
4. NOMINATION FORMS

Senior Fellowship Forms

Part A: Nomination Cover Pages

Nominee contact details

Title	Associate Professor
First Name	Angela
Last Name	Brew
Position	Associate Professor
School/Faculty	Faculty of Education and Social Work
Institution	The University of Sydney
Postal address	NSW 2006
Email address	A.Brew@usyd.edu.au
Telephone	02 9351 4820
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Nominee's Declaration

I nominate for a Senior Fellowship and agree to the conditions of the Fellowship.

Signature	Date
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Declaration if it is proposed to convene a collaborative team

I declare that all members of the collaborative team have been contacted and have expressed their willingness to participate in the fellowship activities as described in the proposal.

Signature	Date
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Head of Faculty's/Organisation Unit Support for Nomination and Authorisation

I support this nomination on the basis of the attached application. I undertake to support this nominee in the activities associated with the Carrick Fellowship in accordance with the attached statement of support.

I confirm that the information above is true and correct and that the nominee named on this form is currently a staff member of this institution.

Name

Position

Faculty/Org
unit

Signature Date

Vice-Chancellor's / Chief Executive Officer's Declaration

On behalf of this institution, I support this nomination on the basis of the attached application. This institution undertakes to support this nominee in activities associated with the Carrick Fellowship in accordance with the attached statement of support.

Name

Institution

Signature Date

Part B: Statement of institutional support

(The statement from the home institution should endorse the proposed program of activities and outline the direct and indirect support that will be given to the fellowship. Similar statements of support are required from all participating institutions if the proposed fellowship activities involve institutions other than the nominee's home institution.)

Part C: Description of proposed fellowship activities (8 pages maximum)

1 Title of Fellowship Program

Enhancing undergraduate engagement through research and inquiry

2 Brief Summary of project (150 words maximum)

Engaging undergraduate students in research and inquiry, develops important graduate attributes, engages students meaningfully in higher education and prepares them for a twenty-first century world of work in which knowing how to inquire and critically evaluate knowledge is of increasing importance. This Fellowship is designed to bring together a team of international experts and leading Australian collaborators to foster student engagement through *developing and sharing protocols for good practice* in engaging undergraduate students in research and inquiry in different disciplines. It will bring international scholars and practitioners to Australia to provide opportunities for academics and senior personnel to *consider mechanisms to support strategic change* in engaging undergraduates in inquiry and to *initiate and contribute to strategically important policy debates*. It will heighten awareness of critical issues through providing an overview of current practice and funding opportunities and exploring implications for learning and teaching in the future.

3 Educational issue(s) to be addressed

What must higher education do to prepare students for the complex and challenging decisions that they are likely to encounter throughout their lives? An improved understanding of how students learn in higher education has shifted attention away from the lecture course as the predominant form of university teaching to more diverse and active course offerings. However, there is still a mismatch between the kind of education being provided and the kind of outcomes for students that universities need to produce. Students need not simply to be able to use existing knowledge however cutting edge it may be. In the work of organisations everywhere knowledge is now produced as a normal part of contemporary activity. Higher education needs to teach all students, not just research students, to engage as much in the production of knowledge as in its acquisition.

Students now live in a fast-paced world; a world of video, TV and radio on demand wherever and whenever it is wanted. If students want to know something they have instant access to chaotic and unplanned knowledge through the internet. This challenges who are the students and who the teachers because students are free to decide what knowledge they want and they are free to contribute to it through 'wikis' (e.g. 'Wikipedia').

Many higher education courses question the instant gratification of knowledge through the internet. They demand that students engage in sustained study, acquire a defined set of learning outcomes, and learn a relatively orderly and organised body of knowledge.

Moves to evidence-based teaching and learning including problem based learning, and increasing development and use of research-based curricula are indications of a move towards research-based teaching in Australian higher education. Yet universities need to go further in preparing students for the complex and challenging world that they will face as professionals. The demands of today's society require higher education to open up to creative solutions, to the generation and acquisition of new kinds of knowledge; to new kinds of thinking. 'What is required' says Ron Barnett (1997, p. 110), 'is not that students become masters of bodies of thought, but that they are enabled to begin to experience the space and challenge of open, critical inquiry (in all its personal and interpersonal aspects)'. This is not just for those who choose to pursue an academic career. Today's society demands resourcefulness and creativity and the ability to deal with complexity, with uncertainty. We need new ways to engage students in the joy and excitement of learning to meet this agenda. In the UK some of the UK government funded Centres for Excellence in Teaching and Learning (CETLs) are experimenting with new kinds of teaching spaces and new ways to engage students in a variety of inquiry-based learning initiatives. The Fellowship draws on the international expertise of three directors of CETLs to enhance debates on these issues within Australia.

