



Australian Government



Office for
Learning & Teaching

Good Practice Report: Postgraduate Research and Coursework Degrees

Final Report 2014

Queensland University of Technology

Professor Jillian Hamilton (Project Leader)

Professor Mandy Thomas

Associate Professor Susan Carson

Dr Elizabeth Ellison

Report Authors:

Jillian Hamilton, Mandy Thomas, Susan Carson, Elizabeth Ellison



supporting • rewarding • innovating

Level 10, 255 Elizabeth Street NSW 2000 • GPO Box 9880, Sydney NSW 2001 • Phone: (02) 6240 0625 • Fax: (02) 6267 4499

www.olt.gov.au

Support for the production of this report has been provided by the Australian Government Office for Learning and Teaching. The views expressed in this report do not necessarily reflect the views of the Australian Government Office for Learning and Teaching.



With the exception of the Commonwealth Coat of Arms, and where otherwise noted, all material presented in this document is provided under Creative Commons Attribution-ShareAlike 4.0 International License <http://creativecommons.org/licenses/by-sa/4.0/>.

The details of the relevant licence conditions are available on the Creative Commons website (accessible using the links provided) as is the full legal code for the Creative Commons Attribution-ShareAlike 4.0 International License <http://creativecommons.org/licenses/by-sa/4.0/legalcode>.

Requests and inquiries concerning these rights should be addressed to:
Office for Learning and Teaching
Department of Education

GPO Box 9880,
Location code N255EL10
Sydney NSW 2001

[<learningandteaching@education.gov.au>](mailto:learningandteaching@education.gov.au)

2014

ISBN 978-1-74361-996-4 [PRINT]
ISBN 978-1-74361-997-1 [PDF]
ISBN 978-1-74361-998-8 [DOCX]

List of Acronyms Used

ALTC	Australian Learning and Teaching Council (now the OLT)
APA	Australian Postgraduate Award
AQF	Australian Qualifications Framework
ARC	Australian Research Council
ATN	Australian Technology Network
CAPA	Council of Australian Postgraduate Associations
DDoGS	Council of Australian Deans and Directors of Graduate Studies
ERA	Excellence in Research for Australia
FIRST	for Improving Research Supervision Training
Go8	Group of Eight (Universities)
HECS	Higher Education Contribution Scheme
HELP	Higher Education Loan Program
HDR	Higher Degrees (Research)
IRG	Innovative Research Group
OLT	Office for Learning and Teaching
PhD	Doctor of Philosophy
QUT	Queensland University of Technology
RUN	Regional Universities Network
TEQSA	Tertiary Education Quality and Standards Agency

Executive Summary

Over the past decade, enrolments in postgraduate courses in Australian universities have risen by 34% (or from 258,164 in 2004 to 347,363 in 2013) (uCube, 2014). This substantial growth can be attributed to increased demand for postgraduate coursework as continuing professional education, the expansion of Higher Degrees Research (HDR) intakes, and the development of postgraduate research and coursework degrees in new fields. At the same time, the establishment of the Australian Qualification Framework (AQF) and national Tertiary Education Quality and Standards Agency (TEQSA), as well as the internationalisation of postgraduate education, have brought challenges and opportunities to the sector.

During the past five years, the Australian Government Office for Learning and Teaching (OLT) and its predecessor bodies have funded a number of projects and fellowships on postgraduate coursework and research degrees. They span diverse topics—from entry pathways and research training to supporting international and Indigenous students, examination, scoping studies of new and emergent programs, and effective supervision.

In 2014, the OLT commissioned this good practice report to review the grants and fellowships conducted between 2009 and 2014. Encompassing 27 learning and teaching projects and fellowships, the aims of this report include providing universities and academics with an overview of the current state of postgraduate study in Australia and the major influences upon it; a coherent overview of funded projects' findings and outcomes; and a central point to access good practices, resources and tools in summary form.

The objectives of this good practice report are to provide:

- A literature review, which contextualises the projects within the Australian and international higher education environment, emphasises factors that currently influence postgraduate programs, and highlights challenges and opportunities for the sector. It also explains variations in postgraduate course types and definitions within the AQF, and identifies key learning and teaching issues as well as good practices identified in scholarly research and position papers.
- A collated overview of the 27 national learning and teaching projects and fellowships on postgraduate coursework and research, including a summary of each project's aims and objectives, methodologies, outcomes and resources.
- A summative index of project characteristics (topics, themes and approaches) and inventory of scholarly research outcomes of the completed projects (publications, reports) as well as resources produced (tools, methods, good practice case studies), and their location (URL Links, references, etc.).
- A summary of good practices that have been identified from the literature and the findings of completed projects.
- A set of recommendations to address remaining gaps in the field and areas in which further work or development are appropriate.

Bringing this work together will help enable university course teams to improve the delivery and development of existing postgraduate courses and to develop new ones, and it will provide academics with an overview of good practices and resources for teaching, supervising and supporting postgraduate students.

Table of Contents

List of Acronyms Used.....	iii
Executive Summary.....	1
Tables and Figures	3
Tables.....	3
Figures	3
A Review of the Field	4
Overview.....	4
Aims and Scope	4
Definitions, Differences, Types and Levels of Australian Postgraduate Degrees	4
International Comparisons.....	7
Other Drivers of Change, Standards and Good Practices	8
Growth and Funding.....	9
Culturally and Linguistically Diverse Students.....	9
Good Practices and Postgraduate Pedagogies.....	10
Academic Writing	12
Examination	13
Conclusion	13
Completed Projects and Fellowships (2009-2014)	15
Current OLT Projects and Fellowships	37
Project Characteristics and Outcomes.....	43
Good Practice Overview	50
Summary of Gaps and Recommendations	51
Postgraduate Pathways.....	51
Postgraduate Coursework Degrees.....	52
HDR Milestones	52
HDR Examination.....	53
Academic Development for HDR Supervisors	53
New Fields, Pedagogies and Outcomes.....	54
An International Context and Culturally and Linguistically Diverse Students.....	55
Postgraduate Destinations and Co-curricula Activity for Career Development	56
Sharing Project Findings and Recommendations.....	56
Design Methodologies.....	57
Conclusion.....	58
References	59
Inventory of Project Outputs	63

Tables and Figures

Tables

Table 1: Summary of Project Characteristics and Outcomes: Page 45.

Figures

Fig 1: An example of diversity: Victoria College of Arts variation in degree titles in four disciplines: Page 5.

A Review of the Field

Overview

Over the past decade, postgraduate courses in Australian universities have seen substantial increases in enrolments, with a cumulative increase of approximately 34% (uCube, 2014). This can be attributed to increased demand for postgraduate coursework to meet industry expectations of continuing professional education, the expansion of HDR intakes, and the establishment of new postgraduate research and coursework fields. At the same time, relatively static funding allocations have seen increased pressures on ensuring timely completions (Group of Eight, 2013, 5) and this, in turn, has impacted upon university processes (such as the milestones in PhD candidature and supervisor accreditation). In addition, the establishment of the national Tertiary Education Quality and Standards Agency (TEQSA), and the strengthening process of the Australian Qualification Framework (AQF), has required universities to align postgraduate courses (as well as undergraduate courses) with national standards and quality assurance processes. It is also likely that the higher education sector will continue to undergo change into the future as a result of proposed deregulation and amendments to education policy and student fee structures that are before the Australian Senate at the time of writing.

Given recent growth in enrolments in postgraduate study, the expansion of postgraduate fields, the quality assurance and regulatory reforms of the past decade, and anticipated changes that may bring new challenges and opportunities to the sector, this is an important moment in which to appraise the field of postgraduate study.

Aims and Scope

This literature review provides an overview of the current contexts and key learning and teaching issues of Australian postgraduate study. It first explains the various types of postgraduate courses, and situates them in national and international contexts. It outlines their differences (in nomenclature, form and degree type), as well as the standards that define them within the AQF. It then provides an overview of the intrinsic and external drivers of change, including growth in enrolments and completions, and the implications for the sector and for graduate employment. This is followed by a summary of the good practice principles promoted by the Council of Deans and Directors of Graduate Studies (DDoGS) and the broader literature. And finally, the issues and current research into postgraduate supervision, writing and examination are discussed. This overview provides a contextual framework for understanding the aims and outcomes of the ALTC and OLT projects of the past five years, and it also helps to establish a foundation for the recommendations that are made here.

Definitions, Differences, Types and Levels of Australian Postgraduate Degrees

Compared with undergraduate courses, there is considerable variation in postgraduate courses. Postgraduate degrees fall into two distinct types: research and coursework, and

they have very different objectives, learning outcomes, graduate capabilities and graduate destinations. They also differ in pedagogical approach—from one-on-one supervision of HDR candidates, to cohort models of supervised projects and classroom contexts not dissimilar to those of undergraduate courses. Due to these differences, discussions in the literature tend to focus on one or the other, primarily HDRs. Although postgraduate coursework enrolments are proportionally higher than research degrees, because HDR programs and pedagogies are the most complex and distinct from undergraduate programs, they are subject to more discussion in the literature, position papers and the projects covered here.

Besides these two modes of postgraduate study, various levels of postgraduate degrees are discussed here: Bachelor (Honours) (as a postgraduate pathway); Graduate Certificate; Masters (Research and Coursework); and doctorate (Doctor of Philosophy and Professional Doctorate). Within them, variation exists in naming, duration, pedagogies and structure. The literature and projects in this report contain varied naming conventions, titles and definitions, which also vary across universities, and even within them. While Master of Philosophy and Doctor of Philosophy degrees tend to be largely consistent in form across institutional and disciplinary boundaries, many universities use a variety of titles for discipline-specific coursework Masters and Professional Doctorate programs (for example, Master of Computational Science, Master of Film and Television, Doctor of Creative Industries, or Doctor of Education) and even sub-disciplinary titles, as evidenced by the representative degree titles of a single faculty within one university in Figure 1 below.

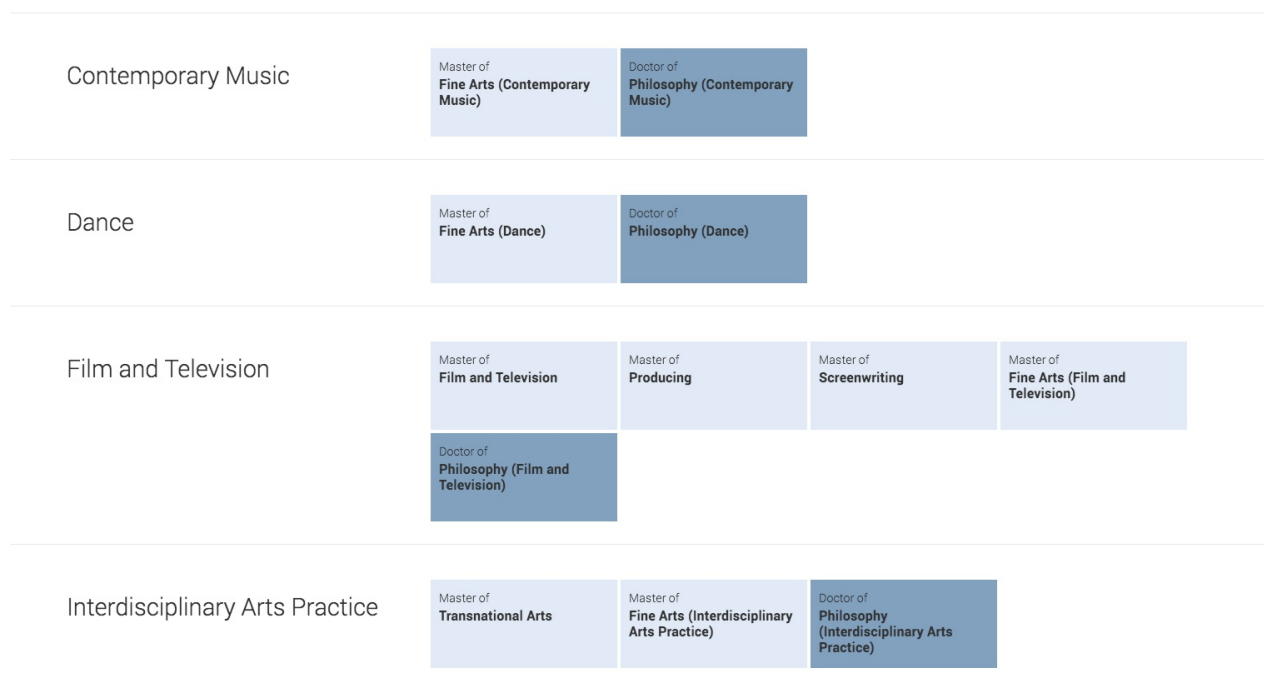


Figure 1: An example of diversity: Victoria College of Arts variation in degree titles in four disciplines (<http://vca.unimelb.edu.au/study/degrees>).

For consistency in this literature review, the following terminology has been adopted: postgraduate study encompasses Graduate Certificates, Masters and PhD programs; postgraduate pathway refers to courses that qualify students to enter postgraduate study (which include Bachelor (Honours), Graduate Certificates and Masters degrees, depending on the destination degree); postgraduate coursework, which includes graduate certificates, graduate diplomas and Masters (Coursework) programs; and Higher Degrees Research (HDRs), which refers to Masters (Research) and PhD programs.

To ensure consistency across qualification ‘types’ regardless of institution or discipline, the quality of courses, and portability of qualifications, the AQF was developed in 1995 as “the national policy for regulated qualifications in Australian education and training” (AQF, 2013). In 2011, the TEQSA was established as an independent regulator of the standards-based quality framework <www.teqsa.gov.au> and the AQF was strengthened, with its purpose defined more specifically as, “[ensuring] that qualification outcomes remain relevant and nationally consistent, continue to support flexible qualifications linkages and pathways and enable national and international portability and comparability of qualifications” (AQF, 2013). In these regards, the AQF might be considered a key influence in promoting good practice in higher education courses in Australia.

The AQF provides 14 ‘Qualification Type’ descriptors, which are aligned with ten ‘Level’ descriptors. Alongside ‘volume of learning’ (which defines the notional duration of the qualification in equivalent full-time years), ‘Levels Criteria’ relate to the relative complexity, depth of achievement, and autonomy required of graduates. These ‘learning outcomes’ are presented as “a taxonomy of what graduates of the course level are expected to know, understand and be able to do as a result of learning” (AQF, 2013, 11). They include three dimensions: *knowledge* (depth, breadth and kinds of knowledge, or “what a graduate knows and understands”); *skills* (cognitive, creative, technical, communication and interpersonal skills, or “what a graduate can do”) and *application of knowledge and skills* (degree of autonomy, responsibility and accountability).

Postgraduate courses sit within AQF levels 8 to 10. At Level 8, in which courses must ensure “advanced knowledge and skills for professional or highly skilled work” (AQF, 2013, 50) are Bachelor (Honours), Graduate Certificates and Graduate Diplomas. While the latter are postgraduate qualifications, Honours is a pathway to postgraduate study. An ‘add-on’ year to a Bachelor degree, it plays an important role in research training in Australia. Indeed, Margaret Kiley describes it as a “gold standard” as the primary pathway into further, research-focused study (Kiley, 2013). It is not the only pathway into doctoral study (Masters degrees may provide an alternate route as discussed below), however, it is the norm in Australia, as inferred by the *Commonwealth Scholarships Guidelines* (Aust. Govt. 2012), which describes Honours as the ‘basic eligibility requirement’ and the measure of ‘exceptional research potential’ for an Australian Postgraduate Award (APA). It is against this standard that equivalence must be argued.

Also sitting at Level 8 are Graduate Certificates and Graduate Diplomas. While many Australian institutions frame them as industry-focused qualifications, they can provide a pathway into Coursework Masters programs for students from non-cognate fields. To date, there has been little discussion on them in the literature and OLT project reports, except where they are indirectly included in discussions on postgraduate study.

Masters degrees sit at AQF Level 9, and must provide “specialised knowledge and skills for research, and/or professional practice and/or further learning” (AQF, 2013, 59). Like Honours, they follow a Level 7 (degree-level) qualification. The AQF describes three forms: Research, Coursework and Extended Masters.¹ Research Masters include the Master of

¹ It is rare to find Masters (Extended) mentioned in the literature, but in the AQF the principal difference is described as the volume of learning (three-to-four years duration compared with other Masters degrees of one to two years) (AQF, 2013, 60).

Philosophy, which is offered across a range of disciplines and involves a supervised, individual project. While a Masters (Research) may be undertaken as a research qualification in its own right, it also provides a pathway to doctoral studies. However, Kiley notes this is becoming less frequent, resulting in a decline of intakes (Kiley, 2013, 10).

Currently, in Australia, a Masters (Coursework) tends to be a discipline specific, taught, professional qualification (for example, Master of Fine Arts; Master of Education; Master of Law). There is wide variety in pedagogical approaches, structures and proportion of coursework to research projects in such degrees. However, the new requirement for Masters Coursework degrees to ensure the application of knowledge and skills “to plan and execute a substantial research-based project, capstone experience and/or piece of scholarship” (AQF, 17), may bring about some consistency (although questions remain in terms of what form the research might take in different disciplines and under what circumstances it might provide a pathway to a PhD).

The highest qualification in the AQF is the Doctoral degree, at Level 10. It must ensure a “systematic and critical understanding of a substantial and complex body of knowledge at the frontier of a discipline or area of professional practice” (AQF, 2013, 63). Doctoral qualifications are of two distinct types. The traditional Doctor of Philosophy is research driven, while discipline-specific doctoral degrees (such as a Doctor of Creative Industries, Doctor of Business, or Doctor of Education), tend to be industry focused, project-based, professional qualifications. Overall, the criteria for examination involves an original contribution to knowledge, but it may take different forms depending on degree type: a thesis (traditional dissertation); a body of practice with accompanying exegesis (practice-led research), a portfolio of shorter project reports (Professional Doctorate); or a coherent collection of publications (Thesis by Publication).

International Comparisons

Australian postgraduate degrees, course progressions and examination are not consistent with some other countries. Australia follows the UK model in typically progressing from a good Honours degree (H1) into a PhD, while European countries conform (more or less) to the Bologna Process,² in which a Masters degree typically provides a pathway to doctoral studies. This progression is similar in the US, but earning a research doctorate there also requires successful completion of coursework (graduate-level courses on the subject area and methodology training). Like the UK, an Australian doctoral degree does not necessarily include coursework and takes the form of “a research apprenticeship in which individual students work closely with a nominated supervisor” (Group of Eight, 2013, 10). This means that research training resides in different degree levels in different countries. Another key difference is the mode of examination. Along with the submission of a written thesis, European, American and New Zealand institutions require an oral examination (Defense or Viva), while the Australian doctoral candidate is rarely required to defend their thesis to

² The Bologna Process was established in 1999 to ensure comparable standards, consistency in quality, and portability of higher education qualifications across the European Higher Education Area. Currently, there remain inconsistencies across European nations in terms of implementation. Like the AQF, its standards focus on ‘learning outcomes’, but there is less focus on ‘volume of learning’ or duration and courses vary from 3–4 year Bachelor degrees, 1–2 years Masters degrees and 3–4 years doctoral degrees.

examiners (but they may face an internal, pre-examination review at some universities).

These international differences are significant because of the pressures they place on the Australian higher education sector. In 2007, the then Australian Minister for Education and the European Union Commissioner signed a joint declaration to “enhance education links and allow for a convergence of the two education systems”³ and, since then, some Australian universities have aligned aspects of their postgraduate degree structures with the Bologna Process (notably the University of Melbourne and more recently Macquarie University).

Other Drivers of Change, Standards and Good Practices

In Australia, a number of university groupings identify with a particular focus or vision. They include the Australian Technology Network (ATN) (five universities with industry links); the Group of Eight (Go8) (eight ‘leading Australian universities’); the Innovative Research Universities (IRU) (seven research-intensive institutions); and Regional Universities Network (RUN) (six regional universities). Representing quite different perspectives, constituencies and agendas, these consortiums create push and pull on the form, standards and practices of postgraduate offerings as they advocate to government, and produce position papers that both inform the sector and drive institutional change.

