter- and trans-disciplinary research practice and supervision.

As a result of the workshops, the summative criteria were revised a second time and a quality criteria document was prepared (see Appendix).

The second component of the co-creation action research cycle focused on the formative side i.e. what could supervisors and students do to ensure the development and demonstration of the summative criteria in the outputs of their research?

I developed a two-day retreat to address this question. Participants for the retreat were identified through their deep and long experience in this kind of supervision, and represented all three groups of actors. I contacted each one individually to invite them to participate. I chose a remote bush location on the edge of Royal National Park, and designed the retreat around the holistic adult learning principles that Schumacher College in the UK (see www.schumachercollege.org.uk) uses for its residential courses. That is, there is specific time set aside in the program for the preparation and sharing of meals and basic tasks, as well as for the program of work. This ensures many incidental conversations and interactions occur, and participants share richer perspectives and develop deeper relationships. We have used this model to good effect for eight years in our postgraduate program at ISF, so were confident it was the right approach for the topic at hand. Evaluations by participants affirmed my choice, as this comment from a senior academic unfamiliar with the approach shows:

‘I loved the Schumacher approach. The closeness you experience when sharing meals, preparation and common space translates in easiness of communication at the time but also for the future.’

The intention at the retreat was to take the summative criteria as read, and to focus on the formative approaches. However, this delightful group of independent thinkers refused to
take anything as read, so the program was collaboratively modified to provide space for
vigorous debate about the criteria and their inter-relationships as well as developing and
capturing a wealth of wonderful ideas for practice through a clever set of individual, pair, and
small group activities.

These ideas for practice were road-tested and extended at an ISF postgraduate retreat.

**Develop and trial guidance materials**

The resources developed over the course of the Fellowship to date were then translated into
a complete set of workshop resources for others to use i.e. a workshop that takes
supervisors and students through some foundational ideas about the nature of inter- and
trans-disciplinary research and its quality, then presents and invites engagement with the
quality criteria derived through this Fellowship, and finally presents and invites engagement
with and extension of the ideas for good practice. The draft of these resources was road-
tested at a workshop with staff and senior students from across The University of
Melbourne. The final version of these resources is in the Appendix.

The intention is that these workshop resources provide everything an academic or academic
developer might need to run a half-day highly interactive session about quality in inter- and
trans-disciplinary postgraduate research and its outcomes. The resources include

- a facilitator's running sheet with detailed timing and instructions,
- a powerpoint presentation,
- separate worksheets for each activity, as well as an evaluation sheet
- 2 key resource documents – the quality criteria document that develops and
describes the criteria and the ideas for good practice document.

The stance of the resources is essentially pluralist, that this is one way of engaging in this
space, that it is 'one' answer, rather than 'the' answer. This stance is intended to encourage
workshop participants to reflect on their own experience and epistemology and draw out
their own insights in relation to what good quality inter- and trans-disciplinary research might
look like, and how they might engender it.

The resources can be used in many ways – at one end of the spectrum they might be used
as a package by supervisor trainer in an academic development unit. At the other end, an
individual supervisor or student might read and make use of just one of the resource
documents. Making them available on the web, through the ALTC Exchange, the fIRST site,
and the ISF website, as related but separate parts of a package, allows potential users to
engage however suits them.
3 Outcomes

This section reports on the outcomes for each of the three outcome spaces as explored in Figure 1, and where appropriate, explains variances between planned outcomes and actual outcomes. The outcomes I specified in my application are given verbatim in italics at the start of each paragraph. Additional outcomes not planned at the start of the Fellowship are also noted.

Knowledge stocks and flows

Draft journal publication on the framework: the quality criteria document included in the Appendix was originally prepared as a book chapter. I have shared this with leading academic development researchers, with the intent of seeking their feedback and advice about publishing the work. Their feedback has been strong and positive, so the document be modified for submission to 'Teaching in Higher Education' imminently.