There is mounting evidence of the value of undergraduate research and inquiry in meeting these challenges; in developing in students the ability to investigate problems, to critically

evaluate knowledge, to make rational judgments in the light of good evidence; evidence that they perhaps gather, to understand and reflect on what they are doing and why (Blackmore & Cousin, 2003; Healey, 2005, Levy & Petrulis, 2007; Seymour, Hunter, Laursen & Deantoni, 2004; Hunter, Laursen & Seymour, 2006). These are the skills of research and inquiry. Research and inquiry are central to Barnett's (2000) 'super-complex' society. They are central to contemporary professional life as well as to the development of capabilities associated with participation and justice in a democratic society.

In my book *Research and Teaching: Beyond the divide*, I have developed a model of higher education where the integration of research and teaching develops through scholarly knowledge-building communities with academics and students at all levels working together in inquiry and learning partnerships (Brew 2006). Central to this are new ideas about an inquiry-centred undergraduate student experience and how to nurture and foster it. The vision addresses the needs within the Australian workforce for critical creative thinkers; people who can solve problems that we currently cannot contemplate; for skills and abilities to gather and evaluate evidence; in short, the skills of inquiry.

Many students are now being encouraged to engage in 'research tasters' such as carrying out research for an assessment, or exploring how academic teachers generate research in a particular discipline (Brew 2006 p. 70). Some forms of undergraduate research and inquiry focus on students solving predetermined problems, developing knowledge which is new for them, but which is well known by experts in the subject. Other forms involve students in developing new knowledge where they may work on unforeseen, open-ended problems alongside experts. If students are to be encouraged to develop the ability to deal with the complexity and ambiguity of knowledge generation, then it is this kind of research and inquiry that they must increasingly be engaged in. Academics typically learn through a process of engaging in collaborative research groups and through peer review (Brew & Boud, 1995). Involving undergraduates in such processes can only enhance their learning and engagement in study.

Currently a number of structural and attitudinal barriers work against the inclusion of undergraduate students in research as it is currently defined in universities. These include hierarchical organisational structures and values conflicts that define undergraduate students as 'other', ways in which power operates to preserve research for the elite, including the higher year students and postgraduates; as if it were a kind of reward for hard work and thus excluding most undergraduates. If students are to engage in learning through research and inquiry, there is a need to explore and discuss within university departments, attitudes that support and sustain particular views of research and teaching and views of students and what they are capable of. Fundamental to these issues are the ways academics and students relate to each other. Indeed, there is variation in the extent to which students consider themselves part of the research community. Robertson & Blackler's (2006) study shows disciplinary differences in this regard. Students who become research associates when engaged in undergraduate research schemes are reported to feel part of the research community. They are treated as junior colleagues rather than just 'students' engaged in courses. Their relationship with academics changes to a more inclusive one (Blackmore & Cousin, 2003; Seymour, *et al.* 2004). However, many undergraduate students typically find themselves alienated from the research culture (Lindsay, Breen, & Jenkins, 2002).

This raises the question as to whether undergraduate students can or should become part of the community of researchers and scholars in the university. There are many different views on this. The National Science Foundation in the US, for example, views undergraduate research as a vital part of the nation's research effort (National Science Foundation 2001). Some Canadian research councils also fund undergraduate research to this end and in the UK the government has invested some 40 million pounds to develop 'research-informed teaching'. Engaging undergraduate students in research is seen not only to benefit student learning, but also to benefit universities' research efforts and staff engagement.

Some of the factors that discourage the engagement of students in research within universities are structural. For example, committee and performance management structures that separate considerations of teaching and research, restrictive definitions of research as well as ideas about who is capable of doing it, and how research is evaluated (Colbeck, 1998). In addition, there are systemic and policy structures that work against the integration of undergraduates into research and inquiry which go beyond individual universities. Key aspects are the attitudes and objectives

of research funding bodies. In contrast to the US where undergraduate research is an accepted part of the national research effort, there is a need for national debates about the role of undergraduate research in the Australian research funding system. The Fellowship will provide opportunities for academics and academic managers to examine policy and practice in terms of the need to set as goals the interrelationship of students as participating scholars and to break down barriers to this. International experts will contribute valuable ideas and experiences to enhance these debates.