Drawing these diverse interests together is DDoGS. A national peak body, DDoGS is a significant driver of change in the field of postgraduate study. Defining good practices and benchmarking activities, it is the source of numerous recommendations, including the recently released *Graduate Research: Good Practice Principles* (2014), which outlines six key principles:

1. Transparent and clearly documented admission requirements and processes;
2. Support for facilitating a successful completion within a reasonable time-frame;
3. Support for candidates to undertake original research while developing key research and employability skills;
4. Access to information on resources required for timely completion, and to engage with scholarly communities;
5. Supervisory teams designed to provide guidance in all facets of completing the candidature (including design, conduct, completion, publication, dissemination, employability, and so on);
6. Examination performed by two external experts of international standing, without conflict of interest.

These broad principles extend into a number of sub-principles for the effective delivery of HDR programs.

Other bodies also influence the agendas of good practice in postgraduate studies, including Universities Australia, which represents Australia’s 39 universities and the Council of Australian Postgraduate Associations (CAPA), which represents students. Both provide

³ <http://www.delous.ec.europa.eu/education/cooperation/JointDeclarationOnEducation.htm>

representation on standards, resourcing, services, student visa provisions, and other issues.

Growth and Funding

Key factors impacting on effectiveness and quality of learning and teaching in postgraduate degree outcomes are enrolments and funding (Group of Eight, 2013, 5). Over the past decade, postgraduate research degree numbers have increased from 47,619 to 62,673 students (or 31%) while 'other postgraduates' (that is coursework students) increased from 210,545 to 284,690 (or 35%) (uCube, 2014).⁴ Given that there has not been a corresponding increase in funding or academic staff numbers, this growth is significant because of the pressures placed on resourcing due to relatively high staff-student ratios of postgraduate courses, and the one-to-one supervisions required for HDRs. Also of concern is the increase in completions of research doctorates without a corresponding increase in graduate employment opportunities (including the traditional destination of academia), which means that the graduate destinations of HDRs are necessarily shifting (Group of Eight, 2013).

Continued increases in enrolment numbers into the future will be contingent on social and political factors. The 2014-2015 Australian Federal Budget proposes significant changes to higher education, including the deregulation of student fees and charges to HDR students of between \$1700-\$3900 per year (Australian Government Department of Education, 2014). While this cost may be deferrable through the Higher Education Loan Program (HELP), when considered in combination with proposed interest charges on deferred Higher Education Contribution Scheme (HECS) fees, accumulated undergraduate debt, and the relative age of postgraduate students (62% are over 30 years of age), it may impact on postgraduate student demand in the medium term.

Culturally and Linguistically Diverse Students

Globalisation is also transforming higher education in Australia. Australia is now the world's third most significant destination for foreign tertiary students, who make up between a quarter and a third of Australia's undergraduate and postgraduate enrolments (Universities Australia, 2013, 1). As noted by Universities Australia,

Just 25 years ago, an international sector scarcely existed. In 1986, universities were granted the autonomy to determine the number of international students they enrolled and the fees they would charge. As a result, the number of international students studying at Australian universities increased more than 18-fold, from just over 18,000 in 1988 to 332,000 students. (2013, 27)

Of these international students enrolled in Australian universities in 2011, 24% (83,000) were enrolled in coursework masters programs and 5% were HDR candidates (16,600).

Given that international education generates nearly a billion dollars in exports annually, there is a strong imperative to ensure good practices. As Universities Australia continues,

Australia's success in international education is built on quality, which depends on how well it is funded and regulated, and the robustness of its quality assurance. These factors in turn contribute to Australia's international reputation in higher

⁴ This growth compares with an increase in undergraduate enrolments of 40% during the same period

education, which is crucial to attracting international students (2013, 25).

Besides broad quality assurance of courses, given the number of postgraduate students arriving from other countries good practice principles are also needed that relate specifically to supporting international students, or what Yarlagadda, Woodman, Silva et al. (2013) call 'Culturally and Linguistically Diverse' cohorts. Focusing specifically on the issues international students face in the engineering and IT disciplines, Yarlagadda, Woodman, Silva et al. established that international students often experience culture shock, language barriers and social isolation when commencing their postgraduate studies (2013, 2). Manathunga's recent text, *Intercultural Postgraduate Supervision: Reimagining time, place and knowledge* (2014) also considers international postgraduates, in relation to HDR supervision and what she calls the "contact zone", where cultures meet and grapple with difference. She not only argues for the need to consider intercultural factors in supervision but for tailored support and transition pedagogies for international postgraduate students.

Another related consideration is the widening participation agendas of university education. In the year 2000, the Go8 universities accounted for nearly 52% of PhD students (Harman, 2000), with only 11% from low socio-economic status (SES) backgrounds. Harvey and Andrewartha (2013, 116) attribute this disparity to a lack of mobility across the sector, writing that, "Institutional stratification can be seen as a major reason for unequal postgraduate access in Australia"(2013, 118).

Good practices introduced to ensure equity of access and retention of undergraduate students from non-traditional backgrounds are also important at postgraduate level. As noted by *Effective teaching and support for students from low socioeconomic status backgrounds* (Devlin, Kift, Nelson et al., 2012), these good practices include approaches that:

1. Value and respect all students;
2. Encompass an institution-wide approach that is comprehensive, integrated and coordinated through the curriculum;
3. Incorporate inclusive learning environments and strategies;
4. Empower students by making the implicit explicit; and
5. Focus on student learning outcomes and success.

Transition pedagogies have also been established in undergraduate programs to support students as they acclimatise to the environments and expectations of university (see, for example, Nelson, Kift, and Clarke, 2012; Gale and Parker, 2014; and Tinto, 1987), and they might also be extrapolated to support postgraduate students encountering new contexts and modes of study.

Good Practices and Postgraduate Pedagogies

Because postgraduate coursework and research degrees are markedly different, good practice pedagogies also differ in relation to them. Postgraduate coursework degrees are more closely aligned with undergraduate courses than HDRs in terms of pedagogies, as they involve curriculum design, assessment, and cohort-based learning experiences. Many good practice principles, which have been established in relation to face-to-face and online undergraduate courses, might therefore be broadly applied to them. For example, Chickering and Gamson's *Seven Principles for Good Practice in Undergraduate Education*, (1987), which can be summarised as:

1. encourage contacts between students and faculty;
2. develop reciprocity and cooperation among students;
3. use active learning techniques;
4. give prompt feedback;
5. emphasise time on task;
6. communicate high expectations; and
7. respect diverse talents and ways of learning,

might be equally applicable to postgraduate courses, as they also require engagement in learning, effective approaches to assessment, community building, and respect for diversity. However, they must also encompass strategies that facilitate the acquisition of “advanced knowledge and skills” through to “systemic and critical understanding of a substantial and complex body of knowledge at the frontier of a discipline or area of professional practice” (AQF, 2013), as set out in the AQF standards.

HDR supervision requires particular, distinctive learning and teaching approaches. Much has been written about the supervision of HDRs in recent years, due to a combination of its complex and unique pedagogies associated with guiding a research project. While Masters (Coursework) programs now have research project components (which may be supervised at a cohort or individual level) and Professional Doctorates may combine coursework with short research projects, postgraduate study that principally involves a major research project is different to any other learning and teaching context.

As Hammond et al. (2010) argue, due to growing pressure on universities, faculties, disciplines and supervisors to increase enrolments, diversify offerings, prioritise timely completion and comply with quality assurance frameworks, there is increasing recognition of the importance of HDR supervision. While responsibility for process rests with institutions, and some steps have been taken to mitigate these challenges—such as the inclusion of coursework into HDR programs (particularly on academic literacy), the development of clearer management structures for dealing with ‘risk’, and the adoption of institutionally-governed milestones to ensure timely completions—in the end, supervisors have responsibility for implementing effective pedagogical practices of supervision. As a recent Go8 paper noted, “It is difficult to underestimate the importance of supervision and the quality of supervision in creating the PhD experience and in ensuring the completion of a PhD” (2013, 13).

Undoubtedly, this has led to increased scrutiny of supervision. As Hammond et al. write, “Supervision no longer occurs just in the private space between supervisor and student” (2010, 7). However, it has also led to the dissemination of good practices and principles to help guide supervision of candidature, navigating milestones, thesis writing and examination. The literature often focuses on advice for supervisors. For example, *Supervising Doctorates Downunder* offers practical tips for various points of candidature (Section 2, for instance, is entitled ‘Beginning in the Supervision Process’). *fIRST* (for Improving Research Supervision and Training) provides a comprehensive, moderated and updated online collection of supervision resources, guidelines and practices <www.first.edu.au>. And Christine Bruce’s *Resource for Supervisors* (2009), an output of her ALTC fellowship, offers strategic advice and an overview of the practices of experienced supervisors. In a framework developed for technology disciplines, Bruce identifies three approaches to supervision (scaffolding; relationships; and direction setting) along with eight types of supervisory good practice strategies (including creating groups; creating a structure; generating outputs; creating space; focusing on the big picture; and negotiating

expectations). This might be compared with Alison Lee's earlier six models of supervision (2007).

While such publications and resources might be considered to be a form of training, some of the projects in this report argue that a deeper approach is needed to build HDR pedagogies. For example, Hammond et al. (2010, v) argue that, "There is a need in many universities for greater emphasis on professional leadership in research education," and that, "conversations [around supervision] need to go beyond issues of compliance to address quality of supervision and good supervisory practices". In addition, they suggest that academic development for supervisors "must address the increasingly complex nature of supervision" and include "reactive, pre-emptive and proactive dimensions" (2010, 14). Noting concerns voiced by supervisors that universities value compliance over quality, however, Hammond et al. (2010) caution against tying academic development to quality assurance processes. They also counsel against the efficiencies of generic training, noting that, "there is considerable resistance from supervisors to compulsory, centralised and formal training programs. There is also considerable cynicism about the value of such programs" (2010, 15). Hamilton et al. (2014) extend this argument, and suggest the need for contextually targeted exemplars of good practice, discipline-level workshops, and informal mechanisms for supervisor training, such as peer mentoring. There are also earlier, significant discussions on supervision, such as and Biggs and Buechler's descriptions of supervision in the 'alternative paradigm' of the creative arts (2009).

Academic Writing

Academic writing is a key aspect of all postgraduate study regardless of discipline and a requisite skill for successful examination. Usually students are expected to have a sophisticated level of writing upon admission, however this is not always the case, and it is a difficult skill to teach. Therefore it is often of concern to supervisors. However, many authors refer to a scarcity of research in the area (Pare, Starke-Meyerring, and Alpine, 2009; Kamler and Thomson, 2006; Lee and Aitchison, 2009). Moreover, as Aitchison et al. (2012) argue, supervisors rarely discuss it. In 2009, Lee and Aitchison therefore suggested that there is, "an emerging recognition of the need for institutional capacity building for writing and publication-focused pedagogical practices in doctoral work" (2009, 87). More recently, Aitchison et al. (2012) report some progress, with the emergence of writing groups, the supervisor dyad, and development activities around feedback and writing for publication (442-443). However, in relation to the sciences, Aitchison et al. note a 'natural selection' process in which students are seen as likely to either 'sink or swim' (2012, 444).

It is important to note that approaches to academic writing vary across disciplines. While traditional theses may be objective, factual and analytical, in the creative arts Ings (2013) refers to the role of the self in autobiographical works, and Hamilton (2014) refers to an adoption of a 'plurality of subject positions'. Moreover, the shifting understanding of what constitutes writing, let alone academic writing, continues to reshape the appearance of research theses. Emerging digital forms and alternative narratives, as well as a trend towards "data-driven literature" (Rodley and Burrell, 2014) in a variety of fields, highlights the need for continued research into the new role of writing in postgraduate courses, and how to effectively support it. That is, more research is required on good practices in teaching and supervising academic writing, including discipline and non-discipline specific techniques.

Examination

The AQF has introduced examination guidelines for PhDs and Professional Doctorates, including external examination by two experts of international standing (though Holbrook, Bourke, Lovat, and Fairbairn (2008, 37) note that, in practice, 58% of Australian universities engage three examiners). Prior to this quality assurance process, wide variation existed in requirements and process for PhDs, as it still does in relation to Masters degrees, where examination is determined by accrediting institutions. In 2008, Holbrook et al. (36-37) drew attention to the challenges that a lack of clear benchmarking standards posed to the PhD examination process. Nonetheless their study showed, “an extremely high level of consistency in examiner recommendations” (2008, 45), which suggests that examiners have developed an inherent understanding of disciplinary expectations and norms, and this provides what might be described as an internal consensus around discipline standards. However, they observed a slightly higher proportion of inconsistencies in emergent HDR fields, such as social sciences, arts, education and engineering. This is perhaps not surprising given that disciplinary ‘norms’ may take time to establish. (For example, in the creative arts where a thesis may be comprised of creative and written (exegetical) components, conventions around length, form and strategic intent of the two elements have not yet reached consensus, let alone quality.)

While a special issue of the *International Journal of Educational Research*, ‘Doctoral Assessment in Australia’ (Morley, 2004), sets out to ‘demystify’ the process of examination across disciplines, and *Supervising Doctorates Downunder* (2009) dedicates two chapters to examination (one on the written report and one on oral examination), there has otherwise been little discussion on examination. Webb, Brien, and Burr (2013, 30) suggest that examination is an isolated experience, writing, “To some extent, thesis examination happens outside the everyday business of the examiner’s university—perhaps because at least in most Australian universities, examiners rarely evaluate students from their own institutions.” And Holbrook et al. (2008) highlight the lack of training for examiners (compared with supervisor training). Therefore, because examination tends to be based on what the examiner knows (based on experience), it may not be consistent with the expectations of other universities, and establishing a stable, sector-wide consensus is a long-term proposition.

Conclusion

We might say then that during the period covered by the projects within this good practice report, postgraduate study in Australia has been subject to a combination of internal (national) reforms (the AQF) and compliance (TEQSA); less formal agendas of representative bodies (such as DDoGS); and pressures from external (international) forces such as the Bologna Process and the internationalisation of education. The drive towards consistency, standards and ongoing quality assurance is not new. As Louise Morley noted in 2004,

Quality assurance mechanisms have been introduced in higher education in a wide range of national locations to reassure consumers about standards, value and entitlements. These have included the introduction of benchmarks, learning outcomes, appeals procedures and assessment criteria. (2004, 92)

However, such reforms have been consolidated and legislated during the past five years. This is important to note in relation to both the literature and reports discussed in this report, as some predate the reforms, while later research take it into account.

Completed Projects and Fellowships (2009-2014)

Between 2009 and 2014, 21 ALTC/OLT grants and fellowships have been concluded and reported on. Six more have commenced. These projects are summarised below in a brief (half to one page) summary of each, including their context, rationale, aims, approaches, findings, outcomes, and recommendations. This is followed by a tabulated overview of their collective topics and themes, aims, approaches and outcomes and a summary of project characteristics (spread of approaches, and key practices and outcomes).

The summaries below rely on project reports provided by the Office for Learning and Teaching (most of which are available on the OLT website). It is from the reports that the information regarding team members, institutions, funding amounts, and project outcomes is drawn. It is important to note that all team members who contributed to each project (particularly the internal team members) may not be listed if they do not appear on the project submission. Many project reports therefore have additional authors named on the final reports.

Dates on the project titles represent the span between year of funding and year of the final report.

Improving the leadership capability of academic coordinators in postgraduate and undergraduate programs in Business, LE6-11, 2006-09

Lead Institution:	University of South Australia
Project Team:	Professor Patricia Vilkinas (Project Leader), Associate Professor Betty Leask
Funding	\$224 130
Final Report:	Vilkinas, T. (2009). <i>Improving the Leadership Capability of Academic Coordinators in Postgraduate and Undergraduate Programs in Business</i> http://www.olt.gov.au/project-improving-leadership-capability-unisa-2006
Project Web site:	http://www.unisanet.unisa.edu.au/academicleadership (inactive)

To enhance the quality of postgraduate programs, this project focused on academic coordinators (Program Directors, Subject Coordinators, and Honours Degree Coordinators) as 'front-line managers'. It set out to ascertain, and highlight the leadership capability of such staff in undergraduate and postgraduate Business programs at two universities.

The project employed an Integrated Competing Values Framework (ICVF) as a theoretical model, and conducted interviews and surveys to establish perceptions of the role, how effective academic coordinators are, and what factors impact on their performance. Professional development workshops were designed to interpret the findings and facilitated the development of action plans to enhance the academic leadership of programs.

Project findings, outcomes, resources, tools and dissemination:

The project concluded that there are some ongoing issues in relation to policy, which hamper the ability of Academic Coordinators to be effective. It also established that there is significant scope for further development of the leadership capabilities of Academic Coordinators.

Outcomes include a professional development framework (*Academic Leadership: Fundamental Building Blocks*), based on three workshops and a resource book to support their implementation. The resource book was designed for extended use by universities to implement Academic Coordinator leadership development workshops. A 'second-order' outcome of the program was increased awareness of the leadership and impact of Academic coordinators. Along with a final report, conference papers documented the findings and outcomes and the project also produced a website (which is no longer active).

Recommendations:

Several recommendations arose from the research and application of the project. The project team argued that, because an in-depth understanding and a complex skill set is required to be an effective Academic Coordinator, universities must ensure that Academic coordinators are fully inducted into their role, and provided with developmental programs that are appropriate for front-line managers in academic settings (using a theoretical framework of academic leadership, such as ICVF). Greater awareness by academic managers of the complexity of the role is also needed, so that the appropriate levels of institutional and personal resourcing can be allocated. And Academic Coordinators need to understand that they are 'leaders', and what this means for the way they do their work. The project team concluded that periodic reviews and the application of 'critical observation' and 'reflective learning' would be of benefit in this regard (at both a personal and an institutional level).

Building local leadership for research education, LE11-1982, 2011-14

Lead Institution:	University of Technology, Sydney
Partner Institutions:	Macquarie University, The Australian National University, University of Western Sydney
Project Team:	Professor David Boud (Leader), Dr Andrew Solomon, Dr Jo McKenzie, Dr Margaret Kiley, Professor Angela Brew, Dr Janne Malfroy
Funding	\$220 000
Final Report:	Boud, D., Brew, A., Dowling, R., Kiley, M., Malfroy, J., McKenzie, J., Solomon, N. & Ryland, K. (2014). <i>Building Local Leadership for Research Education</i> http://www.olt.gov.au/project-building-local-leadership-research-education-2011
Project Web site:	www.first.edu.au

Arguing for the importance of the role of research education coordinators (RECs) for the administration of postgraduate research courses, enhancing student experience, and ensuring timely completion, this project focused on their needs within schools, faculties and research centres. In particular, it set out to improve the ability of RECs to see themselves as leaders, to improve institutional awareness of their impact, and to develop materials to support them at a time of expansion, diversification, and increased scrutiny of postgraduate courses.

The project team examined the roles of RECs and developed a needs analysis through consultations, interviews and surveys at the four partner institutions. Through analysis of the interviews and survey responses, they mapped, conceptualised and clarified the REC role using an Integrated Competing Values Framework and distributed leadership concepts. They sought out exemplars of good practice and, from this material, they produced resources (scenarios and case studies) for RECs, and trialled them in regional workshops.

Project findings, outcomes, resources, tools and dissemination:

The project found wide variation in the roles, expectations and responsibilities of RECs, which is exacerbated, at times, by ambiguous position descriptions and reporting relationships. They identified and mapped the most significant aspects of the role, and produced a series of resources based on seven 'typical' scenarios faced by RECs as a form of academic development. Drawing on the ideas of experienced coordinators and their senior colleagues, they also produced four case studies, which exemplify good practices and explain how productive cultures had been established across faculties. These outcomes were disseminated through regional workshops, in which the standard term RECs was introduced. Besides the workshops, the outcomes of the research and the resources were also disseminated through the *fIRST* website.