Conference paper at the Quality in Postgraduate Research (2008) or similar: for health reasons my Fellowship was delayed so I could not submit a paper here. I did however attend the conference. The 2010 QPR organisers have suggested I develop a train-the-trainer workshop for the conference.

Contributions to ALTC Fellows Forum: done (and continuing)

Final report for ALTC: done

There is a further significant outcome in this space: the development and provision of the workshop resources in various web locations, through ALTC Exchange, fIRST, and ISF.

The situation

A collaboratively developed, pilot-tested, evaluative frame for the formative and summative outputs of transdisciplinary research students for use by students and supervisors: this is the core of the work, and is represented by the seven criteria developed iteratively through the project and explored in detail in the quality criteria document, and the ideas for good practice document, both of which are explained in the Appendix. Below are the final criteria, to give a taste of the outcomes here:

- Critically aware, coherent argument
- Critical, pluralistic engagement with appropriate literature and other artefacts
- Evidence of critical reflection/reflexivity on own work
- Alignment between epistemology, theory, methodology, claims and enquiry space
- Mastery of the process and/or outcomes
- Effective communication for diverse audiences

Insights into and experience of how explicitly reflective supervisory practice can enhance the transdisciplinary research training experience and outcomes: the criteria, the ideas for good practice, and the workshop processes strongly promote and give specific guidance on the centrality of critical reflection by supervisors and students.

For UTS, a workshop for supervisors and students: done

For collaborators’ universities, provision of workshop resources: this report and its appendices will be distributed to all participants in the Fellowship.
There are two further outcomes in this space. The first was the opportunity to test the workshop resources prior to the completion of the Fellowship through the invitation from The University of Melbourne’s Graduate School to deliver a developmental workshop for staff and students.

The second additional outcome in this space was the opportunity to make a formal presentation to the half-yearly meeting of the Deans and Directors of Graduate Schools in early 2009.

**Transformational learning space**

*Mutual learning demonstrated through reflective processes:* Every event in the Fellowship was designed with a strong reflective intent, and concluded with a reflective evaluation. Participants came with an expectation of reflection, and left wanting to do more, as the following participant comment shows:

> ‘What were your expectations for the retreat?

- Chance to explore ID/TD with others who operate in different ID/TD spaces
- Chance to share, reflect, think about disciplinary and ID/TD (recently been doing work around these areas)
- Think more about how you design a curriculum for ID/TD students and train and support TD/ID sup(ervision) & prepare examiners

And how they were met? Or not?

- They were met very well and I leave with a great deal more to think about

**Outline for a separate journal paper reporting and reflecting on the process of this project:**

This outcome has not been met because the process of the project changed early on, and data was not collected.

The primary additional outcome in this space is the fledgling community of practice that has been brought into existence by individuals’ participation in the various collaborative phases of this work. Experienced supervisors expressed relief at being given an opportunity to reflect on their practice, to be validated by the experiences of others who valued this way of working. In particular, several participants commented that they had found new potential examiners through the relationships that developed at the various events.

A secondary additional outcome was the opportunity to engage with Swedish and English inter and trans-disciplinary researchers about these questions. In the early days of the Fellowship, I used the opportunity afforded by the award of an Honorary Doctorate from Chalmers University to engage with Swedish research community including researchers and research funding agencies, to test the ideas in European setting. Participants’ responses were similar to those in Australia, expressing appreciation for the chance to discuss these issues with like-minded and thoughtful colleagues, and finding resonance with the ideas for structuring quality outcomes.
4 Dissemination

The project had a deeply embedded approach to dissemination, as outlined above, so there may be some overlap between this section and the previous one. Here, I explain the dissemination activities with reference to the ALTC dissemination framework. The ALTC framework asks awardees to step through a process of identifying users and stakeholders, designing strategies for engagement along the way, and also to raise awareness and encourage adoption of the outcomes.