If we are serious about engaging students in research and inquiry, as I have argued we must be if we are to meet the needs of students for professional life in the twenty-first century, we need mechanisms and opportunities where the assumptions of academics, academic managers and policy-makers about what students are and are not capable of can be challenged. We also need ideas, models resources and protocols which assist in developing pedagogical practices that structure knowledge and learning in new ways; and we need to discuss and debate new ideas about who should do research and who should not, about how teaching and research should be organised, about the kinds of learning support and resources that should be provided for students, and about how spaces are used.

It is relatively easy to establish the desirability of enhancing students' engagement by involving them in various forms of research and inquiry, but the establishment of mechanisms for them to do so are less easily developed. There are now in existence, in publications and websites, many case studies of good practice. I have myself collected numerous examples where students are learning disciplinary knowledge and/or are engaged in exploring the nature of knowledge and how it is generated in a disciplinary area, developing generic graduate attributes such as communication and teamwork skills and skills of critical analysis through engaging in inquiry, where they are doing research to learn about research, collaborating in inquiry projects or problem based learning, carrying out interdisciplinary inquiry projects for real clients, mirroring the social practices of research such as participation in undergraduate student conferences, and involving students in communities of researchers, as well as participating in undergraduate research schemes. These examples are detailed in *Research and Teaching: Beyond the Divide* and on my website at: <http://www.itl.usyd.edu.au/rlt>. (for other examples see <http://www2.warwick.ac.uk/fac/soc/sociology/research/cetl/ugresearch/>).

Case studies provide ideas about what to develop, but not how to develop initiatives and policies. My experience in developing research-enhanced learning and teaching in Australia and overseas suggests that what is needed, and what this Fellowship will provide, are various kinds of models, strategies, protocols and artifacts which show how undergraduate research and inquiry have been and can be implemented; which provide practical guidance to bridge the gap between existing practice and inquiry-based practice in courses; which ease the transition of academics, academic managers and policy-makers to a more research and inquiry based higher education.

4 Activities

The Program builds upon, integrates and extends work conducted for my book: *Research and Teaching: Beyond the Divide*; several UK projects on related themes I have been associated with over a number of years; and new and existing projects in a variety of disciplines including existing Carrick funded projects being carried out by members of the team.

Stage 1: Identification of needs, existing practice and available resources

There are four key activities in Stage 1:

1. Activity will initially be focused on building the National Team. This will be done by drawing them together for a meeting. The team will collaborate to share ideas and identify existing projects and resources needed to make a real difference in student engagement in research and inquiry across the Australian higher education system and facilitate buy-in by academics. Stage 1 will begin to identify gaps. The ultimate aim will be to develop facilitative models, strategies, protocols and resources for a range of activities including for example: developing of subjects and curricula including establishing inquiry-based units and courses; developing unit of study outlines; dealing with ethical issues that may arise; implementing inquiry-based assessment; finding/providing funding opportunities for undergraduate research; setting up community-based undergraduate research projects; establishing undergraduate research vacation schemes; establishing administrative arrangements for engaging students in various forms of research and inquiry; providing strategies, structures and resources to facilitate the engagement of academics
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in providing research-based opportunities for students. Resources may be in the form of models of implementation, successful strategies that have been tried and evaluated, templates, lists of do's and don'ts, advice about critical incidents in implementation, key questions to ask when implementing a particular strategy, identification of necessary administrative arrangements, likely barriers to implementation and how they have been surmounted etc.

2. Consistent with the aims of the Fellowship, two undergraduate research projects will be carried out in Stage 1. These will build on the ideas brought forward by the national team to a) carry out a survey of existing practice in Undergraduate Research Scholarship Schemes in Australia and b) identify sources of funding used for student stipends in such schemes. See Healey & Jenkins (2007) for similar surveys.)
3. An Extended Network of contacts will be identified through these processes and through networks of the National Team.