Recommendations:

Recommendations of this project can be summarised as follows: universities (and DDoGS) should clarify the role of RECs; recognise its leadership dimensions; define its scope and workload; and map formal and informal department/school/faculty/research centre reporting relationships. Ideas and resources should be produced for Associate Deans, Research to raise their awareness of what effective coordination involves and how it relates to both research and research education priorities, as well as to help them to support the work of RECs. Sufficient and appropriate support needs to be provided for centrally initiated programs in research education coursework programs. A national network for research education coordinators should be established for RECs to meet across institutions and to share information and ideas, and space should be given for this within the bi-annual Quality in Postgraduate Research (QPR) conference. A common location for REC resources and development activities should be maintained with *fIRST* <www.first.edu.au> and advertised to newly appointed and continuing RECs.

Building research supervision and training across Australian universities, GI7-631, 2007-10

Lead Institution:	University of Technology, Sydney
Partner Institutions:	For Improving Research Supervision Training Consortium (fIRST)
Project Team:	Associate Professor Jennifer Hammond (Project Leader), Kevin Ryland, Mark Tennant, David Boud
Funding:	\$139 171
Final Report:	Hammond, J., Ryland, K., Tennant, M. & Boud, D. (2010). <i>Building research supervision and training across Australian universities</i> http://www.olt.gov.au/project-building-research-supervision-uts-2007
Project Web site:	www.first.edu.au/public/ALTC (no longer active)

With increasing pressure on universities to increase HDR supervision capacity, ensure timely completions, and comply with new standards and quality assurance processes, the supervision of research students has come under unprecedented scrutiny, with added expectations of professionalisation and formalisation. Against this backdrop, this project set out to provide an evaluation of the roles and responsibilities of supervisors, contemporary supervision practices, and current training provisions for HDR supervisors. Besides auditing current practices and available resources, the objectives of the project were also forward looking—to ascertain future needs of supervisors and make recommendations to assist universities to develop effective supervisor training.

The project team first conducted a symposium with HDR supervisors and key academic leaders in the field, which facilitated discussions on supervision pedagogy. They then conducted a scoping exercise through surveys, with follow-up interviews and focus groups with supervisors from a range of Australian universities.

Project findings, outcomes, resources, tools and dissemination:

The project team clustered their findings under four major categories: growth and diversity in research education; professionalisation and formalisation of research education; changes in supervision practices; and changes to supervisor academic development. The project team published a report on the findings of the symposium, interviews and focus groups. The outcomes were grouped under four headings: professionalisation and formalisation of research education; growth and diversity in research education; changes in supervision practices; and changes for supervision development. The project was disseminated at the symposium and during the data collection phase. The final report was linked to the fIRST website (but is no longer available there).

Recommendations:

Besides recommending further research on academic leadership in research education, a key gap identified by this project was adequate training and resources to improve HDR supervisors' capacity and capability. A particularly interesting finding was the resistance of experienced supervisors showed to centralised and generic supervisor training. A key recommendation was therefore that universities provide ways of encouraging rich and sustained local conversations about research education; support and develop leadership in research education at both a central and faculty/school level; and review resources and existing professional development programs to ensure they address the local needs of both new and experienced supervisors.

The project also recommends that university systems, guidelines, and regulations be reviewed to keep pace with the changing nature of research education; to address the challenges faced by supervisors around growth and diversity (of students, as well as project outputs), and to alleviate pressures on supervisors regarding workload, resources and academic development.

A pedagogy of supervision for the technology disciplines, 2008-09

Lead Institution: Queensland University of Technology
Fellow: Professor Christine Bruce
Final Report: Bruce, C. (2009). *Towards a pedagogy of supervision in the technology disciplines* <http://www.olt.gov.au/altc-teaching-fellow-christine-bruce>
Web site: http://eprints.qut.edu.au/view/person/Bruce_Christine.html

Given the emergent nature of HDRs in technology disciplines, and a predominant view that HDR supervision is principally a research endeavour, Bruce took an alternate approach and applied a 'research education lens' to supervision as a 'site of teaching and learning practice'. She developed 'a pedagogy of supervision for the technology disciplines' by investigating supervisors' views on their role in helping candidates to learn, along with HDR curriculum. She developed a pedagogical framework and key principles from the findings, and built resources for supervisors.

Bruce employed 'constructionism' and developmental phenomenography as a methodology for engaging supervisors (from various technology disciplines) in conversation on 'supervision as teaching and learning'. Methods included interviews, small group conversations and workshops. In the second phase of the fellowship Bruce developed a framework for the pedagogy of supervision, including descriptions of different ways of thinking about teaching and learning in supervision (Nine Pedagogies). This provided a basis for further conversations with supervisors, the Fellowship team and senior administrators. The third phase focused on evaluation, further alignment and dissemination, again through a conversational approach, as well as publications.

Project findings, outcomes, resources, tools and dissemination:

A key outcome of the Fellowship was 'Nine Pedagogies' or ways of thinking about HDR supervision as a teaching and learning practice, with descriptions of each from the perspective of supervisors, students and community. Three approaches to supervision in the technology disciplines were also identified, namely: scaffolded learning, relationship building and direction setting. They were complemented by eight strategies (creating structure, process, and timelines for generating outputs; negotiating expectations; creating intellectual space for innovation; establishing conversations and collaborative learning, focusing on the big pictures, and aligning projects with research agendas).

Outputs of the fellowship include a supervision framework, with a set of pedagogies and good practice principles (which were also developed into a simplified form for supervisors and students). Case studies, four scholarly papers on the project phases and the resulting framework, and a final report (with a literature review, analysis, methodology, findings, new knowledge claims and recommendations) were also produced. The project outcomes were cyclically disseminated through the workshops and conversations with supervisors and stakeholders during the fellowship. Published outcomes are available on QUT ePrints.

Recommendations:

Bruce made a number of recommendations, which can be summarised as follows: Technology disciplines should promote a vision of pedagogical excellence in supervision; create development opportunities for conversations on pedagogy as a teaching and learning practice; and formally establish mentors for less experienced supervisors. The sector needs to establish deeper understandings of HDR curriculum from supervisors' and students' perspectives. And research administrators should adapt generic resources and standards using discipline-terms, for the benefit of supervisors.

Developing a toolkit and framework to support new postgraduate research supervisors in emerging research areas, ID11-2091, 2011-14

Lead Institution:	Swinburne University of Technology
Partner Institutions:	Central Queensland University, Edith Cowan University, University of Southern Queensland, Victoria University
Project Team:	Professor Eddie Blass (Project Leader), Professor Santina Bertone, Associate Professor Anne Jasman, Professor Ronel Erwee, Professor Ron Adams, Associate Professor Helen Borland, Professor Kevin Tickle, Professor Qing-Long Han, Professor Joe Luca, Professor Craig Standing, Juliet Eardley
Funding	\$219 000
Final Report:	Blass, E. and Bertone, S. (2014). <i>Developing a toolkit and framework to support new postgraduate research supervisors in emerging research areas</i> http://www.olt.gov.au/project-developing-toolkit-and-framework-support-new-postgraduate-research-supervisors-emerging-re-0
Project Web site:	http://researchsupervisiontoolkit.com/

In response to the emergence of new research forms of research in ‘practicing disciplines’ (business, creative arts, nursing and allied health), this project set out to develop a toolkit of resources to assist inexperienced postgraduate research supervisors. Its overarching aim was academic development to improve the capabilities of supervisors.

The project team’s approach involved an international literature review, audit of previous OLT outcomes (for example *fIRST* resources), and an evaluation of current supervision practices in the five partner institutions. The latter involved a survey of (287) supervisors, (30) interviews, and (4) focus groups (with 10 participants). This provided a foundation for a workshop to design an interdisciplinary online toolkit for new supervisors, which was developed and then trialled in 2013.

Project findings, outcomes, resources, tools and dissemination:

The team reported that a significant minority of supervisors do not consider mandatory central training to be effective because supervision “could not be reduced to formulaic, recipe-like prescriptions”. They instead seek real-time, readily accessible, sophisticated (but concise and easy to read) online resources, along with advice from a community of HDR supervisors. Of particular interest to supervisors are strategies for managing supervisory relationships (student emotional issues, difficult students); guiding the choice of methodology; assisting students to publish; and managing compliance.

A major outcome of the project was a toolkit, which is available online <www.researchsupervisiontoolkit.com>, as PDF download, and as an eBook. Its modules span: Selecting For Success, Setting Expectations, Achieving Confirmation, Doing the Research, Finalising the Thesis, Managing Progress, Supervisor Development, Early Exit Strategies, and Exit interviews. The toolkit was piloted at partner institutions in workshops before final release.

Recommendations:

The project team recommended an evaluation of the toolkit’s effectiveness. They also suggested the addition of a supervision discussion forum. To ensure dissemination and uptake, they recommended that DDoGS launch and host the website, and moderate the supervisor discussion forums. They proposed that member institutions contribute financially and in-kind to the further development of content and enhancing existing tools.

Building distributed leadership for effective supervision of creative practice Higher Research Degrees, LE12-2274, 2012-14

Lead Institution:	Queensland University of Technology
Partner Institutions:	Auckland University of Technology, The University of Melbourne, The University of New South Wales, University of Western Sydney
Project Team:	Associate Professor Jillian Hamilton (Project Leader), Associate Professor Barbara Bolt, Professor Welby Ings, Professor Ross Harley, Dr Claire Aitchison, Dr Susan Carson
Funding	\$50 000
Final Report:	Hamilton, J., Carson, S. and Ellison, E. (2014). <i>Building distributed leadership for effective supervision of creative practice Higher Research Degrees</i> http://www.olt.gov.au/project-building-distributed-leadership-effective-supervision-creative-practice-higher-research-degr
Project Web site:	www.supervisioncreativeartsphd.net

In response to rapid recent growth in enrolments in the emergent field of creative practice HDRs, this pilot project set out to establish an in-common understanding of effective approaches to supervising what is a relatively new form of PhD. The project's objectives included understanding the contextual factors of creative practice HDR supervision; identifying the good practices of early adopter supervisors and RECs; collating resources developed by partner institutions; and proposing approaches to supervision capacity building. Its aim was to highlight innovative practices and resources, establish commonalities in approach, and identify patterns and working principles for effective supervision of PhDs that combine creative practice and written (exegetical) components.

The project employed a multi-method approach including a literature and contextual review, interviews with emerging and experienced supervisors at the five partner universities, surveys of RECs, and building networks of distributed leadership through simultaneous capture and dissemination of good practices and dialogues at a national symposium.

Project findings, outcomes, resources, tools and dissemination:

Through a content analysis of interviews with supervisors, the project formulated 12 principles for effective supervision of creative practice PhDs (which were framed as supervisor to supervisor advice, with quotes and examples of good practice). A booklet presents the principles in printed form. It is also available as a downloadable PDF, along with a repository of supervisory case studies; links to supervision resources; a literature and contextual review (drawn from a review of institutional data and surveys of HDR administrators) on a project web site <www.supervisioncreativeartsphd.net>. Dissemination included a national symposium, conference presentations, and a special issue of an international journal.

Recommendations:

The recommendations of the project include developing models for academic development for supervisors that are local and peer-to-peer, with experienced supervisors sharing their expertise, experience, exemplars and practices. The project team also recommends building local, discipline-level communities of supervision practice to facilitate dialogue and the sharing of concerns, experiences, strategies and insights. The project also recommends capturing more discipline-specific case studies and building national networks for supervisors to engage with others in similar fields of supervision. It also recommends remaining open to diversity and experimentation in approaches to creative practice HDRs, outcomes and the role of the creative artefact.

Pro-active music higher degrees, 2012-13

Lead Institution: Griffith University
Fellow: Professor Scott Harrison
Final Report: Harrison, S. (2013). *Pro-active music higher degrees*
<http://www.olt.gov.au/olt-national-teaching-fellow-scott-harrison>
Web site: <http://musicresearchspace.com.au/>

Arguing that, despite increased interest in creative practice research, HDRs in Music (and the performing arts more generally) are an under-explored area of pedagogy, Harrison set out to establish effective supervision practices for his discipline. He framed his Fellowship against a backdrop of tensions between creative practice and traditional research in music, due to the amalgamation of conservatoires of music and universities. The Fellowship focused on improving the higher research degree supervision process in music by reducing reliance on the master-apprentice model of research supervision, and developing collaborative approaches to supervision and learning.

A mixed-method approach was taken including capturing case studies, conducting surveys and interviews with supervisors and research students, and identifying tools and strategies to support supervisory practices. Harrison trialled what he called 'dialogue forms'—student and supervisor driven activities and dialogues to promote, act on, and enhance supervision strategies and practices, improve supervisor-student relationships, and better prepare students for careers.

Project findings, outcomes, resources, tools and dissemination:

Findings included that students and supervisors feel isolated in the HDR process and would appreciate the development of networks and relationships with others; and that students feel ill prepared for life after their degree. The Fellowship developed a series of national 'dialogue forums' to address these issues. Outputs also include a significant number of presentations during the course of the fellowship, a website entitled *Music Research Space*, which showcases the Fellowship outcomes and findings and provides activities. So far (the Fellowship has just been completed), the website is a repository for information rather than a hub of resources or a forum for dialogue. A number of publications have been produced (14 published, in press, or under review).

Recommendations:

In the Fellowship's final report, Harrison identified the need to develop a shared understanding amongst supervisors of HDR pedagogies. He also advocates (non-hierarchical) development opportunities for supervisors in the form of collegial dialogue forums for supervisors to collaborate and exchange knowledge and experiences. And, for the benefit of students, he recommends regular student-led activities for skills development, sharing understanding, and addressing issues of interest or concern. He also recommends implementing a mechanism to encourage self-evaluation of supervisory practices among supervisors on a regular basis.

Where are our doctoral candidates coming from and why? SI10-1889, 2010-11

Lead Institution:	The Australian National University
Partner Institutions:	DDoGS, Edith Cowan University, James Cook University, Queensland University of Technology, University of New South Wales
Project Team:	Dr Margaret Kiley (Project Leader)
Funding	\$10 000
Final Report:	Kiley, M. (2011). <i>Where are our doctoral candidates coming from and why?</i> http://www.olt.gov.au/project-where-are-our-doctoral-candidates-coming-and-why-2010

In light of the changing contexts of higher education and transforming HDR programs, this project investigated Australian doctoral degree pathways, including entry requirements and degree option exit points prior to completion. The researcher analysed examples of doctorates from a sample of eight Australian universities of varying types (Go8, ATN, IRU and non-aligned) and compared pathways and program structures between them and against international models. She also reviewed the Postgraduate Survey of Student Engagement data and interviewed Deans of Graduate Studies at the universities to capture a snapshot of current practices, concerns, and strategies for the future.

Project findings, outcomes, resources, tools and dissemination:

The comparative analysis of Australian and international models revealed a substantial difference. While most overseas institutions seek evidence of a Masters degree (in the proposed discipline or by research) along with research experience, publications, academic achievement or awards, a research proposal, and language proficiency; Australian universities seek evidence of academic achievement and research performance (or readiness and potential) through a First Class Honours degree (H1) or equivalence (i.e. other evidence of academic achievement, disciplinary knowledge, and research training) (6).

The research revealed new entry pathways into Australian doctoral programs, as well as an increasing multiplicity of program types (for example, four year PhDs; Joint Masters/PhD programs (a Masters that upgrades into a PhD); and a 'three plus three' model where candidates are offered a scholarship into a Masters and, after 3 semesters, articulate into a PhD; as well as a professional doctorates). The project was disseminated through a final report, conference papers and presentations to national bodies including DDoGS, the Australian Council for Educational Research (ACER), and the former Department of Innovation, Industry, Science and Research (DIISR).

Recommendations:

As a pilot, a key recommendation of the project was that further research is needed to address concerns regarding Australia's research workforce needs and that PhD enrolments need to be considered in relation to supervision capacity. The project also recommended that research is needed into ways to ensure suitable career pathways for graduates given changing candidate demographics, including collaboration with industry. The project was extended into a subsequent project entitled *I've done a coursework masters, now I'd like to do a doctorate: Can I?*, which is discussed on page 24.

I've done a coursework masters, now I'd like to do a doctorate: can I? CG10-1706, 2010-13

Lead Institution:	The Australian National University
Partner Institutions:	Edith Cowan University, James Cook University, Queensland University of Technology, The University of New South Wales
Funding:	\$220 000
Project Team:	Dr Margaret Kiley (Project Leader), Ms Andrea Benson
Project Report:	Kiley, M. (2013). <i>I've done a coursework masters now I'd like to do a doctorate: can I?</i> http://www.olt.gov.au/project-ive-done-coursework-masters-now-id-do-doctorate-can-i-2010
Project Web site:	http://courseworkmasters.anu.edu.au/

As its name suggests, *I've done a coursework masters, now I'd like to do a doctorate: can I?* focuses on the extent to which a Masters Coursework degree, which includes a research project, provides 'an effective, supportable entry' into a HDR program. It is framed against a context in which there has been substantial growth in Masters Coursework enrolments in Australia, and applicants seeking an alternate pathway (to Honours 1) into a doctoral degree. The project examines the nature of H1 equivalency, as well as the 'readiness' and 'preparedness' of Masters Coursework graduates for doctoral research, and the availability of research training for such candidates. The aim of the project was to establish how the curriculum of a Coursework Masters might be modified to provide adequate preparation (research training and research experience) to optimise success in PhD candidature.

The principal research method of the project was semi-structured interviews at four major universities (Go8, ATN, IRU and regional/other). They involved students (doctoral candidates who had completed a Coursework Masters) from the Sciences, Humanities, Social Sciences, Engineering and IT; supervisors of such doctoral candidates; and convenors and Deans of Graduate Research.

Project findings, outcomes, resources, tools and dissemination:

Ultimately, the project report answers the project title question in the affirmative. It identifies a variety of doctoral pathways, as well as multiple configurations of HDRs (including coursework masters that offer choice of greater or less emphasis on the research component; accredited exit points (e.g. Graduate Diplomas); a joint Masters/PhD; 'professional' doctorates, 'practice' doctorates; and a four year PhD). However, it also identifies consensus around issues that may arise when transitioning from a Coursework Masters into PhD, such as student preparedness for doctoral research, in terms of demonstrated skills, expertise and research training (compared with HDR students from an Honours pathway). It also identifies other factors that contribute to successful transition from a Coursework Masters into a PhD including 'mature' student characteristics such as work experience, student motivation for success, and support. Findings were disseminated through workshops, a final report, and a project website.

Recommendations:

In this project, more questions were raised than answers and it concludes that further research is needed on research training given the transformation of Australian postgraduate programs. (Kiley now leads an OLT project: *Coursework in Australian PhD programs: What's happening, why, and future directions?*) Other recommendations include that university convenors should provide adequate advice on course selection and pathways for students; keep a record of PhD candidates' entry pathways, and benchmark standards for entry and quality. Moreover, the project recommends that research training and supervision of research projects in Masters Coursework needs to align with Honours (particularly in relation to developing methodological skills), with supervisor workload allocated accordingly, and increased support to match that of other HDR students (such as learning advisors, writing workshops and so on).

A best practice framework to inform and guide higher degree by research training excellence in Australia, SI11 2102, 2011-13

Lead Institution:	Edith Cowan University
Project Team:	Professor Joe Luca (Project Leader) Ms Trish Wolski
Funding	\$100 000
Final Report:	Luca, J. & Wolski, T. (2013). <i>Higher Degree Research Training Excellence: A Good Practice Framework</i> http://www.olt.gov.au/project-best-practice-framework-inform-and-guide-higher-degree-research-training-excellence-australi
Project Web site:	Resources on www.ddogs.edu.au

In response to increased pressures on Australian universities to ensure research quality and timely completion of HDRs, this project aimed to develop a Good Practice Framework (GPF) to promote research-training excellence, and to assist universities to identify areas of good practice, as well as gaps in their research training processes and practices.

To design the GPF, the project examined DDoGS and OLT reports, as well as learning and teaching scholarship in the field of research training. An open consultation process involved Deans of Graduate Studies (or equivalent title) from Australia and New Zealand, along with experts from overseas institutions. Feedback, via email exchanges, workshops and presentations, led to the iterative refinement of the framework elements.

Project findings, outcomes, resources, tools and dissemination:

The major outcome of this project was the GPF. It details high-level 'Dimensions' of research training (e.g. Supervision) as well as components of them (e.g. Supervision Capacity and Supervision Eligibility). These sub-themes are aligned with processes, practices and standards. The project also produced a quality assurance checklist; a gap analysis template to trigger actions for improving practice; good practice guidelines, and resources including case studies that exemplify good practice. The framework document is available through the DDoGS website and the project's final report.