The action research, co-creation approach means that there are very many people who have already had an active hand in the development of the resources. This approach included identification of and engagement with two specific groups of users and stakeholders, as well as colleagues (staff and students) in my own institution. The particular specialist researchers engaged with this project were nominated because of their interests and expertise, and because of their role as academic developers, and hence their specific opportunity to help extend the reach and impact of the outcomes through embedding this work in their own practice.

Active and experienced ID/ TD supervisors, and latter stage ID/TD students were identified using a snowballing approach through my own networks and my collaborators’ networks to extend and broaden participation. Locations targeted for workshop participants focused on south east Queensland (specifically through contacts at UQ, QUT, Griffith, SCU), the Sydney region (UTS, USyd, Macquarie, UWS, UWollongong), and Melbourne (UMelb). Participants in the retreat were in part chosen to give a national perspective – every state except SA was represented. Finally, the award of an Honorary Doctorate in Sweden gave me an opportunity to engage with Swedish researchers and research funding agencies, to test the ideas in a European setting and to promote Australian work in this field.

A third, and highly significant, group of stakeholders are the Deans and Directors of Graduate Schools (DDoGS). I sought and was given an opportunity to present the outcomes of the Fellowship at their bi-annual meeting. This has resulted in three invitations to visit particular universities to deliver institution-wide developmental workshops on the topic.

The accompanying resources explained in the Appendix – the three-part package of the quality criteria document, the ideas for good practice document, and the workshop resources – are being distributed to all three of these groups: specialist researchers, participants, and DDoGS.

The intention is that these resources can be used in various ways. An individual supervisor or student can engage with the documents, or work their way through the workshop activity sheets. A trainer of postgraduate supervisors could pick up the workshop in its entirety and deliver it in their own institution. An experienced supervisor wanting to facilitate a discussion in their own research unit could use the workshop resources as triggers.

A separate independent evaluation is being conducted – see Appendix 1 for details.
5 References

Australian Research Council (ARC) (2008) ERA Indicator Principles


H Lin (2008) Opportunities and Challenges for Interdisciplinary Research and Education. *Journal of Natural Resources and Life Sciences Education* 37:83-91


Appendix 1: accompanying documents

This Appendix explains the additional documentation that accompanies this report.

Resource Documents

Two key resource documents have been prepared to disseminate the outcomes of the Fellowship in useful ways.

The first, ‘ID TD PG Quality Criteria.pdf’, focuses on a set of summative quality criteria for the outcomes of inter and trans-disciplinary postgraduate research. The criteria emerge from a two part process. The first part was a synthesis of the literature on the nature of ‘doctoralness’ and thesis examination, an analysis of about 30 examiners reports of inter and trans-disciplinary PhD theses, and a reflective review of ISF’s transdisciplinary praxis. The second part was the co-creation component of the Fellowship i.e. review and critique by about 40 practising ID and TD researchers and research supervisors. These could be used to guide preparation and examination of the thesis, as well as other scholarly outputs.

The second, ‘Ideas for Good Practice.pdf’, is a compilation of ideas for good practice in the supervision of such work, that is, particular strategies that will help the student develop and/or demonstrate the quality criteria in the materials they produce. Each idea is self-contained, in that there is a description of the idea and who has what roles, a rationale for its use, its relationship to the criteria, triggers for use, and additional resources.

Workshop Materials

A comprehensive set of workshop materials have been developed. They can be used in many ways, ranging from formally as a set to guide a half-day workshop with supervisors and students, to using as informal conversation or individual reflection triggers.

The accompanying ‘Workshop.pdf’ introduces the workshop and includes a concatenation of the following documents:

- Presenter’s outline, including timing and learning outcomes from each element:
  Facilitator Running Sheet

- Discussion Guides/Worksheets for participants:
  Resonant Criteria Worksheet for Individuals
  Criteria Assessment Worksheet for Small Group
  Practical ideas Worksheet

- Feedback and Evaluation Form:
  Evaluation Worksheet
In addition to the worksheets and running sheet, there is a presentation that introduces the ideas, has further references about the nature of inter and trans-disciplinary work, and provides the visual cues for all the exercises:

‘TD PGR Workshop Facilitator Slides.ppt’

All documents are provided in accessible formats (.doc, .ppt) so that users can modify as they choose.