Recommendations:

The project report does not include specific recommendations. However, the external evaluator points to the need to differentiate between supervisor capacity (quality and ability of the supervisor) and supervisory capacity (the capacity of the school to provide an adequate research experience for candidates) and, in relation to the former, developing strategies for addressing issues relating to the non-performing supervisor.

Keeping on track: teacher leaders for Indigenous postgraduate coursework students, LE10-1608, 2010-13

Lead Institution:	Australian Catholic University
Partner Institutions:	James Cook University
Project Team:	Dr Jack Frawley (Project Leader), Professor Nereda White, Professor Sue McGinty, Ms Felecia Watkin-Lui
Funding	\$217 000
Final Report:	Nobin, K., Frawley, J., Jackson, T., McGinty, S., Watkin-Lui, F., & White, N. (2013). <i>Relationships are key: building intercultural capabilities for Indigenous postgraduate coursework students and their teachers.</i> http://www.olt.gov.au/project-keeping-track-teacher-leaders-indigenous-postgraduate-coursework-students-2010

This project focused on building the learning and teaching leadership capacity of academics for the benefit of Indigenous postgraduate coursework students. It set out to establish a learning and teacher leadership capabilities framework to enable capacity-building for lecturers involved in teaching Indigenous postgraduate coursework students, strengthen discipline structures, and build cross-disciplinary networks. It took a different tack, as suggested by the shift in project title from *Keeping on Track* to the project report title *Relationships are key*. Rather than a framework, it developed University Community of Practices (UCoP) at target universities.

The project was informed by a review of literature from a variety of fields and universities. It used a mixed method approach, including collating quantitative university data, an online survey to collect responses to statements, and qualitative methods in the form of interviews and focus group discussions within the *University Communities of Practice* (UCoP) at participating universities.

Project findings, outcomes, resources, tools and dissemination:

Analysing the teaching and learning experiences of Indigenous students and their teachers in postgraduate coursework programs led to the key findings of the project, namely that intercultural capabilities are required by both teachers and students to engage fully in postgraduate coursework programs, and that relationships are key to building intercultural sensitivity. This led to the development of a *Blueprint for Intercultural Capabilities* to guide UCoPs at institutions that provide postgraduate coursework for Indigenous students. A framing device for developing UCoPs, the Blueprint covers attitudes, knowledge, skills, and encouraging capability development for teachers and students, as well as showcasing the crucial role that relationships play.

Recommendations:

The project report proposes that the number of Indigenous postgraduate students can be improved through recruitment, but highlighted ongoing concerns with Indigenous access to postgraduate courses, including time and money. The project's key recommendations relate to encouraging Universities' Learning and Teaching Centres (or equivalent) to facilitate intercultural development through student/teacher encounters facilitated by UCoPs, guided by the *Blueprint for Intercultural Capabilities*.

Leadership in Indigenous research capacity building: implementing and embedding an Indigenous Research Methodologies Masterclass Module LE8-780, 2008-11

Lead Institution:	Queensland University of Technology
Partner Institutions:	University of Tasmania
Project Team:	Professor Aileen Moreton-Robinson, Associate Professor Maggie Walter, Mr Adam Robinson
Funding	\$215,000
Final Report:	Moreton-Robinson A. & M. Walter, Leadership in Indigenous Research Capacity Building: Implementing and Embedding an Indigenous Research Methodologies Masterclass Module, olt.gov.au/project-leadership-indigenous-research-qut-2007
Project Website:	Indigenous Studies Research Network http://www.isrn.qut.edu.au/

Arguing that Indigenous knowledges, perspectives and understandings seldom feature in dominant research training curriculum, nor in research practice; this project set out to provide an accessible resource on Indigenous Research Methodologies. Its aims included promoting research policy change in higher education, to build institutional leadership and research capacity, and to enable Indigenous and non-Indigenous postgraduate students by developing, trialling and embedding an Indigenous Research Methodologies Masterclass within the HDR programs of four universities.

The project team implemented Yurriala⁵ pedagogy into the design of the Masterclass, to encompass respect, responsibility, obligation, generosity, reciprocity and interdependence. They trialled the resulting curriculum in intensive interactive workshops with small groups of Indigenous and non-Indigenous postgraduate students and evaluated its reception.

Project findings, outcomes, resources, tools and dissemination:

The team produced an Indigenous research methodology framework and a Masterclass module (with reader, structured activities, and exercises for developing qualitative and quantitative Indigenous methodologies). Besides disseminating the module during trials (50 students from 14 universities participated) three universities went on to include Indigenous Research Methodologies Masterclasses in their curriculum. A project website hosts an Indigenous studies database, information on Indigenous scholarships, research funding, conferences and an IRMMM teaching toolkit (no longer available). Conference presentations, a book chapter and successful ALTC Teaching Excellence Award nomination also disseminated the project outcomes.

Recommendations:

While no direct recommendations are made report in the project, the team propose that, to enhance Indigenous postgraduate retention and completions, there should be ongoing dissemination and uptake of the Indigenous Research Methodologies Masterclass module they developed. They argue that, to engender an atmosphere of respect and support in the Masterclasses it is vital that that they are framed within an Indigenous environment (ie. it is taken as given that Indigenous modes of learning and research are the norm) and that a small group approach is inclusive, supportive and respectful of indigenous and non-Indigenous participants.

⁵ Also referred to as Yurrialia in the documentation diagram.

A holistic model for research supervision of international students in engineering and information technology disciplines, PP10-1771, 2010-13

Lead Institution:	Queensland University of Technology
Partner Institutions:	The University of Western Australia, Curtin University
Project Team:	Professor Prasad Yarlagadda (Project Leader), Professor James Trevelyan, Professor Hema Sharda, Professor Yinong Liu, Dr Karen Woodman, Dr Tony Sahama, Professor Tony Lucey, Dr Ramesh Narayanaswamy, Professor Acram Taji, Ms Christine Percy
Funding	\$219 000
Final Report:	Yarlagadda, P., Woodman, K., Silva, P., Taji, A., Sahama, T., Trevelyan, J., Samani, S., Sharda, H., Narayanaswamy, R. & Lucey, A. (2013). <i>A model for research supervision of international students in engineering and information technology disciplines.</i> http://www.olt.gov.au/project-holistic-model-research-supervision-international-students-engineering-and-information-tech

With growing numbers of international postgraduate students enrolling in the information technology and engineering disciplines, this project was designed to identify the key factors that influence the success of what the project team refers to as ‘culturally and linguistically diverse’ (CALD) HDR students. In particular, it focused on the supervisory relationship between supervisor and student in light of their potential differences in academic and social cultures, and set out to inform the provision of effective supervision and support services.

The project involved both quantitative and qualitative data collection, including online student survey and supervisor surveys, workshops, focus groups, a comparative analysis of support services across the partner universities, and critical incident interviews with HDR supervisors across the three partner universities. The project team analysed the data using a variety of statistical approaches including descriptive statistics, linear regression, and Bayesian Network analysis.

Project findings, outcomes, resources, tools and dissemination:

The project report concludes that while international HDR numbers are growing, international candidates have slightly better completion times, publication outcomes and retention rates than their domestic peers and that they are generally satisfied with supervision (level of expertise, commitment, availability and guidance on process and contexts). However, it also concludes that differences in language and culture do affect student-supervisor relationships. The project developed a literature review, a classified table of HDR support services and a comprehensive report on the quantitative and qualitative findings. Factors influencing student success are categorised under prior experience, student attributes, obligations, behaviours, attributes, HDR competencies and supervision factors. Project outcomes were disseminated through the project report; a report to Deans of Engineering and Information Technology in Australia and New Zealand; conference presentations and publications.

Recommendations:

Several areas of potential improvement were identified. They include establishing student motivation as a genuine researcher prior to acceptance; supervisor training—particularly in interpersonal and cross cultural communication issues, pastoral care, coaching and building motivation; open communication between supervisors and their students (including social and academic interaction with CALD students); enabling greater engagement in supervision by removing other constraints (i.e. administrative duties); allocating additional time to workload for supervising CALD students; increasing funding to support services and activities; and establishing student mentor schemes. It is argued that a future study is required to investigate whether, in the case of international students, it is beneficial to first complete a year or more of coursework-related exercises.

Development and evaluation of resources to enhance skills in higher degree research supervision in an intercultural context, CG7-507, 2007-10

Lead Institution:	Macquarie University
Partner Institutions:	The University of Newcastle, The University of Queensland
Project Team:	Associate Professor Judi Homewood (Project Leader), Ms Christa Jacenyik-Trawoger, Associate Professor Anna Reid, Dr Theresa Winchester-Seeto, Dr Catherine Manathunga, Professor Sid Bourke, Professor Allyson Holbrook
Funding:	\$218 790
Final Report:	Homewood, J., Winchester-Seeto, J., Mackaway, C., & Jacenyik-Trawoger, C. (2010). <i>Development and evaluation of resources to enhance skills in higher degree research supervision in a cross-cultural context</i> . http://www.olt.gov.au/project-development-evaluation-resources-macquarie-2007
Project Web site:	http://www.mq.edu.au/lrc/altc/cross_cultural_supervision_project/

In response to increasing international postgraduate enrolments, and the aspirations of Australian universities to attract more international HDR candidates, this project was established to develop resources to support effective cross-cultural supervision. The team argued that universities tend to problematise international student issues, by focusing on challenges such as language and cultural adaptation, rather than considering the needs of diverse student populations and adapting institutional approaches to meet them. The project set out to consider the point of view of both supervisor and candidate in a cross-cultural context, and to establish ways to support them.

The team employed a design-based methodology, which incorporated analysis, design, development and evaluation. They conducted semi-structured interviews and interdisciplinary focus groups with students and supervisors at the three partner universities to gather qualitative data. They then produced video and text-based resources for supervisors and for the broader community.

Project findings, outcomes, resources, tools and dissemination:

The project found that several factors contribute to the complexity of supervision in a cross-cultural context, including the candidate's separation from support networks and familiar cultural and academic contexts; communication difficulties; and time pressures due to visa limitations. The project produced an annotated bibliography, and an analysis of interviews and focus group material, which provide an evidence-based understanding of the issues. Resources were produced to assist universities, faculties and departments to improve their capacity to host candidates from different cultures (including a checklist for institutional use). Multimedia resources were produced from narratives and case studies to assist supervisors including 10 videos, 17 written scenarios, and 3 documents outlining strategies for effective supervision and developing good candidate-supervisor relationships. Creative Commons licensing makes them available within and beyond the university sector. The project was disseminated through a number of publications and conference papers.

Recommendations:

The project avoids prescriptive recommendations, instead highlighting the team's awareness that different institutions and disciplines must respond in their own way to the challenges facing cross-cultural students. However, two recommendations stand out as important: the need to develop more understanding of cross-cultural issues and the need to address institutional approaches and language that imply that international/intercultural students must take the lead in ensuring their success.

Dancing between diversity and consistency: evaluating assessment in postgraduate studies in dance, PP6-45, 2006-09

Lead Institution:	Edith Cowan University
Partner Institutions:	Deakin University, Queensland University of Technology, The Tertiary Dance Council of Australia
Project Team:	Associate Professor Maggi Phillips (Project Leader), Associate Professor Cheryl Stock, Associate Professor Kim Vincs
Funding	\$149 523
Final Report:	Phillips, M., Stock, C. & Vincs. K. (2009). <i>Dancing between diversity and consistency: refining assessment in postgraduate degrees in dance</i> http://www.olt.gov.au/project-dancing-between-diversity-ecu-2006
Project Web site:	http://www.dancingbetweendiversity.com/

Given the dance discipline's relatively recent entry into the area of postgraduate research degrees, the *Dancing between Diversity and Consistency* project set out to establish best practice in assessment for HDRs in the field, including the provision of standards, benchmark indicators, and clear but flexible guidelines for written and practice-based approaches to postgraduate study in dance. One of the key aims of the project was to establish how the 'embodiment' of dance performance can be assessed in the context of Masters and Doctoral examinations.

Literature on postgraduate examination and the creative arts was reviewed to gain national and international perspectives. Practices within the discipline were explored through interviews with supervisors, examiners, research deans and candidates (to determine expectations, experiences and existing protocols). And practitioner and community forums in association with Ausdance (the Australian Dance Council) gauged the prevailing views of the profession as a complement to the knowledge of academics.

Project findings, outcomes, resources, tools and dissemination:

The project articulates the fundamental formats of creative practice HDRs in Dance. The report synthesises attitudes towards dance research including its distinctive characteristics; points of emphasis; defining formats of presentations and examination. It outlines processes and criteria for examining written and multi-modal theses; and identifies the challenges that such an assessment process poses (such as documenting the temporal and embodied nature of dance and ensuring examiner anonymity). Based on generic guidelines provided by DDoGS in 2005, it produced criteria and standards for the examination of doctoral and masters by research in dance, namely, evidence of originality; acknowledging contributions of others; independent thinking and/or creation; a substantial coherent product; clarity around the contribution; and standard of presentation of the project. The project produced a booklet, *Dancing Between Diversity and Consistency: Refining Assessment in Postgraduate Degrees in Dance*, along with the final report, five publications/presentations, and a project website.

Recommendations:

Besides recommending the adoption of the examination criteria that the project produced, the team proposed that institutions must clearly articulate examination expectations (e.g. confidentiality, conflict of interest, duration of examination); that the examination processes include guidance around the assessment of 'live' environments and reports (including a balanced focus on creative and critical work); that examiners must have the appropriate expertise and experience (in scholarly and industry areas); and that training (workshops, mentoring) should be provided for supervisors and examiners on this model. A number of these recommendations could be mapped to other creative HDR fields.

Examination of doctoral degrees in creative arts: process, practice and standards, PP10-1801, 2010-13

Lead Institution:	University of Canberra
Partner Institutions:	Central Queensland University
Project Team:	Professor Jennifer Webb (Project Leader), Professor Donna Brien, Dr Sandra Burr
Funding	\$149 000
Final Report:	<i>Examination of doctoral degrees in creative arts: process, practice and standards</i> (2013). Webb, J. Brien, D. and Burr, S. http://www.olt.gov.au/project-examination-doctoral-degrees-creative-arts-process-practice-and-standards-2010
Project Web site:	www.creativedoexams.org.au

While a body of knowledge now exists on the relatively recent field of creative practice (practice-led or practice-based) HDRs, little research had been conducted into the examination of outcomes prior to this project. The project team set out to investigate assessment practices, processes and policies for examining doctoral degrees in the creative arts. It also investigated perceptions and expectations of students, supervisors and examiners, and whether there are agreed standards of quality.

The project involved a mixed-method approach including online questionnaires, individual discussions, roundtables, archival research and textual analysis of project reports. The resulting qualitative and quantitative data was triangulated into a series of findings in the final report.

Project findings, outcomes, resources, tools and dissemination:

Key findings of this research project were that there is consensus across the sector on the value of creative practice research. There was also broad agreement that doctoral degrees in the creative arts have improved in quality, as has the process of examination. Although the project's initial aims involved developing an overseeing board designed to uphold the standards of examination, participant stakeholders were almost unanimously opposed to the idea. There was also an almost-universal rejection of the imposition of uniform examination practices or standards. However, a wide desire for more transparency and clarity around the process of examination, coupled with wide variations in HDR practices and processes across university programs, brings about challenges. In addition, the team found that experienced examiners remain difficult to find in what is a relatively new field, and more training, support and recognition is required.

Besides a final report, project outcomes included a guide to informing improved examination practices, processes and policies. Entitled *Examining doctorates in the creative arts: A guide*, it is available as a booklet, and a downloadable PDF on the project website along with literature on the topic, the final report, and links to other resources. The team produced eight publications and conference presentations.

Recommendations:

Besides more research into HDR examination in the creative arts (and more broadly), the team recommend that creative arts national peak bodies take the lead in improving examination policies and processes (including consistency of terminology around the written component). They also suggest ensuring creative arts doctoral awards conform with Level 10 standards and learning outcomes of the AQF, clarifying the differences between the creative PhD and professional doctorates, and aligning conditions of enrolment, programs of study, and expected outcomes. Other recommendations include training for examiners, acknowledging the value of examiners, establishing a register of examiners and building a database of exemplars of examiners' reports. The report also recommended that peak bodies investigate the viva voce process in examination.

Taking clinical psychology postgraduate training into the next decade: aligning competencies to the curriculum, PP8-900, 2008-11

Lead Institution: The University of Queensland

Partner Institutions: Griffith University, James Cook University, Macquarie University, Swinburne University of Technology

Project Team: Associate Professor Nancy Pachana (Project Leader), Associate Professor Kate Sofronoff, Professor Kim Halford, Dr Mia O'Brien, Professor Edward Helmes, Associate Professor Analise O'Donovan, Professor Michael Kyrios, Associate Professor Gregory Murray, Professor Steven Schwartz, Associate Professor Andrew Baillie

Funding \$220 000

Final Report: Pachana, N., Sofronoff, K., Baillie, A., Halford, K., Helmes, E., Murray, G., & O'Donovan, A. (2011). *Taking clinical psychology postgraduate training into the next decade: aligning competencies to the curriculum* <http://www.olt.gov.au/project-taking-clinical-psychology-postgraduate-uq-2008>

Project Web site: www.psy.uq.edu.au/current-students/postgraduate/clin/altc/#

In response to the changing context of expanding roles for professional psychologists in allied health-care settings, the phasing out of an apprenticeship model of training, and the establishment of a national psychology registration board, this project investigated how training for clinical psychology postgraduate students can be improved. Taking a cooperative, national approach, which involved key stakeholders (the national registration board, professional peak bodies, and major university training programs), the project's aim was to align curriculum with new health sector expectations, to develop best practice in professional training, and so to enable graduates to develop key competencies to deliver clinical services.

The project set out to align the training practices of the 36 accredited clinical psychology postgraduate programs in Australia with national registration standards. First, a scoping exercise extracted competencies described in APAC guidelines and registration board criteria, and benchmarked them against international standards. Curriculum mapping was then conducted by partner universities to align their postgraduate clinical training with the clinical competencies. A survey of first-year clinical postgraduate students across all Australian universities and telephone interviews with a representative of each of the clinical postgraduate training programs informed the process.

Project findings, outcomes, resources, tools and dissemination:

The project found that students overwhelmingly prefer practical, interactive, competency-based teaching to didactic, exam-based programs. To help universities embed core clinical competencies into postgraduate clinical psychology curriculum, the project produced curriculum mapping of competencies; templates for formative assessment of competencies; and fitness to practice protocol as well as teaching models, university-based training clinic models and supervision strategies. The results of the scoping and mapping exercises, and the survey of students were presented at a symposium, and in the final report. The project partners worked with the College of Clinical Psychologists to better assess training competencies through a national exam.

Recommendations:

The project report notes that sophisticated models of conceptualising core clinical competencies are now available but need to be operationalised and foregrounded in postgraduate training programs. While it is not explicitly stated as a recommendation, implementation of the models, templates and curriculum mapping tools produced by the project would enable consistent implementation in clinical training courses.

Curriculum renewal in postgraduate information technology education: a response to growing service sector dominance, PP8-954, 2008

Lead Institution:	The University of Sydney
Partner Institutions:	The University of Melbourne, The University of New South Wales, The University of Queensland
Project Team:	Associate Professor Joseph Davis (Project Leader) Associate Professor Fethi Rabhi, Associate Professor Shazia Sadiq, Professor Boualem Benatallah, Professor Lester Johnson, Ms Andrea Stern, Dr Ravi Seethamraju, Dr Simon Poon, Dr Helen Paik, Dr Marta Indulska, Dr Simon Milton
Funding	\$218 500
Final Report:	Davis, J. (2011). <i>Curriculum renewal in postgraduate information technology education: a response to the growing service sector dominance</i> http://www.olt.gov.au/project-curriculum-renewal-postgraduate-sydney-2008
Project Web site:	http://altcgrant.it.usyd.edu.au/ http://soc.cse.unsw.edu.au/teachingfoundry/ (inactive)

While the services sector encompasses 'traditional' services, such as transport, government, and retail, newer services, such as logistics, information technology, and telecommunications, were the focus of this project. In light of recent technological developments such as Web2.0, cloud computing, and service oriented architecture, it set out to identify key knowledge and skills required for the contemporary service workplace. An educational and IT sector consortium was established to develop market-relevant, interdisciplinary curriculum modules and resources for service science management engineering (SSME) information technology postgraduate coursework.

The project employed focus groups with industry, recent graduates in the service sector, and academics (who are engaged in service-related research and teaching) to ascertain the needs and challenges of the industry and the key knowledge and skills required in the contemporary information technology service workplace.

Project findings, outcomes, resources, tools and dissemination:

The focus group data was coded to establish key themes for the curriculum framework and eight learning modules—the first of which (Service System Fundamentals) was tested in the School of IT, University of Sydney. Other outcomes include an online, open-access education portal (*Services Foundry*) with the SSME modules (including learning objectives, multi-media case studies from industry partners, simulations, business process modelling tools, and compendiums of standardised business processes. However this is not longer accessible. Dissemination also involved a workshop entitled *SSME Education: Looking Ahead*, a conference, seminars and the final report.

Recommendations:

The project had no specific recommendations beyond the use of the modules.

Graduate professional entry courses in accounting and law, PP9-1386, 2009-12

Lead Institution:	RMIT University
Partner Institutions:	Curtin University, Queensland University of Technology
Project Team:	Professor Margaret Jackson (Project Leader), Lillian Lowe Joann Cattlin, Associate Professor Robert Inglis, Linda Kam, Mary Toohey, Lauren Vasrelli, Professor Glennda Scully, Associate Professor Stacy Porter, Carolyn Nothling, Professor Rosalind Mason, Donna Cooper, Associate Professor Sheryl Jackson, Sarah Jones
Funding	\$209 000
Final Report:	Jackson, M., Cattlin, J., Lowe, L., Scully, G., Porter, S., Mason, R., Jackson, S., & Cooper, D. (2012). <i>Graduate professional entry courses in accounting and law</i> http://www.olt.gov.au/project-graduate-professional-entry-courses-rmit-2009
Project Web site:	http://rmit.edu.au/teaching/altc/professionalpathways

In a shifting higher education environment influenced by the Australian Qualifications Framework (AQF), the Tertiary Education Quality and Standards Agency (TEQSA), and the Australian Learning and Teaching Council's threshold standards project, this project considered whether a Masters level degree, which meets the profession's entry requirements, applied different academic standards to an undergraduate degree that meets the same professional entry requirements. The team considered whether the structure, learning outcomes, teaching and assessment practices are always different *in practice* in professional Bachelor and Masters courses in accounting and law. An in-depth literature review supported the primary research, which primarily relied on interviews.

Project findings, outcomes, resources, tools and dissemination:

The project found that, while there was not always a clear difference between professional practice Bachelor and Masters courses. Some Masters courses adopted the same academic standards as the undergraduate degree and were taught in the same way. The project identified desirable characteristics of Masters (Coursework) in terms of entry skills, teaching postgraduate learners, level and depth of learning, assessment and professional focus. And they identified learning outcomes that signify core differences between undergraduate and postgraduate coursework units in accounting and law. They developed an academic standards model that is aligned with the AQF level 9 outcomes of knowledge, skills and application and benchmarked the standards to develop national framework for professional entry coursework Masters. Findings were disseminated through the final report, a project website, and ongoing interactions the project team had with universities and professional institutions during the interviewing and focus group stage of their research.

Recommendations:

The project includes recommendations for entry skills requirements to professional Masters degree programs (to ensure that students possess the necessary entry skills, interpersonal capacity, and aptitude) and emphasises the importance of prior learning (educational and life experiences) and students' motivations for study. Another key recommendation is that assessment should have a professional focus and involve problem solving, practical application of new learning, and intellectual challenges. The project team argue that the academic standards model they developed could be applied to other professional Masters courses, and it could be modified to guide other Masters Coursework programs.

Future-proofing the creative arts in higher education: Scoping for quality in tertiary creative arts learning, teaching, and research training, DS7-624, 2007-9

Lead Institution:	The University of Melbourne
Partner Institutions:	Australian Council of University Art and Design schools, The University of Sydney
Project Leaders:	Professor Su Baker, Associate Professor Brad Buckley
Funding:	\$100 000
Final Report:	Baker, S., Buckley, B. & Kett, G. (2009). <i>Creative Arts PhD: Future Proofing the Creative Arts in Higher Education</i> http://www.olt.gov.au/project-futureproofing-creative-arts-melbourne-2007

This scoping study set out to provide an evidence-based understanding of an emergent field of doctoral studies—the creative arts (specifically the visual arts). Because the PhD and Professional Doctorate in the creative arts is currently varied in form, implementation and examination, the project set out to address this disparity and its potential impact on the integrity and growth of the sector. Its stated aims included establishing an understanding of quality research training methods; reviewing models of thesis submission for the PhD and the professional doctorate; developing benchmark standards for creative arts doctoral research training, examination and outcomes; and making recommendations for cross-sector collaboration.

To establish consensus on these issues, the project involved a wide cross-section of Australian universities and peak bodies (Council for the Humanities, Arts and Social Sciences (CHASS), and Australian Council of University Art and Design Schools (ACUADS)). While primarily a national study, some comparative analysis with international institutions was included. A mixed method approach was employed to establish an overview of the history, growth, and approaches to the creative arts doctorate, including literature and documents review, surveys, interviews and focus groups with postgraduate coordinators, examiners and supervisors, followed by quantitative and qualitative data analysis and collation of findings.

Project findings, outcomes, resources, tools and dissemination:

The project outcomes included cross-sector dialogues including roundtables, discussion forums, and conference presentations. The project established a substantial, evidence based overview of HDRs in the creative arts. It presented an analysis of current best practice, as well as some limitations in the processes related to achieving doctoral qualifications. Key issues confronting the sector were identified, such as varying processes and expectations around admissions; levels of graduate supervision; experience of supervisors; the coursework or structured programs offered to candidates; and the variation in examination models. Besides an extensive final report, the project produced a website, which is no longer active.

Recommendations:

The project recommended further research on coursework or research methods programs, supervision training programs, examination, and international perspectives. It also recommended the establishment of a database of best practice thesis submissions, regular contact between coordinators from across the sector, and a community of practice website or email list for exchanging models of best practice.

Developing a collaborative national postgraduate research program for 22 Australian film schools, ID11-2099, 2011-14

Lead Institution:	Murdoch University
Partner Institutions:	Flinders University, Griffith University, RMIT University, The University of Melbourne
Project Team:	Associate Professor Josko Petkovic (Project Leader), Professor Herman van Eyken, Nick Oughton, Leo Berkeley, Dr Alison Wotherspoon, Associate Professor Gillian Leahy, Annabelle Murphy, Linda Butcher
Funding:	\$220 000
Final Report:	Petkovic, J. (2014). <i>Developing a collaborative national postgraduate research program for 22 Australian film schools</i> http://www.olt.gov.au/project-developing-collaborative-national-postgraduate-research-program-22-australian-film-schools-2
Project Web site:	http://nass.murdoch.edu.au/altc/index.html

This project was a large-scale undertaking involving 22 Australian film schools. Its goal was to establish a strategic national postgraduate research education program for screen producers (as an alternative to diverse postgraduate courses). Extending a previous project involving Petkovic (*Assessing Graduate Output in Nineteen Australian Film Schools*), it set out to address structural, funding and practice-based research issues in order to do so. Its aim was to establish a network of screen production research hubs, with regional nodes, as a collaborative, inter-university research centre, with postgraduate places.

The project took a multi-method, sector-wide, collaborative approach. It involved consultations, meetings and debriefings with a network of project groups representing the 22 national film schools. It also involved a series of workshops that incorporated surveys to identify issues for postgraduate research and involved an audit of ERA (Excellence in Research for Australia) reports.

Project findings, outcomes, resources, tools and dissemination:

Besides networks built through sector-wide consultations, forums and collaboration across Australia's film schools, the project facilitated a national colloquium. It identified concerns for the screen production sector; formulated a Memorandum of Understanding to develop a research centre, and established a collaborative, inter-university research centre, namely the Screen Production and Research Collaboration Centre (SPARC). A project report outlined a collaborative national plan for strategic postgraduate programs that are staff- and grant-driven. It also detailed concerns over definitions of the discipline and the impact that the funding models, practices and reporting of Australian Research Council (ARC) has on the viability of creative practice research, particularly in the area of screen production. Position papers were submitted to the ARC, a website with literature and resources was produced, and a special issue of *IM: Interactive Media* facilitated the dissemination of findings and outcomes.

Recommendations:

Recommendations of the project include splitting postgraduate programs in film disciplines, with one for filmmakers within the industry paradigm (Professional Doctorate) and another that encourages new, cutting edge research. Other recommendations relate to research and its funding rather than learning and teaching. They include separating the cultural and commercialisation briefs of screen-funding organisations; encouraging the ARC to consider 'research-on-practice' and 'creative-practice-research' as separate fields of research and to ensure assessment of proposals by screen production academics (rather than screen practice commentators); encouraging the ARC to assess creative works as publication equivalent in rankings; and to capture, articulate and promote creative research outcomes.

Current OLT Projects and Fellowships

Design of a participatory supervision support platform for improving higher degree supervision: a feasibility study, SD12-2447, funded 2012

Lead Institution: Murdoch University
Partner Institutions: Curtin University
Project Team: Dr Dorit Maor (Project Leader), Professor Barry Fraser, Ms Gillian Buckingham
Funding: \$50 000
Project Information: <http://www.olt.gov.au/project-design-participatory-super-vision-support-platform-improving-higher-degree-supervision-feasi>

Given the need to improve HDR supervision and increase completion rates, and the emergence of new communication technologies, this project is investigating the use of Web2.0 technologies and social learning media to facilitating HDR training and to build communities of learners and professionals.

Proposed outcomes of the project are a theoretical framework for the use of social learning media to aid research supervision, and a more participatory approach to the process of supervision through the use of inclusive pedagogy. The project will involve a trial with existing social software technologies and a feasibility study with experienced supervisors at two universities.

Identifying, developing and disseminating best practice in supporting honours dissertation supervision, 2013 -

Lead Institution: Curtin University of Technology

Fellow: Dr Lynne Roberts

Proposal: <http://www.olt.gov.au/olt-national-teaching-fellow-lynne-roberts>

Arguing that there are currently few materials to support supervisors of honours and coursework dissertation students in Australian universities, in this Fellowship Roberts aims to enhance the research training culture and learning experiences of students by identifying, developing and disseminating good practices of supervisors of honours and coursework theses.

Proposed outcomes of the Fellowship include an annotated bibliography, a needs assessment based on interviews, good practice exemplars produced from workshops with experienced supervisors, an online training module, and a website of resources.

Coursework in Australian doctoral education: What's happening, why, and future directions? ID12-2223, 2012 -

Lead Institution: Australian National University
Partner Institutions: DDoGS
Project Team: Dr Margaret Kiley (Project Leader)
Funding: \$150 000
Project Information: <http://www.olt.gov.au/project-coursework-australian-doctoral-education-whataposs-happening-why-and-future-directions-2012>
Project Web site: <http://chelt.anu.edu.au/doctoral-coursework/outcomes>

This project aims to investigate the pedagogical, curriculum, structural and resourcing issues associated with the potential implementation of coursework into the Australian PhD. In conjunction with DDoGS, and in collaboration with six other universities (through their Deans of Graduate Research (or equivalent)), the project will address the issues of support and funding issues related to introducing coursework into the PhD, and will produce principles for the development of award courses and programs.

The project involves a mixed methods approach, including a review of doctoral programs in Australia, the US, Canada and UK; a literature review on pedagogical issues in the area of doctoral education; and interviews, surveys and workshops with Deans and Directors of Graduate Research, doctoral candidates and academic staff.

Interim outcomes: The project website (which is already live) currently lists the following outcomes: a bibliography; initial analysis of interviews and focus groups with candidates and staff; examples of coursework models (11 case studies provided by universities across Australia); an analysis of surveys; and the collated results of workshops. These resources primarily provide statistical data at this point. Some dissemination has already occurred, including four conference presentations and multiple meetings with DDoGS as well as other institutions (including some international ones).

Collaborating for success: enhancing the transition of Chinese communication/ media students into Australian postgraduate education ID12-2442, 2012 -

Lead Institution: Murdoch University
Partner Institutions: Communication University of China, Victoria University
Project Team: Associate Professor Christine Daymon (Project Leader), Dr Lindy Norris, Professor Simone Volet, Dr Yinchu Chu, Dr Haixia Yu, Ms Dawei Wang, Associate Professor Jin Xeutao, Dr Maree Keating, Dr Fiona Henderson
Funding: \$200 000
Project Information: <http://www.olt.gov.au/project-collaborating-success-enhancing-transition-chinese-communicationmedia-students-australian-po>

This project aims to undertake research to develop and implement a model of good practice to optimise the conditions for academic success for Chinese postgraduate coursework students studying communication and media in Australia. With the goal of systemic change in postgraduate education in both countries, the project's approach will be underpinned by the principles of collaboration, cultural inclusivity, customisation, and embedding skills development.

Proposed outcomes: The project will produce a comparative report of tertiary learning contexts in China and Australia; develop a model of good practice; a customised toolkit of learning and teaching materials and resources in both English and Chinese; and practical guidelines for employing culturally blended pedagogies and strategies to enhance student learning and lecturers' professional development. These resources will be disseminated on a project website.

Shared mastery: an international collaborative approach to masters in landscape architecture, ID13-2319, funded 2013

Lead Institution: RMIT University
Partner Institutions: Lincoln University (NZ), The University of Adelaide, The University of Melbourne, The University of Western Australia
Project Team: Dr SueAnne Ware (Project Leader), Professor Gini Lee, Ms Tanya Court, Assistant Professor Tinka Sack, Associate Professor Jacky Bowring
Funding: \$47 000
Project Information: <http://www.olt.gov.au/project-shared-mastery-international-collaborative-approach-masters-landscape-architecture-2013>

The project sets out to examine the viability of a shared Masters of Landscape Architecture (coursework) program for the partner institutions. The project team plan to harness the distinct learning and teaching strengths of each institution, and to develop an innovative, global approach to postgraduate learning.

Proposed outcomes: A cooperatively developed and shared Masters of Landscape Architecture degree.

A creativity skills MOOC for Australian coursework masters students, SD13-2944, funded 2013

Lead Institution: Victoria University
Partner Institutions: Central Queensland University, Open Universities Australia, Queensland University of Technology
Project Team: Associate Professor Kym Fraser (Project Leader), Professor Yoni Ryan, Professor Donna Lee Brien, Mr Brett McLennan
Funding: \$50 000
Project Information: <http://www.olt.gov.au/project-creativity-skills-mooc-australian-coursework-masters-students-2013>

Through collaboration between the academic project team, industry professionals and education experts this project aims to develop a Massive Open Online Course (MOOC) approach to teaching and assessing AQF skills for Masters Coursework students.

Proposed outcomes: The project sets out to develop a customisable MOOC for Masters Coursework students, which will be usable across disciplines. It will include assessment tasks to allow students to develop and evidence attainment of Masters Coursework standards. This project is recently funded and the only outcome at this stage is the project abstract.

Project Characteristics and Outcomes

This report encompasses 27 projects on postgraduate research and coursework degrees, which have been completed or have commenced in the past five years (since 2009). The projects relate to two, largely distinct areas—Masters by Coursework and Higher Research Degrees. While three projects span both areas by covering potential pathways between them, none covers both of them. As discussed in the literature review, these two modes of study have quite distinct objectives, learning outcomes, graduate capabilities and graduate destinations. Just as discussions in the literature tend to focus on one or the other of these areas, so it is the case with the projects captured here. A considerably higher proportion of the projects and fellowships focus on HDRs (17/27) over postgraduate coursework (7/27), while a small number (3/27) consider transitions from coursework (Honours and Masters) to HDR programs. This proportional distribution is understandable if we consider that many of the pedagogical concerns of coursework programs (such as classroom contexts, learning engagement and delivery modes, discipline concerns, standards, graduate destinations and cohort models) might also relate to concerns of undergraduate courses and be covered by broad projects on curriculum design, learning engagement pedagogies, and so on.

Besides this clear division between HDR and postgraduate coursework projects, there is much variation between them. They were funded under a range of ALTC and OLT Fellowships and competitive grant categories (innovation and development, leadership for excellence, strategic priorities, commissioned projects, seed projects, and special initiatives reserves), and their funded amounts span from \$10,000 to \$224,000. They have employed a wide range of methodological approaches, have differing scopes and scales, and have produced a variety of outcomes. Half are broad-based and issue focused (14/27 projects), while the other half (13/27 projects) are discipline specific (of which 6 might be described as discipline centric).

The projects focus on a wide range of topics, out of which it is possible to identify broad themes, including:

- Coordination and leadership of postgraduate programs (2 projects);
- Higher degrees research supervision (7 projects);
- Pathways into higher degrees (3 projects);
- Higher degree research training (2 projects);
- Linguistic and cultural diversity of candidates (3 projects);
- Examination of higher degrees by research (2 projects).

Within these themes, the projects have a range of aims, including to:

Analyse (*scope, evaluate, research, or develop an understanding of*): new fields, programs or practices; impact of policies or contextual changes; perceptions; pedagogies; roles of technologies; roles of supervisors or academic managers; training; resources or structures.

Identify (*capture, benchmark, align or compare*): approaches, practices, processes, policies, pathways, exit points, needs, case studies, or exemplars of good practice.

Develop (*establish, build or apply*) curriculum, programs, good practice frameworks, models of best practice, principles, guidelines, bench-marking tools, standards, support materials, strategies, toolkits, resources, training, professional framework, academic development, communities of practice, networks, or collaborations.

Embed (*promote or implement*) practices, curriculum, policies, frameworks.

It should be noted that a number of projects span multiple aims—for example, to analyse and then develop.

The projects can be roughly divided into two types: analytical (evaluating the state of something) and developmental (producing something) with a near equal split between the two types (13/27 and 14/27 respectively), although developmental projects tend to include an analytical component as part of the project approach. While the methodologies and methods employed in the projects varied, all involved a literature view, and all completed projects conducted some primary research involving qualitative methods, such as interviews and surveys of stakeholders (students, academics, administrators and/or peak body representatives). This suggests that the sector (or perhaps the funding body) is particularly interested in capturing experiential perspectives over statistical analysis.

In summary, the methods employed within this collection of projects include:

Reviews: Literature reviews, contextual reviews, archival research, audit of resources or data sources.

Analysis: Comparative analysis, textual analysis, coded data analysis, mapping and conceptualisation.

Primary research: Surveys, questionnaires, interviews, focus groups, workshops, developmental phenomenography, dialogue forms, roundtables, forums.

Data capture: Case studies collection, capture of good practices, symposia.

Design based methods: Encompassing needs analyses, design and development, trials, iterative feedback, and evaluation.

Outcomes invariably include findings from the review and analysis process in the form of a **Literature and contextual review**.

Other outcomes produced by this collection of projects include:

Strategic approaches such as frameworks, models, maps, good practice principles, strategy documents, guidelines, matrices and protocols.

Resources such as case studies (text and videos), scenarios, toolkits, checklists, benchmarking tools, templates, curriculum modules, databases and booklets.

Websites holding project outcomes (19/27 completed projects, with four being inactive).

Associations, which range from gatherings (workshops, symposia, colloquia) to Communities of Practice (CoPs), networks and in one instance a research centre.

Scholarly outcomes including presentations, publications, papers.

All completed projects have a publicly available Final Report on the OLT web site (a requirement of funding) and (unpublished) interim reports. There is broad consistency in the style of reports (due to template requirements), and generally there is a clear link between each project's stated aims and its outcomes and recommendations (although one project deliberately changed tack as a result of stakeholder feedback, and a small number of project reports lack clarity on the project outcomes).

The following table of provides a collated summary of project themes, aims, approaches and outcomes, with an inventory of project outputs in Appendix 1, on page 63.