**Independent Evaluation Report**

*To be supplied in mid September by independent consultant, Dr Delwyn Goodrick*

Agreed process for Dr Goodrick’s evaluation:

- Review Fellowship and draft final report including appendices and accompanying documents

- Identify small number (6-8) of interviewees representing range of participants eg 1 or 2 ISF colleagues (Dr Juliet Willetts, Dr Chris Riedy, Dr Kumi Abeysuriya); 2 or 3 from specialist researcher group (Dr Kath Fisher (SCU), Dr Anna Carew (UTas), Associate Professor Simon Barrie (USyd), Dr Catherine Manathunga (UQ)); 1 or 2 from other retreat participants (Prof Ray Ison (UMelb), Prof Dora Marinova (Curtin); and Prof Brian Martin (UWollongong)); and 2 or 3 from workshop participant list (tbd).

- Conduct brief interviews seeking feedback on project and views on
  
  o their experience of engaging in the project
  
  o the final resources from the project, and how they might use and/or disseminate them
  
  o what if anything has changed in their practice as a result of their engagement with the project

- Prepare and submit short separate report for separate submission to ALTC.
Appendix 2: Workshops, presentations & participants

Workshops and presentations associated with the Fellowship

WORKSHOPS

- Half-day workshop on Summative Criteria – Brisbane (May 2008)
- Half-day workshop on Summative Criteria – Sydney (May 2008)
- 2-day retreat on Formative Action – Lilyvale NSW (29-30 July 2008)
- Workshop on Formative action at ISF postgraduate students’ and supervisors’ annual retreat – Pittwater NSW (March 2009)
- Half-day workshop Trialling of guidance materials – Melbourne (July 2009)
- Workshops on transdisciplinary research education – Chalmers University, Sweden (November 2007)

PRESENTATIONS

- Conference on Quality in postgraduate research, Adelaide (April 2008)
- ALTC Forum, Brisbane (September 2008)
- Bi-annual meeting of the Deans and Directors of Graduate Schools (DDoS), Sydney (April 2009)
Workshop and Retreat Participants

Brisbane Workshop on summative criteria

Rose Boyd School of Engineering, UQ
Don Cameron Natural & Rural Systems Management, UQ
Kath Fisher Graduate Research College, Southern Cross
Robyn Gillies School of Education, UQ
Amanda Henderson Health, Griffith
Lesley Jolly Strategic Partnerships- Research, Evaluation, Training, Community
Justine Lacey School of Natural & Rural Systems Management, UQ
Paul Lant Chemical Engineering, UQ
Bob Maczkowiack Natural and Rural Systems Management, and Centre for Mined Land Rehabilitation, UQ
Catherine Manathunga Teaching and Educational Devt Institute/UQ Graduate School, UQ
George Mellick Eskitis Institute, Griffith
Janet Wiles School of IT & Electrical Engineering, UQ
Juliet Willetts Institute for Sustainable Futures, UTS
Prasad K.D.V. Yarlagadda Director: Smart Systems Research Theme, School of Engineering Systems, QUT
Sydney Workshop on summative criteria

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Participants in Retreat on formative action

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Carlia Cooper  Dana Cordell  Chris Dunstan  Dena Fam
Simon Fane  Damien Giorco  Suzanne Grob  Jenny Kent
Sarina Kilham  Cynthia Mitchell  Candice Moy  Michael Paddon
Roel Plant  Jason Prior  Tani Shaw  Tanzi Smith
Juliet Willetts  Phil Willis  Keren Winterford  Stuart White