Summary of Project Characteristics and Outcomes

Topic	Discipline	Aim	Approach	Outcomes
Co-ordination, Leadership of Postgraduate Programs				
Improving the leadership capability of academic coordinators in postgraduate and undergraduate programs in Business (2006-9)	Business	To develop a professional development framework for academic coordinators in undergraduate & postgraduate Business degrees.	A theoretical model, interviews, surveys, and workshops to implement the framework at two universities.	<u>Finding:</u> Ongoing policy issues. <u>Outputs:</u> Integrated Competing Values Framework: <i>Academic Leadership: Fundamental Building Blocks</i> , workshops, resources, papers, report, Website (inactive).
Building local leadership for research education (2011-14)	Inter-disciplinary	To improve leadership capability of research education coordinators; improve institutional awareness and develop support materials.	Consultations, interviews and survey; analysis; conceptualisation; Collation of good practices.	<u>Finding:</u> Identified diverse practices, systems, and reporting structures and the most significant aspects of the REC role. <u>Outputs:</u> Map of roles; training resources, scenarios, case studies; report. first.edu.au/
Higher Degrees Research (Supervision)				
Building research supervision and training across Australian universities (2007-10)	Inter-disciplinary	To evaluate current roles, responsibilities, practices and training for HDR supervisors, assess future needs, and make recommendations on effective supervisor training.	A symposium/colloquium/ Discussions, scoping exercise, surveys, follow-up interviews and focus groups (with supervisors).	<u>Findings:</u> Growth and diversity in research education; the formalisation of HDRs and professionalisation of practices; changes to academic development; and resistance of supervisors to generic research training. <u>Outputs:</u> Report, Website (inactive).
A pedagogy of supervision for the technology disciplines Fellowship (2008-9)	Information Technology	To apply a 'research education lens' to supervision as a 'site of teaching and learning practice' and to develop 'a pedagogy of supervision for the technology disciplines'.	Developmental phenomenography: conversational interviews, group conversations and workshops, iterative feedback.	<u>Findings:</u> Supervision is a teaching practice with key pedagogical strategies. <u>Outputs:</u> Nine Pedagogies framework, good practice principles, case studies, report, four scholarly papers. eprints.qut.edu.au/view/person/Bruce_Christine
Developing a toolkit and framework to support new postgraduate research supervisors in emerging research areas (2011-14)	Inter-disciplinary	To develop a toolkit of resources to assist with academic development for new postgraduate research supervisors including strategies for managing supervisory relationships and managing compliance.	Literature review, audit of resources, survey, focus groups, interviews, (supervisors), design workshop, toolkit development and trial.	<u>Findings:</u> Supervisors seek accessible resources and community support over mandatory, central training. <u>Outputs:</u> Report; supervisor toolkit (with tools for candidate selections, expectation setting, confirmation, doing research, thesis, progress, and early exit strategies). researchsupervisiontoolkit.com.au

Building distributed leadership for effective supervision of creative practice Higher Research Degrees (2012-14)	Creative Arts	To establish in-common understandings and principles for effective supervision in Creative Practice PhDs (which combines creative practice and written (exegetical) components).	Literature review, contextual reviews, interviews (new and experienced supervisors), surveys (RSCs), data analysis, good practices capture, discussion at symposium.	<u>Findings:</u> innovative practices, commonalities in approach, patterns and working principles for supervision <u>Outputs:</u> Report, booklet: <i>12 principles for effective supervision of creative practice PhDs</i> , case studies, symposium, papers, journal special issue, web site supervisioncreativeartsphd.net/
Pro-active music higher degrees (2012-13) Fellowship	Creative Arts	To establish a foundation for improving the master-apprentice model of HDR supervision in music, and to develop collaborative approaches to supervision.	Case studies, surveys and interviews (supervisors, students), trial of 'dialogue forms'.	<u>Findings:</u> To combat isolation supervisors and candidates appreciate networks and relationships with others. <u>Outputs:</u> 14 publications, report, website for resources and online forum, entitled <i>Music Research Space</i> . musicresearchspace.com.au/
Design of a participatory supervision support platform for improving higher degree supervision: A feasibility study	Inter-disciplinary	To investigate Web 2.0 technologies to facilitate HDR training and communities of learners/professionals.	A trial and a feasibility study.	<u>Current Project</u> (2012 -) No outcomes as yet.
Pathways				
Where are our doctoral candidates coming from and why? (2010-11) (NB: extended into the following project)	Inter-disciplinary	To investigate student motivations for, alternative pathways into, and potential exit points out of Australian doctoral degrees, compared with international models.	Comparative analysis (of Australian and international models), interviews (with DDoGS).	<u>Finding:</u> Differences between Australian and overseas pathways and entry requirements; the identification of multiple program types. <u>Outputs:</u> Report; presentations to national bodies; conference papers.
I've done a coursework masters, now I'd like to do a doctorate: can I? (2010-13)	Inter-disciplinary	To determine if Masters Coursework degrees, which include a research project, provide Hons1 equivalence and effective, supportable entry into HDRs.	Semi-structured interviews (doctoral students, conveners and Deans of Graduate Research).	<u>Finding:</u> Multiple doctoral pathways and configurations of HDRs; risk and success factors for transition from a Masters (Coursework) into a PhD. <u>Outputs:</u> Workshops, report, website. courseworkmasters.anu.edu.au
Identifying, developing and disseminating best practice in supporting honours dissertation supervision	Inter-disciplinary	To develop support materials for supervisors of honours and coursework dissertation students.	Interviews, workshops, analysis.	<u>Current Project</u> (2013–) No outcomes as yet

Higher Degrees Research: General Issues				
A best practice framework to inform and guide higher degree by research training excellence in Australia (2011-13)	Inter-disciplinary	To develop a Good Practice Framework to assist universities to identify areas of good practice and gaps when reviewing their research training processes.	Literature review, consultation (DDoGS, international experts), iterative reviews.	<u>Findings:</u> Good practices and gaps for evaluating research training processes. <u>Outputs:</u> Good Practice Framework (GPF), guidelines (processes, practices, standards), quality assurance checklist, online benchmarking tool, gap analysis template, case studies, report. goo.gl/RXAS1z
Coursework in Australian doctoral education: What's happening, why, and future directions?	Inter-disciplinary	To investigate pedagogical, curriculum, structural and resourcing issues for coursework in Australian PhDs.	Comparative analysis (Australian, US, Canada UK programs), literature review, interviews, surveys, workshops.	<u>Current Project</u> (2012–) chelt.anu.edu.au/doctoralcoursework/outcomes
Linguistic and cultural diversity				
Keeping on track: teacher leaders for Indigenous postgraduate coursework students (2010-13)	Inter-disciplinary	To establish a capabilities framework, communities of practice, and networks for teachers of Indigenous coursework students.	Literature review, data analysis, survey, interviews and focus groups, trial of University Communities of Practice (UCoPs).	<u>Finding:</u> Intercultural capabilities are required in postgraduate coursework programs. Relationships through Communities of Practice can best enable intercultural capability building for teachers and students. <u>Outputs:</u> <i>Blueprint for Intercultural Capabilities</i> for UCoPs, report.
Leadership in Indigenous research capacity building: implementing and embedding an Indigenous Research Methodologies Masterclass Module (2008-11)	Inter-disciplinary	To develop, trial and embed an Indigenous Research Methodologies Masterclass within the HDR programs of four universities.	Design methods, process including trial and evaluation.	<u>Finding:</u> <u>Outputs:</u> Indigenous research methodology framework, Masterclass module,. Publications, report, website of resources: isrn.qut.edu.au/ IRMMM teaching toolkit (not available) Conference peppers, book chapter
A holistic model for research supervision of international students in engineering and information technology disciplines (2010-13) <i>Extension grant awarded 2014</i>	Engineering	To identify key factors for the success of 'culturally and linguistically diverse' (CALD) HDR students and to inform the provision of supervision and support services.	Workshops, focus groups, surveys, critical incident interviews (students, supervisors), and analysis (support services).	<u>Findings:</u> Factors influencing student success experience include attributes, obligations, competencies, supervision. <u>Outputs:</u> Literature review, matrix of HDR support services, success factors, training resources, report, publications.

Collaborating for success: enhancing the transition of Chinese communication/ media students into Australian postgraduate education	Inter-disciplinary	To develop a model of best practice for Chinese students' success in media communication coursework.	Collaborative design methods.	<u>Current Project (2012–)</u> No outcomes as yet.
Development and evaluation of resources to enhance skills in higher degree research supervision in an intercultural context (2007-10)	Inter-disciplinary	To develop and evaluate resources to support effective cross-cultural supervision.	Design methods: semi-structured interviews, focus groups, design process and evaluation.	<u>Findings:</u> Factors that contribute to the complexity of cross-cultural supervision. <u>Outputs:</u> Checklist for institutional use, multimedia case study resources (videos, scenarios, strategies, publications, report. mq.edu.au/lrc/altc/cross_cultural_supervision_project/
Higher Degrees by Research- Examination				
Dancing between diversity and consistency: Evaluating assessment in postgraduate studies in dance (2006-09)	Dance	To establish best practice in assessment for practice-based HDRs in dance (standards, guidelines, benchmarks).	Literature review; interviews with supervisors, examiners, research deans and candidates, forums.	<u>Findings:</u> Processes and criteria for examining multi-modal theses. <u>Outputs:</u> Booklet: <i>Dancing Between Diversity and Consistency</i> , publications, report, thesis database, website dancingbetweendiversity.com/
Examination of doctoral degrees in creative arts: process, practice and standards (2010-2013)	Creative Arts	To investigate expectations of students, supervisors and examiners, as well as practices, processes and policies for examining doctorates in the creative arts.	Online questionnaires, individual discussions, roundtables, (supervisors, coordinators), archival research and textual analysis of project reports.	<u>Findings:</u> Experienced examiners, training, support, recognition, and clarity on examination and HDR practices are needed. <u>Outputs:</u> Report, booklet: <i>Examining doctorates in the creative arts: A guide</i> , website. creativedoceams.org.au/
Masters (Coursework) Discipline-specific				
Taking clinical psychology postgraduate training into the next decade: aligning competencies to the curriculum (2008-11)	Clinical Psychology	To better align clinical psychology curriculum with new health sector expectations, and to develop best practice in professional training.	Comparative analysis of local guidelines and international standards, curriculum mapping, survey (students), interviews (academics).	<u>Finding:</u> Students prefer practical, competency-based teaching. <u>Outputs:</u> Map of competencies to curriculum, assessment template, training clinic models, fitness to practice protocols. Presentation, report, website: psy.uq.edu.au/current-students/postgraduate/clin/altc/#

Curriculum renewal in postgraduate information technology education: a response to growing service sector dominance (2008-11)	Information Technology	To develop market-relevant, inter-disciplinary curriculum modules for service science management engineering (SSME) coursework.	Design methods: needs analysis, focus groups (industry, graduates, academics), coded data analysis, design, trials.	<u>Findings:</u> Key themes to develop a curriculum framework. <u>Outputs:</u> Eight learning modules and online, open-access portal (inactive). soc.cse.unsw.edu.au/teachingfoundry/
Graduate professional entry courses in accounting and law (2009-12)	Accounting and Law	To compare structure, learning outcomes, teaching and assessment practices in accounting and law professional Masters degrees.	Literature review, interviews.	<u>Finding:</u> Characteristics of Coursework Masters: entry skills, depth of learning, assessment at AQF 9. <u>Outputs:</u> Report, website: rmit.edu.au/teaching/altc/professionalpathways
Shared mastery: an international collaborative approach to Masters in landscape architecture	Landscape Architecture	To explore a 'global approach' to Masters of Landscape Architecture (coursework).	Not stated in project abstract.	<u>Current Project (2013–)</u> No outcomes to date.
A creativity skills MOOC for Australian coursework masters	Inter-disciplinary	Massive Open Online Course to teach and assess AQF skills	Design based methods.	<u>Current Project (2013–)</u> No outcomes to date.
Higher Degrees by Research (Discipline specific)				
Future-proofing the creative arts in higher education: Scoping for quality in tertiary creative arts learning, teaching, and research training (2007-10)	Creative Arts	To provide a scoping study and an evidence-based understanding of an emergent field of doctoral studies in the creative arts (visual arts).	Literature and contextual review, surveys, interviews, focus groups (coordinators, examiners, supervisors); roundtables, fora, analysis.	<u>Findings:</u> Variation in processes and expectations around admissions, levels of supervision, experience of supervisors, structured programs, examination models. <u>Outputs:</u> Report, papers, website (inactive).
Developing a collaborative national postgraduate research program for 22 Australian film schools (2011-14)	Film	To establish a strategic national postgraduate research education program for screen producers.	Sector-wide consultations, workshops, surveys and audit of ERA reports.	<u>Findings:</u> A collaborative research center could consolidate research and funding. <u>Outputs:</u> National colloquium; Screen Production And Research Collaboration Centre; national plan, journal issue. mcc.murdoch.edu.au/nass/altc/index.html

Good Practice Overview

Against the categorised themes outlined in the tabular overview of projects presented above, a number of good practices can be extracted. In summary, good practices in the area of postgraduate coursework and research programs can be identified in contexts where:

- Pathways into postgraduate research, processes around admission, and the range of configurations of HDRs on offer are clear and well communicated, and the risk and success factors for transitioning students (for example from a Masters Coursework into PhD) are identified and addressed through pedagogies, curriculum, structural process and resourcing (Kiley, 2013).
- Masters (Coursework) and HDR programs align with the levels and depth of learning in the AQF standards, DDoGS good practice principles and good practices identified by OLT projects, and program design is guided and reviewed by quality assurance checklists; benchmarking tools; gap analysis templates or other available resources.
- The supervision of higher research degree candidates is seen through a 'research education lens' as a 'site of teaching and learning practice' and it is underpinned by pedagogical principles (Bruce, 2008).
- Academic development is provided for HDR supervisors, with central training on process complemented by capacity building at local levels through distributed leadership models that enable dialogue, communities of practice, and peer mentoring (Hammond et al., 2010; Hamilton et al., 2013, Blass et al., 2013).
- Support is provided to new and inexperienced supervisors through accessible resources and community support (Hamilton et al., 2013, Blass et al., 2013).
- Networks and relationships are formed between students and supervisors and between supervisors within institutions to dispel isolation (Harrison, 2014), and where formal and informal networks and collaborations are developed across the sector at discipline level (Petkovic et al., 2014).
- Approaches to supervision capacity, programs, and examination models have disciplinary consistency across the sector, particularly in emerging fields (Baker et al., 2009), but where latitude around entry, supervision practices and forms of research are at the discretion of local administrators and supervisors (Hammond et al., 2010, Hamilton et al. 2013).
- Coordinators of postgraduate programs are recognised by universities as leaders who have significant impact on the postgraduate student experience, completion rates, and supervisory capacity in their institutions, and where they are trained and have clear roles, responsibilities and lines of reporting (Vilkinas et al., 2009; Boud et al., 2013).
- Intercultural capabilities for teachers and students are enabled by good practice principles, case studies, exemplars and local communities of practice (Yarlagadda et al., 2013), and Indigenous methodologies are enabled (Moreton-Robinson et al., 2011).
- Training, support and recognition of examiners of HDR theses is provided and examination processes and criteria are clear (Webb et al., 2013; Phillips et al., 2009).

Summary of Gaps and Recommendations

Besides the diversity of themes, aims, methods and outcomes of ALTC/OLT projects and fellowships reported here, what is perhaps most notable is the shift in focus over time as intrinsic and external factors have influenced the higher education sector. During the reporting period, we have seen the emergence of new pathways, degree titles, and HDR fields; the development of standards and quality assurance requirements; increased pressure on enrolment numbers and completion times, and the internationalisation of education. These factors are all reflected in discussions and strategic outcomes of projects. However, a number of gaps still remain. Through a triangulation of the literature and contextual review, the review of project outcomes, and recommendations made by the projects in this report, gaps have been identified and, along with apparent absences in topics and themes, they form the basis of our recommendations for future work.

Postgraduate Pathways

A key consideration for the administration of postgraduate courses is pathways into them. In 2011, Margaret Kiley investigated the emergence of new pathways into PhD programs, such as Masters (Coursework) degrees that potentially provide Honours 1 equivalency. The recent AQF requirements for Masters degree candidates to “plan and execute a substantial research-based project, capstone experience and/or piece of scholarship”, potentially ensures such equivalency. In addition, a Masters degree pathway aligns with the international standard of the Bologna model. However, there are implications to consider in the Australian context, such as the extent of research training needed to provide the same capacity as students transitioning from Honours (particularly around methodological skills); and under what circumstances an industry focused Masters can provide a pathway to a research focused PhD. A recent, as well as a current project, by Kiley on coursework in Australian doctoral education, along with a current Fellowship by Roberts to develop support for supervisors of honours and coursework dissertation students may provide some answers to these questions. However, these important and complex issues may need fuller investigation. It is also worth noting that there has been little specific focus on traditional and most common pathways into postgraduate study: Honours and Graduate Certificates.

Other considerations relate to discipline-specific entry requirements for professional Masters and Doctorates and creative practice HDRs, such as prior education, professional standing and life experience. Selection processes that ascertain a candidate’s potential to complete have also been proposed in some project reports. And, while the importance of transition pedagogies has been established in undergraduate degrees, its potential value for postgraduate students (particularly international students) has not yet been addressed.

Recommendation 1:

Given changing contexts and new possibilities for (non-traditional) postgraduate pathways, more investigation is needed into the challenges and opportunities that both traditional and new pathways into postgraduate coursework and HDRs present. Key issues relate to selection, structure, resourcing, support for students and transition pedagogies.

Postgraduate Coursework Degrees

Postgraduate coursework enrolments are proportionally higher than HDR enrolments (284,690 compared with 62,673 (uCube, 2014)) and they are increasing at a slightly higher rate (35% compared with 31%). However, of the projects in this report, many more focus on HDRs (17/27 projects). To some extent this is unsurprising, as the pedagogical practices of Coursework degrees (being primarily cohort-based, taught courses) may be encompassed in broader projects. However, a number of issues have recently emerged, which require investigation. For example, the AQF requirement for a Coursework Masters degree to include a research-based project or piece of scholarship, raises questions around what form such a research component might take in different disciplines, given the difference between focal research (of say, a situation, client needs or project requirements, as a key competency in some disciplines), and higher order research (which contributes to new knowledge), and what this means for professional and HDR pathways, as well research training. Questions also arise around support and effective, pragmatic models of supervision and the implications for student services and supervisor workload.

The emerging prominence of continuing education for professional work (higher qualifications, ensuring currency, and enabling career agility) is also impacting upon student motivations and availability, and the impact on structures and delivery modes of Graduate Certificates, professional Masters and Doctorates would benefit from exploration.

Recommendation 2:

Given new standards for postgraduate coursework degrees, investigation is needed into the research components of Masters by Coursework, including its forms and models of supervision. And, given the changing contexts and demands of professional work, the structures, pedagogies and delivery modes of Graduate Certificates, Professional Masters and Professional Doctorates may need to be reconceptualised.

HDR Milestones

Increases in enrolments and pressures on timely completion of HDRs have seen an increased focus on reviews of student progress, as well as the introduction of milestones of candidature (such as confirmation seminars, final reviews and other interim milestones). While university guidelines are informed by national AQF standards and regulatory frameworks provided by the *Education Services for Overseas Students Act 2000* and TEQSA, so far there is no sector-wide consensus on the nature, form, and timing of milestones. And, while the benefits of milestones to universities (such as quality assurance and timely completion) may be becoming clear, for PhD candidates, milestones are a process that must be successfully navigated with the help of their supervisors. Little investigation has so far been conducted on the benefits and challenges of milestones to students, or ways to support candidates to successfully achieve them.

Recommendation 3:

Given the increased adoption of milestones in HDRs, work needs to be done to clarify the benefits and challenges to candidates, supervisors and universities. This includes research

into sector-wide practices regarding timing, forms and approaches to milestones, and identifying good practices for supporting candidates and supervisors to successfully complete them.

HDR Examination

The examination requirements of the AQF and guidelines produced by DDoGS provide some consistency in HDR examination (external examination by two experts of international standing, and the broad criteria of an original contribution to knowledge). However, as noted by one project report (Webb et al., 2013), little training is offered for PhD examiners, and examiners conduct the review in isolation, and the result is not subject to moderation. This means that the result tends to be based on what the examiner knows (through experience at their own university), which may not be consistent with the expectations of other universities. Moreover, the examinable component may take different forms depending on degree type (a thesis; a body of practice with accompanying exegesis of varying proportions; a collection of project reports; or a coherent collection of publications).

A recent project (Webb et al., 2013) undertook sector-wide consultation to provide recommendations for examining creative arts HDRs and they suggested that this model might be applicable across disciplines. However this remains to be tested and cross-disciplinary exploration of examination process and guidelines is needed. Another issue relates to recent discussions on aligning examination with international models, such as introducing the European style Viva or Defence into Australian doctorates (Group of Eight, 2013, Phillips, Stock and Vincs, 2009). The implications of such an approach might be assessed (bearing in mind that this is the focus of a current ARC grant).⁶

Recommendation 4:

Further work is needed on postgraduate examination with regards to process, **preparing students for examination**, and discipline variation (**including** examinable outcomes). In addition, questions around criteria and guidelines for examination, which can ensure equity and parity for research candidates, need to be resolved. And finally, the potential value and form of discipline specific examiner training might be considered.

Academic Development for HDR Supervisors

Increases in enrolments in Higher Degrees Research and shortened completion times focus attention on the quality and effectiveness of supervision. While responsibility for good practices in terms of process rests with institutions, as several of the projects (and the broader literature) establish, supervisors are the key influence on HDR student experience, quality of outcomes, and timely completion. Supervision has therefore become subject to quality assurance processes and accreditation in recent years. Beyond compliance is the need to support and build the capacity of supervisors. The nature of supervision is complex:

⁶ A. Holbrook, S. Bourke, T. Lovat, M. Kiley, and S. Starfield, *A cross-national study of the relative impact on an oral component on PhD examination quality, language and practice*, ARC Discovery grant, 2011-2013.

at the nexus of research and teaching, it has its own, quite particular pedagogies, which include “reactive, pre-emptive and proactive dimensions” (Hammond, 2010, 14).

Given its importance and complexity, supervision has been the subject of a relatively high proportion of the reported projects (7/27 projects). However, while they have established pedagogical frameworks, identified and developed resources to assist supervisors, and considered professional development, gaps still remain.

There is a need for greater understanding and communication of higher degree research pedagogy and Bruce’s discipline focused pedagogy of supervision might be adapted to other disciplines. It is also important to differentiate between supervisory capacity (availability of supervisors) and supervisor capacity (the ability of supervisors) and this difference draws attention to the need for new approaches to academic development. Generic, university-wide training is related to the former, and several reports identify the reluctance of supervisors to embrace it (Hammond et al., 2010; Hamilton et al., 2013). Therefore, a need remains for projects to design and test frameworks, strategies and models that effectively achieve the latter. This requires discipline-level exploration of supervisory practices, the development of contextually specific resources and exemplars of good practice, and discipline-based training. New models for local workshops, building collegial dialogue between supervisors to exchange of knowledge and experiences, peer mentoring, and peer and self-evaluation of supervision practices have featured in the recommendation of a number of the projects covered here.

Recommendation 5:

Further investigation is needed into the pedagogy of supervision, along with the adaptation and trialing of work that has been conducted in one discipline. To improve supervision capacity, there is also a need to examine the motivations, nature and form of predominant models of academic development for HDR supervisors, and to design and test frameworks, strategies and models that extend the concept of academic leadership beyond coordinator/administrator roles and provide decentralised, discipline-level training such as local workshops, peer mentoring, and peer and self-evaluation of supervision practice, along with contextually specific resources and exemplars of good practice.

New Fields, Pedagogies and Outcomes

The emergence of new HDR paradigms in the creative practice and technology disciplines has challenged the form, structure, methodologies, timelines, practices, processes and examinable outcomes of PhDs. These new HDR models also have supervision pedagogies that differ from their more traditional ‘pure research’ counterparts. The earliest of these emergent areas, creative practice PhDs are most represented in the wave of recently funded OLT projects (6/27 projects), which cover scoping, pathways, supervision, outcomes and examination. Now, new ‘applied research’ fields such as Design, Education (including Higher Education), Health, Business and Law, have begun to challenge traditional HDRs. However, little established literature and few projects have focused on what HDR models and supervision pedagogies are possible and appropriate to these fields. While there are undoubtedly key differences across disciplines, it would be useful to investigate how experimental practices in the creative and technology fields might be extrapolated to new

applied research areas (as well as how they might potentially reinvigorate traditional fields). For instance, it would be useful to examine if supervision practices established in the technology and creative fields can be translated to applied research in Health HDRs.

The use of new technologies for supporting candidates and supervisors is also being investigated in current projects, but emerging digital forms and a trend towards 'data-driven literature' (Rodley and Burrell, 2014) highlights the need for continued research around the use of technology in postgraduate courses. New technologies have also affected postgraduate outcomes. They have given rise to alternative narratives, and alternative presentation forms (such as the interactive PDF). Writing in postgraduate courses generally remains somewhat of a gap in OLT projects (although it has been explored in an ARC grant Holbrook et al. 2011-13) and very recent publications (Paltridge et al., 2009; Aitchison and Guerin, 2014). However new writing forms and PhD outcomes might be investigated.

Recommendation 6:

The transferability of recent findings, experimental models and supervision strategies in emergent fields (the creative and technology disciplines) to 'applied research' fields (such as Design, Education, Health, Business and Law), as well as traditional HDR fields, should be considered. More research is also required into the impact of new forms of research, new technologies and evolving writing forms.

An International Context and Culturally and Linguistically Diverse Students

Postgraduate courses operate in an increasingly international context. This not only means that the proportion of international enrolments has increased, it also means pressure to ensure that qualifications are portable and comparable with those of other nations. Because international students make up nearly a third of Australia's postgraduate students, there is a strong imperative to ensure quality and to develop good practices to support 'Culturally and Linguistically Diverse' cohorts. While some work has been/is being conducted in disciplines with high intakes of CALD students (Yarlagadda et al., 2013 and Daymon et al., 2014) wider consideration of supervisor training, tailored transition pedagogies, focused support services, cross-cultural community building, and mentoring schemes is needed.

Recent amendments to the defined purpose of the AQF to (amongst other things) "[enable national and international portability and comparability of qualifications" (AQF, 2013), as well as proposals to align Australian models with the Bologna model, warrant investigation into the potential implications, benefits and challenges of internationalising postgraduate courses. Many of the reports included here pay little attention to international comparisons or the effects of internationalisation on the Australian higher education sector. It is crucial that research into postgraduate studies begins to take account of global contexts.

It is also particularly notable that, while two ALTC/OLT projects on postgraduate study in the past five years relate to Indigenous Australians only one focuses on Masters Coursework (Frawley et al., 2013) and one focuses on methodologies (Moreton-Robinson et al., 2011). None cover alternate HDR outcomes produced by Indigenous students and none consider how relatively low enrollments and how attrition rates might be addressed (other than

through inclusive methodologies). Both issues are a significant gap in the national landscape of postgraduate studies.

Recommendation 7:

Given the increasing diversity of postgraduate student populations, including increases in international student enrolments and aspirations to increase Indigenous representation in postgraduate studies, more work is needed to ascertain and address the particular challenges and opportunities of non-traditional background students. Transition pedagogies and support structures need to be developed; good practices need to be identified and more resources for culturally and linguistically diverse students, Indigenous postgraduate cohorts, and professionals returning to study need to be produced and collated.

Postgraduate Destinations and Co-curricula Activity for Career Development

With HDR graduates now outnumbering academic positions (the traditional destination of graduates), and industry demand for doctoral qualifications increasing in some fields, graduate destinations appear to be shifting, and the skills required of graduates are expanding. Yet there has been little research into postgraduate student destinations, or how effective postgraduate qualification are in preparing their graduates for the workplace—whether in academia or in industry.

In response to concerns by employers and industry groups that “many university graduates—including those with masters and doctoral degrees—are inadequately prepared for the world of work”, a scoping study entitled *Research Graduate Skills Project* by Cumming et al. (2009), focused on academic skills development and professional attributes of HDR courses. However, given the changing nature and motivations of postgraduate student populations, an updated review, along with a deeper understanding of the nature and benefits of co-curricula activities for postgraduate students (such as academic development for teaching, research publication, and grant writing) would be of benefit. Such career development, in the form of university workshops, online modules or informal workshops, is an important aspect of postgraduate study from the perspective of students and their futures.

Recommendation 8:

Further investigation is needed into changing postgraduate student destinations. Evaluation is also needed into how universities are preparing postgraduate students for their careers through core and complementary aspects of the postgraduate experience. This might include identifying good practices and developing sector-wide recommendations for assisting graduates with career preparedness.

Sharing Project Findings and Recommendations

The 27 projects examined in this report provide research findings, techniques, and strategies for a diverse range of postgraduate coursework and research degrees. Many of the reports recommend instigating change in the sector through the dissemination of the

findings and resources they have produced. What is unclear, however, is whether the recommendations were implemented as a result of the project reports or how successful they were as catalysts for systemic change in practice.

Recommendation 9:

It would be useful to conduct follow up reports on funded projects, and to develop mechanisms for project teams to update and add new outcomes and impacts to the OLT website for three years post-reporting. A small amount of post-delivery funding could help to determine the medium term impact of projects. To further disseminate project findings and to help embed recommendations across the sector, the OLT might also usefully develop a cooperative relationship with DDoGS to endorse, adopt and circulate the recommendations, summarised findings, and outcomes of projects on postgraduate study.

Design Methodologies

The methodologies employed in the projects reported here vary considerably, however all conducted some primary, qualitative research, such as interviews or surveys of stakeholders (students, academics, administrators and/or peak body representatives). And, while half the projects are analytical (evaluating the state of something), the other half are also developmental (producing something) and applied (implementing something). The latter involve a design methodology to produce substantive outcomes (models, protocols, resources, case studies, toolkits, associations and so on). By and large, these outcomes are collaboratively produced through participatory workshops, symposiums, or colloquia, in which stakeholders make direct contributions to the design of outcomes through co-design methodologies. However, the descriptions of methodologies and methods in the reports vary in terms of methodological understanding and rigour (and, by extension, the effectiveness of outcomes). The strongest outcomes of projects have a clearly explicated relationship between the defined aims and objectives, methodologies and project outcomes. It is therefore crucial that a stronger understanding of emergent methodologies of higher education research be explored and articulated for the benefit of OLT grant and fellowship applicants and project teams, and this might be a useful project in its own right.

Recommendation 10:

It would be of benefit to the sector, and to grant and fellowships applicants in particular, to develop a methodological guide for projects, which encapsulates the methods typically and usefully employed in recent OLT projects, and frames them against methodologies drawn from multiple disciplines, particularly those involved in applied research, qualitative data collection, and design methods.

Conclusion

Over the past five years, many aspects of postgraduate study have been investigated through OLT funded grants and fellowships by researchers across many disciplines. This work has added considerable insight into core pedagogies and recent changes in the higher education sector. This new understanding is complemented by the development of a range of good practice principles, frameworks and case studies, along with the production of tangible resources, toolkits and databases, change-making associations, sector-wide networks and Communities of Practice. Considerable progress has been made in understanding and mitigating challenges to the sector in the current climate of increased student loads, pressures on funding, quality assurance and compliance requirements, and the internationalisation of higher education. And much has been done to seize the opportunities that have been presented, to capture and embed good practices, and to provide tools and resources to enable them.

However, work remains to be done in relation to HDRs, including developing a clearer understanding of new pathways, milestones, writing, and the examination of HDR outcomes; the pedagogies of supervision; the transferability of experimental models of HDRs; along with new models of academic development for supervisors. In relation to Masters Coursework degrees, investigation is needed into models for supervising research projects, and new modes of flexible delivery are required for professionals extending their qualifications. For the increasing proportion of non-traditional background postgraduate students, work is needed to develop transition pedagogies and support structures, along with resources for culturally and linguistically diverse, Indigenous postgraduate cohorts, and professionals returning to study. And investigation into career preparation through co-curricular activity may be of benefit. Finally, with regards to projects more broadly, expanded dissemination through peak bodies and the clarification of appropriate methodologies may be of benefit to applicants and project teams.

Despite these remaining gaps, much progress has been made by the projects conducted in the past five years, and it is our hope that collating them here as a coherent set of projects and outcomes will further benefit to the sector.

References

- Aitchison, C. and C. Guerin 2014. *Writing Groups for Doctoral Education and Beyond: Innovations in Practice and Theory*, Routledge, Oxon
- Aitchison, C., J. Catterall, P. Ross and S. Burgin. 2012. 'Tough love and tears': Learning doctoral writing in the sciences. *Higher Education Research & Development*, 31 (4): 435-447
- Australian Government Department of Education, *A Contribution from Postgraduate Research Students*, Accessed August 25, 2014. <http://education.gov.au/researchers-faqs#faq4>
- Australian Government Department of Education. *UCube: Higher Education Statistics*, Accessed August 1, 2014. <http://highereducationstatistics.education.gov.au/>
- Australian Government ComLaw. *Commonwealth Scholarships Guidelines (Research)*, 2012. Accessed August 8, 2014. http://www.comlaw.gov.au/Details/F2012L02535/Html/Text#_Toc339549665
- Australian Government, *Tertiary Education Quality and Standards Agency*, Accessed August 8, 2014. <http://www.teqsa.gov.au/>
- Australian Qualifications Framework Council. 2013. *Australian Qualifications Framework, Second Edition, January, 2013*. Accessed July 31, 2014. <http://www.aqf.edu.au/wp-content/uploads/2013/05/AQF-2nd-Edition-January-2013.pdf>
- Biggs, M. and D. Buechler. 2009. Supervision in an alternative paradigm. *Text: Journal of Writing and Writing Courses*. Special Issue (6). Accessed August 1, 2014 <http://www.textjournal.com.au/speciss/issue6/Biggs&Buchler.pdf>
- Blass, E. and S. Bertone. 2014. *Developing a Toolkit and Framework to Support New Postgraduate Research Supervisors in Emerging Research Areas*. Office for Learning and Teaching. Accessed August 1, 2014. <http://olt.gov.au/project-developing-toolkit-and-framework-support-new-postgraduate-research-supervisors-emerging-re-0>
- Brien, D. L., S. Burr and J. Webb. 2010. *Examination of Doctoral Degrees in Creative Arts: Process, Practice and Standards*: Office for Learning and Teaching. Accessed August 1, 2014. <http://creativedoceams.org.au/about>
- Bruce, C. 2009. *Towards a Pedagogy of Supervision in the Technology Disciplines*. Office for Learning and Teaching. Accessed August 1, 2014. <http://www.olt.gov.au/resource-towards-pedagogy-supervision-qut-2009>.
- Bruce, C. and I. Stoodley. 2009. *Resource for Supervisors*. Accessed August 1, 2014. <http://eprints.qut.edu.au/28542/>
- Chickering, A. and Z. Gamson. 1987. Seven principles for good practice in undergraduate education. *AAHE Bulletin*: 3-7. Accessed August 1, 2014. <http://eric.ed.gov/?id=ED282491>

- Council of Deans and Directors of Graduate Research (DDoGS). 2014. *Graduate Research: Good Practice Principles*. Accessed August 1, 2014. http://media.wix.com/ugd/f39714_171714a9c1584ca3ac4fd8125c2e6739.pdf
- Cumming, J., M. Kiley, M. Thomas, L. Hort, M., Pike, E. Evans, and A. Main, 2009, Research graduate skills project, Australian Learning and Teaching Council. Accessed August 1, 2014. <http://www.olt.gov.au/resource-research-skill-development-questions-anu-2009>
- Cumming, J. 2009. Contextualised performance: Reframing the skills debate in research education, *Studies in Higher Education*, Vol. 35 (4). 405-419
- Denholm, C., T. Evans and B. Jones. 2007. *Supervising Doctorates Downunder: Keys to Effective Supervision in Australia and New Zealand*. EACER Press.
- Department of Education. 2014. *Researchers FAQs*. Accessed July 12, 2014. <http://education.gov.au/researchers-faqs#faq4>
- Devlin, M., S. Kift, K. Nelson, L. Smith, J. McKay. 2012. *Effective Teaching and Support of Students from Low Socioeconomic Status Backgrounds: Resources for Australian Higher Education*. nd. Accessed August 8, 2014. <http://www.lowses.edu.au>
- Ryland, K., *FIRST*. Accessed July 12, 2014. <http://first.edu.au>
- Gale, T. and S. Parker. 2014. Navigating change: A typology of student transitions in Australian higher education. *Studies in Higher Education*. 39 (5): 734-753.
- Group of Eight. 2013. *The Changing PhD*. Accessed July 29, 2013. www.go8.edu.au
- Hamilton, J., S. Carson and E. Ellison. 2014. *Building Distributed Leadership for Effective Supervision of Creative Practice Higher Research Degrees*. Office for Learning and Teaching. Accessed August 1, 2014. <http://www.olt.gov.au/resource-building-distributed-leadership-effective-supervision-creative-practice-higher-research-degr>
- Hamilton, J. 2014. Voices of the exegesis: Composing the speech genres of the practitioner-researcher into a connective thesis. In Ravelli, L., B. Paltridge, and S. Starfield. *Doctoral writing in the creative and performing arts: the researcher/practitioner nexus*, Libri Publishing, UK
- Hammond, J., K. Ryland, M. Tennant, D. Boud. 2010. *Building Research Supervision and Training Across Australian Universities*. Australian Learning and Teaching Council. Accessed August 1, 2014. <http://www.olt.gov.au/resource-building-research-supervision-and-training-across-australian-universities-uts-2010>.
- Harman, G. 2002. Producing PhD graduates in Australia for the knowledge economy, *Higher Education Research and Development*, 21 (2): 179-190.
- Harvey, A. and L. Andrewartha. 2013. Dr Who? Equity and diversity among university postgraduate and higher degree cohorts, *Journal of Higher Education Policy and Management*, 35 (2): 112-123.
- Holbrook, A., S. Bourke, T. Lovat and H. Fairbairn. 2008. Consistency and inconsistency in PhD thesis examination. *Australian Journal of Education* 52: 36-48.
- Holbrook, A., S. Bourke, T. Lovat and K. Dally. 2004. Investigating PhD thesis examination reports, *International Journal of Educational Research* 41 (2): 98-120.
- Ings, W. 2013. Narcissus and the muse: Supervisory implications of autobiographical,

- practice-led PhD design theses, *Qualitative Research*, May 24, 2013.
- Kamler, B. and P. Thomson. 2006. *Helping Doctoral Students Write: Pedagogies for Supervision*. New York: Routledge
- Kiley, M., J. Cumming and R. Pitt. 2013. *I've Done a Coursework Masters and Now I'd Like to Do a Doctorate: Can I?* Office for Learning and Teaching. Accessed August 1, 2014. <http://www.olt.gov.au/project-ive-done-coursework-masters-now-id-do-doctorate-can-i-2010>.
- Lee, A. 2007. Developing effective supervisors: Concepts of research supervision, *South African Journal of Higher Education*, 21 (4): 680-693. Accessed August 1, 2014. <http://epubs.surrey.ac.uk/492/>
- Lee, A., and C. Aitchison. 2009. Writing for the doctorate and beyond. In D. Boud and A. Lee. *Changing Practices of Doctoral Education*. Routledge: New York
- Manathunga, C. 2014. *Intercultural Postgraduate Supervision: Post-colonial Explorations*. Routledge: New York.
- Morley, L. 2004. Interrogating doctoral assessment. *International Journal of Educational Research* 41 (2): 91-97
- Nelson, K., Kift, S., and Clarke, J. 2012. A transition pedagogy for student engagement and first year learning, success and retention. In Ian Solomonides, Anna Reid and Peter Petocz (eds). *Engaging with Learning in Higher Education (ELHE)*. Libri Publishers: Faringdon
- Paltridge, B., L. Harbon, D. Hirsh, H. Shen, M. Stevenson, A. Phakiti and L Woodrow. 2009. *Teaching Academic Writing: An Introduction for Teachers of Second Language Writers*. Ann Arbor, USA: University of Michigan Press.
- Pare, A., D. Starke-Meyerring, and L. McAlpine. 2009. The dissertation as multi-genre: Many readers, many readings. In C. Bazerman, A. Bonini, and D. Figueiredo. *Genre in a Changing World*. The WAV Clearinghouse: Colorado
- Phillips, M., Stock, C. & Vincs. K. (2009). *Dancing between diversity and consistency: refining assessment in postgraduate degrees in dance*, Office for Learning and Teaching. Accessed August 1, 2014. <http://www.olt.gov.au/project-dancing-between-diversity-ecu-2006>
- Ryland, K. 2012. *fIRST - For Improving Research Supervision and Training*. Accessed August 1, 2014 www.first.edu.au
- Rodley, C., and A. Burrell. 2014. On the art of writing with data. In Jason Potts (eds). *The Future of Writing*. Palgrave MacMillan: London, UK.
- Tinto, V. 1987. *Leaving College: Rethinking the Causes and Cures of Student Attrition*. University of Chicago Press: Chicago, USA.
- Universities Australia. 2013. *An Agenda for Australian Higher Education a Smarter Australia 2013–2016*. Accessed August 8, 2014. <https://www.universitiesaustralia.edu.au/news/policy-papers/Universities-Australia-Policy-Statement-2013---2016>

The University of Melbourne, Victoria College of Arts, *Degrees*, Accessed August 1, 2014
<http://vca.unimelb.edu.au/study/degrees>

Webb, J., D. L. Brien and S. Burr. 2013. *Examination of Doctoral Degrees in Creative Arts: process, practice and standards*. Office for Learning and Teaching. Accessed August 1, 2014 www.creativedocexams.org.au

Yarlagadda, P., Woodman, K., Silva, P., Taji, A., Sahama, T., Trevelyan, J., Samani, S., Sharda, H., Narayanaswamy, R. & Lucey, A. (2013). *A model for research supervision of international students in engineering and information technology disciplines*. Accessed August 1, 2014. <http://www.olt.gov.au/project-holistic-model-research-supervision-international-students-engineering-and-information-techn>.

Holbrook A., S. Bourke, T. Lovat, M. Kiley, B. Paltridge, and S. Starfield. 2011-2013. *A cross-national study of the relative impact of an oral component on PhD examination quality, language and practice*, Australian Research Council (ARC) Discovery Project.

Appendix 1

Inventory of Project Outputs

Co-ordination and Leadership of Postgraduate Programs

- Boud, D., N. Soloman, M. Kiley, A. Brew, J. McKenzie, R. Dowling, J. Malfroy and K. Ryland. 2014. *Building Local Leadership for Research Education*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-building-local-leadership-research-education-2011>
- Boud, D., N. Soloman, M. Kiley, A. Brew, J. McKenzie, R. Dowling, J. Malfroy and K. Ryland. 2013. Hosted by *FIRST*. www.first.edu.au (no longer available)
- Vilkinas, T. 2009. *Improving the Leadership Capability of Academic Coordinators in Postgraduate and Undergraduate Programs in Business*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-improving-leadership-capability-unisa-2006>
- Vilkinas, T., Leask, B. and R. Ladyshevsky, 2009. *Academic Leadership: Fundamental Building Blocks*, Resource booklet, tne.curtin.edu.au/local/documents/academic_leadership_fbb.pdf
- Vilkinas, T., and R. Ladyshevsky. 2009. Project Website <http://www.unisanet.unisa.edu.au/academicleadership> (no longer active)
- Vilkinas, T., B Leask, and Rogers, T. 2007. Developing the leadership capability of academic coordinators, *Enhancing Higher Education, Theory and Scholarship, Proceedings of the 30th HERDSA Annual Conference*, Adelaide, 8-11 July 2007

Higher Degrees Research (Supervision)

- Bruce, C. S. and Stoodley, I. D. 2010. *Science and technology supervision resources* <http://eprints.qut.edu.au/38456/>
- Bruce, C. S. and Stoodley, I.D. 2009. *Resource for supervisors and cases*. <http://eprints.qut.edu.au/28592/>
- Bruce, C. S., Bell, J. M., Gasson, S., Geva, S., Kruger, K., and Oloyede, A., 2009. *Summary and recommendations*. <http://eprints.qut.edu.au/28537/>
- Bruce, C. S. and Stoodley, I. D. 2009. *A pedagogical framework for the technology disciplines*. <http://eprints.qut.edu.au/28536/>
- Bruce, C. S., Gasson, S., and Stoodley, I. D. 2009. *A review of the conversations and their content*. <http://eprints.qut.edu.au/28535/>
- Bruce, C. S. and Stoodley, I. D. 2009. *Cases from the technology disciplines*. <http://eprints.qut.edu.au/28582/>
- Bruce, C. S. and Stoodley, I. D. 2009. *Student resources for the use of supervisors* <http://eprints.qut.edu.au/28585/>

- Bruce, C. S. and Stoodley, I. D. 2009. *Towards a pedagogy of RHD supervision in the technology disciplines*. <http://eprints.gut.edu.au/18869/>
- Bruce, C. S., Stoodley, I. D. and Pham, B. L. 2009. Doctoral student's experience of information technology research. *Studies in Higher Education*, 34 (2): 203-222. <http://dx.doi.org/10.1080/03075070802556131>
- Blass, E. and S. Bertone. 2013. *Developing a toolkit and framework to support new postgraduate research supervisors in emerging research areas*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-developing-toolkit-and-framework-support-new-postgraduate-research-supervisors-emerging-re-0>
- Blass, E. and S. Bertone. 2013. *Research Supervision Toolkit*, Project Website. www.researchsupervisiontoolkit.com
- Hamilton, J., Carson, S., and Ellison, E. 2014. *Building distributed leadership for effective supervision of creative practice Higher Research Degrees*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-building-distributed-leadership-effective-supervision-creative-practice-higher-research-degr>
- Hamilton, J., Carson, S., and Ellison, E. 2014. *12 principles for effective supervision of creative practice higher research degrees*. <http://supervisioncreativeartsphd.net/wp-content/uploads/2013/12/12-Principles-for-Effective-Supervision.pdf>
- Hamilton, J., Carson, S., and Ellison, E. 2014. *Effective Supervision of Creative Arts PhDs*: Project Website. http://supervisioncreativeartsphd.net/?page_id=190
- Hammond, J., K. Ryland, M. Tennant, and D. Boud. 2010. *Building research supervision and training across Australian universities*. Project Report. Office for Learning and Teaching: Sydney <http://www.olt.gov.au/project-building-research-supervision-uts-2007>
- Hammond, J., K. Ryland, M. Tennant, and D. Boud. Project Website linked via <http://first.edu.au/public/ALTC> (no longer available).
- Harrison, S. (Ed., in press). *Research and Research Education in Music Performance and Pedagogy*. Springer Landscape: Arts, aesthetics, and education series. Springer.
- Harrison, S. (in press). Weaving together disparate threads: Future perspectives for research and research education. In Harrison, S. (Ed.), *Research and Research Education in Music Performance and Pedagogy*. Springer Landscape: Arts, aesthetics, and education series. Springer.
- Harrison, S.D. (in press). Training the singing researcher. In Harrison, S.D. and O'Bryan, J. (Eds.), *Teaching Singing in the 21st Century*. Dordrecht: Springer.
- Harrison, S. and Draper, P. (in press). Evolving an artistic research culture in music: An analysis of an Australian study in an international context. In Harrison, S. (Ed.), *Research and Research Education in Music Performance and Pedagogy*. Springer Landscape: Arts, aesthetics, and education series. Springer.
- Harrison, S.D. (in press). Examining the music doctorate: Challenges, contradictions and confluence in assessing time-based work. In *Text Special Issue: Examination of*

Doctoral Degrees in Creative Arts.

- Harrison, S. 2013. Finding the balance: Creativity and text-based approaches in research and research training programmes in music. In Burnard, P. (Ed.), *Developing Creativities in Higher Music Education*, London: Routledge. pp. 305-317.
- Harrison, S., Burnard, P., McPherson, G., Westerlund, H., and O'Neill, S. 2013. Preparing the next generation of music researchers: Exploring approaches to research education in tertiary music. *Research in Music Education Conference*, Exeter, UK. 10 April, 2013.
- Harrison, S.D. 2013. Up hill and down dale: Trials and triumphs in research and research training in music education. *British Educational Research Association seminar series*, University of Cambridge. 25 March, 2013.
- Harrison, S.D. 2012. Innovative approaches to practice-centred research supervision in music. *International Society for Music Education conference*, Thessaloniki, Greece. 16 July, 2012.
- Harrison, S.D. 2012. Practice-centred research training in music: An emerging practice in the Conservatoire. *International Society for Music Education Research Commission*, Thessaloniki, Greece. 8 July, 2012.
- Harrison, S.D. 2012. *Music Research Space*: Project Website.
www.musicresearchspace.com.au
- Sabey, P., Harrison, S. and O'Bryan, J. 2013. The role of assessment in preparing students for performance careers: A case study in musical theatre training. *Research in Music Education Conference*, Exeter, UK. 9 April, 2013.
- Stoodley, I. D. and Bruce, C. S. 2009. *Project plan and conceptual framework*.
<http://eprints.gut.edu.au/27945/>

Postgraduate Pathways

- Kiley, M. 2013. *I've done a coursework masters, now I'd like to do a doctorate: can I?* Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/resource-live-done-a-coursework-masters-now-ld-do-doctorate-can-i>
- Kiley, M. 2013. *I've done a coursework masters, now I'd like to do a doctorate: can I?* Project Website. <http://courseworkmasters.anu.edu.au/>
- Kiley, M. 2012. *What are the options for a doctorate after completing my Coursework Masters?* 3rd International Conference on Professional Doctorates (ICPD-3), Florence, Italy: 2 – 3 April, 2012
- Kiley, M. 2012. *Postgraduate Students' Award Choices and University Practices: Room for Alignment?* 10th Quality in Postgraduate Research (QPR) Conference, Adelaide, South Australia: 17 – 20 April, 2012.
- Kiley, M. 2011. *Where are our doctoral candidates coming from and why?* Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-where-are-our-doctoral-candidates-coming-and-why-2010>
- Kiley, M. 2011. The pathway to PhD entry via a coursework masters. *Higher Education and Research Society of Australasia conference (HERDSA)*, Gold Coast.

Kiley, M. 2011. Research projects in taught Masters programs and possible preparation for doctoral entry. *2011 European Association for Research in Learning and Instruction (EARLI) Conference*, Exeter, England: 30 August - 3 September.

Higher Degrees Research: General Issues

Kiley, M. 2012. *Coursework in Australian doctoral education: what's happening, why, and future directions?* Project Website. <http://chelt.anu.edu.au/doctoral-coursework/outcomes>

Luca, J. and T. Wolski. 2013. *Higher Degree Research Training Excellence: A Good Practice Framework*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-best-practice-framework-inform-and-guide-higher-degree-research-training-excellence-australi>

Luca, J. and T. Wolski. 2013. *Good Practice Framework for Research Training*. DDoGs. <http://goo.gl/RXAS1z>

Linguistic and cultural diversity

Gudimetla, P., Yarlagadda, P. K., Sahama, T. R., and Woodman, K. 2010. Assessment of the influence of cultural barriers to HDR supervision of non-English speaking background (NESD) students in engineering and information technology (IT) disciplines. In Butdee, S., Sapsaman, T., and Yarlagadda, P.K. (Eds.) *Proceedings of the 10th Global Congress on Manufacturing and Management - Innovative Design for Sustainability In Manufacturing and Management*, King Mongkut's University of Technology North Bangkok, Thailand, Century Park Hotel, Bangkok: 51-56.

Homewood, J., T. Winchester-Seeto, J. Mackaway, and C. Jacenyik-Trawoger. 2010. *Development and evaluation of resources to enhance skills in higher degree research supervision in a cross-cultural context*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-development-evaluation-resources-macquarie-2007>

Homewood, J., T. Winchester-Seeto, J. Mackaway, and C. Jacenyik-Trawoger. 2010. *Cross cultural supervision project*. Project Website. http://www.mq.edu.au/ltc/altc/cross_cultural_supervision_project/

Nobin, K., J. Frawley, T. Jackson, S. McGinty, F. Watkin-Lui, and N. White. 2013. *Relationships are key: building intercultural capabilities for Indigenous postgraduate coursework students and their teachers*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-keeping-track-teacher-leaders-indigenous-postgraduate-coursework-students-2010>

Nobin, K., J. Frawley, T. Jackson, S. McGinty, F. Watkin-Lui, and N. White. 2013. *Blueprint for Intercultural Capabilities in Relationships are key: building intercultural capabilities for Indigenous postgraduate coursework students and their teachers*. Office for Learning and Teaching: Sydney: 54 – 59. <http://www.olt.gov.au/project-keeping-track-teacher-leaders-indigenous-postgraduate-coursework-students-2010>

- Woodman, K., Trevelyan, J., Sahama, T., Gudimetla, P., Sharda, H., Lucy, T., Taji, A., Narayanaswamy, R., and Yarlagaadda, P. 2011. Chaos or complex systems? Identifying factors influencing the success of international and NESB graduate research students in Engineering and Information Technology Fields. *ICERI2011 Proceedings*, pp. 5359-5366.
- Yarlagaadda, P., K. Woodman, P. Silva, A. Taji, T. Sahama, J. Trevelyan, S. Samani, H. Sharda, R. Narayanaswamy, A. Lucey. 2013. *A model for research supervision of international students in engineering and information technology disciplines*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-holistic-model-research-supervision-international-students-engineering-and-information-techn>

Higher Degrees Research – Examination

- Brien, D., M. Freiman, J. Kroll, J. Webb. 2011. The Australasian Association of Writing Programs 1996–2011 in *New Writing: The International Journal for the Practice and Theory of Creative Writing*. Special Issue: *Making Connections: Creative Writing in the 21st Century*: 238-63
- Kroll, K and J. Webb. 2012. Policies and Practicalities: Examining the Creative Writing Doctorate, *New Writing: The International Journal for the Practice and Theory of Creative Writing*, 9(2): 166-78
- Phillips, M., C. Stock, and K. Vincs. 2009. *Dancing between diversity and consistency: refining assessment in postgraduate degrees in dance*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-dancing-between-diversity-ecu-2006>
- Phillips, M., C. Stock, and K. Vincs. 2009. *Dancing between diversity and consistency: refining assessment in postgraduate degrees in dance*. Booklet. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-dancing-between-diversity-ecu-2006>
- Phillips, M., C. Stock, and K. Vincs. 2009. *Dancing between diversity and consistency*. Project Website. <http://dancingbetweendiversity.com/index.html>
- Webb, J., D. Brien and S. Burr. 2013. *Examination of doctoral degrees in creative arts: process, practice and standards*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-examination-doctoral-degrees-creative-arts-process-practice-and-standards-2010>
- Webb, J., D. Brien and S. Burr. 2013. *A Guide to Examination in the Creative Arts*. Booklet. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-examination-doctoral-degrees-creative-arts-process-practice-and-standards-2010>
- Webb, J., D. Brien and S. Burr. 2013. *Examination of doctoral degrees in creative arts: process, practice and standards*. Project Website. <http://creativdocexams.org.au/> (no longer active)
- Webb, J., D Brien and S Burr. 2011. *Leading the leaders: enhancing the examination of*

creative arts doctoral degrees, in *TEXT Special Issue Leadership in the Creative Arts in the Academy*.

Masters (Coursework) Discipline-specific

- Baillie, A. J., H. Proudfoot, R. Knight, L. Peters, J. Sweller, S. Schwartz and N. A. Pachana. 2011. Teaching methods to complement competencies in reducing the 'junkyard' curriculum in clinical psychology. *Australian Psychologist*. 46 (2): 90-100.
- Colbran, S., and B. Tynan. 2008. *Australian Law Postgraduate Network*. Project Report. Office for Learning and Teaching. <http://www.olt.gov.au/project-australian-law-postgraduate-network-une-2006>
- Colbran, S., and B. Tynan. 2008. *Pathways to Professional Entry Project*. Project Website. <http://www.rmit.edu.au/browse;ID=2cto87x1qf7r>
- Davis, J. 2011. *Curriculum renewal in postgraduate information technology education: a response to the growing service sector dominance*. Project Report. Office for Learning and Teaching. <http://www.olt.gov.au/project-curriculum-renewal-postgraduate-sydney-2008>
- Helmes E. and N. Pachana. 2011. Perspectives on clinical psychology training by students at Australian regional and urban universities. *Australian Psychologist*. 46 (2): 113-119.
- Nätti, S. and J. Ojasalo. 2008. What prevents effective utilisation of customer knowledge in professional B-to-B services? An empirical study. *The Service Industries Journal*, 28 (9): 1199-1213.
- O'Donovan, A., Halford, W. K., and B. Walters. 2011. Towards best practice supervision of clinical psychology trainees. *Australian Psychologist*. 46 (2): 101-112.
- Pachana, N., K. Sofronoff, A. Baillie, K. Halford, E. Helmes, G. Murray, and A. O'Donovan. 2011. *Taking clinical psychology postgraduate training into the next decade: aligning competencies to the curriculum*. Project Report. Office for Learning and Teaching: Sydney. <http://www.olt.gov.au/project-taking-clinical-psychology-postgraduate-ug-2008>
- Pachana, N., K. Sofronoff, A. Baillie, K. Halford, E. Helmes, G. Murray, and A. O'Donovan. 2011. *Australian Learning and Teaching Grant on Psychology Training*. Project Website: <http://www.psy.uq.edu.au/current-students/postgraduate/clin/altc/#>
- Pachana, N., K. Sofronoff, T. Scott and E. Helmes. 2011. Attainment of competencies in clinical psychology training: Ways forward in the Australian context. *Australian Psychologist*, 46 (2): 67-76.
- Pachana, N., A. Baillie, E. Helmes, K. Halford, G. Murray, M. Kyrios, A. O'Donovan, M. O'Brien, S. Schwartz and K. Sofronoff. 2012. *Taking clinical psychology postgraduate training into the next decade: aligning competencies to the curriculum*, Macquarie University Research Online.
- Scott, T., N. Pachana and K. Sofronoff. 2011. Survey of current curriculum practices within Australian postgraduate clinical training programmes: Students' and programme directors' perspectives. *Australian Psychologist*. 46 (2): 77-89.

- Shandley, K., B. Klein, M. Kyrios, D. Austin, L. Ciechomski and G. Murray. 2011. Training postgraduate psychology students to deliver psychological services online. *Australian Psychologist*, 46 (2): 120-125.
- Sofronoff, K., E. Helmes and N. Pachana. 2011. Fitness to Practice in the Profession of Psychology: Should We Assess this During Clinical Training? *Australian Psychologist*, 46 (2): 127-132.
- Zhao, J. L., M. Tanniru and L.-J. Zhang. 2007. Services computing as the foundation of enterprise agility: Overview of recent advances and introduction to the special issue. *Information Systems Frontiers*, 9 (1): 1-8.

Higher Degrees by Research (Discipline Specific)

- Baker, S., B. Buckley, and G. Kett. 2009. *Future Proofing the Creative Arts in Higher Education*. Project Report. Office for Learning and Teaching: Sydney.
<http://www.olt.gov.au/project-futureproofing-creative-arts-melbourne-2007>
- Petkovic, J. 2014. *Developing a collaborative national postgraduate research program for 22 Australian film schools*. Project Report. Office for Learning and Teaching: Sydney.
<http://www.olt.gov.au/project-developing-collaborative-national-postgraduate-research-program-22-australian-film-schools-2>
- Petkovic, J. 2014. *Screen Production and Research Collaboration (SPARC)*. Project Website.
<http://wwwmcc.murdoch.edu.au/nass/altc/projecttwo/news.html>
- Petkovic, J (ed). 2014. Special Issue - Screen Production and Research Collaboration (SPARC): A National Strategic Plan. *Interactive Media E-Journal of the Academy of Screen and Sound*. 10. http://wwwmcc.murdoch.edu.au/nass/nass_current_issue.htm