Stage 2: Study tour

Having identified the needs and requirements for models, strategies, protocols and resources, I will then undertake a study tour overseas to identify further resources that can be drawn upon to meet the national needs. This will involve visiting International Experts. UK members of the international team are also members of a wider *Teaching and Research Group* which meets periodically in the UK, and with which I have been associated over a number of years, so I will expect also to draw on the experience and expertise of this wider group. Indeed, through my association with a number of Higher Education Academy (HEA) and Higher Education Funding Council for England (HEFCE) projects and centres and other organisations working to develop aspects of undergraduate research and the integration of research and teaching (see CV for details), I will be able to draw on the expertise of a wide network of scholars and practitioners in different disciplines working in this field.

During preparation for my book I began to investigate undergraduate research projects and talk to students engaged in such projects in the UK. During this study tour I will build on this work by visiting key institutions in the US. Specifically, I will visit Professor Elaine Seymour and her research group at the University of Colorado USA, who have engaged in and published fundamental research to establish the benefits of undergraduate research. My study tour will include visiting universities and projects in North America where undergraduate research and community engaged inquiry are practiced. Involvement of the US Council for Undergraduate Research through its Executive Director, Professor Nancy Hensel and the National Science Foundation through its Director, Division of Undergraduate Education, Professor Linda Slakey, on the International team provide further important contacts.

Stage 3: Consolidate and build resources

Having collected a range of models, resources, potential and actual protocols, ideas and suggestions during the study tour, a period of time spent in Sydney will enable me to consolidate and adapt resources for use in the Australian context. In Stage 3, the resources will then be trialed by the National Team and the Extended Network. I will liaise with the Carrick Institute ensuring that this work dovetails with other Carrick projects. This stage will also see the establishment of a website (linked into the Carrick Exchange) and resources prepared for dissemination.

Stage 4: Regional Roundtables

Having developed resource, an intense period of dissemination and national engagement will follow. This will be achieved initially through a series of Regional Roundtables. These will bring together on a State-wide basis, members of the National Team, the Extended network, and Associate Deans (Teaching and Learning). The resources will be available at the Regional Roundtables for viewing and trial. They will provide the stimulus for discussion and debate with the aim of bringing about attitudinal and cultural shifts among academics and academic leaders and managers about involving undergraduates in research and inquiry. It is intended that the Regional Roundtables would be accompanied by media coverage so as to ensure the beginnings of widespread debates across Australia.

Stage 5: Australian Summit on Linking Research and Teaching

The Fellowship will culminate with the First Australian Summit on the Integration of Research and Teaching. This will bring together senior academic managers specifically Pro/Deputy-Vice Chancellors (Learning and Teaching) and Pro/Deputy-Vice Chancellors (Research). At national

levels, it is imperative that research councils take seriously the potential contribution to each university's research effort of undergraduate students. This is evident in the work of the National Science Foundation in the US (International Experts will include Professor Slakey, Director of the Division of Undergraduate Education, National Science Foundation) but it is by no means universal and, in Australia it is by no means accepted practice. So the Summit will involve members of national research funding bodies, DEST officials, the National Team and the International Experts who will provide keynote addresses. As such it will follow the pattern of the Canadian Summits on the Integration of Research and Teaching held in 2004 and 2006.

The undergraduate student experience and specifically the undergraduate experience of research and inquiry is key to the integration of research and teaching more generally, but is considered achievable in the context of the Fellowship. The summit will provide opportunities for sector-wide debates about the integration of research and teaching and the role of undergraduate research and inquiry in this. It is anticipated that one of the outcomes of the Summit is the setting up of a high level Steering Group to progress the idea of establishing a National Centre for the Integration of Research Teaching and Learning to take forward this work into the future.

Collaborators

A National and International team of expert collaborators has been assembled for the Program. There will in addition be an Extended Team identified during the Program who will be involved in suggesting and trialling resources, models and protocols and contributing to Roundtables. All of the named collaborators have contributed to the preparation of this proposal.

National team

A National Team of academics who are involved in projects to develop undergraduate student engagement in research and inquiry has been assembled to progress the project. These come from different types of institution and have been chosen to represent a range of disciplinary expertise. It is anticipated that the team will provide a bridge between the Fellowship and other related projects led by team members, some of which are funded by Carrick. The team consists of:

- Professor Sally Kift, is a Carrick Senior Fellow, Professor of Law and Director of the First Year Experience Project, Queensland University of Technology. She will explore how engaging undergraduate students in research and inquiry might be harnessed to enhance the first year student experience.
- Professor Kerri-Lee Krause is Director of the Griffith Institute for Higher Education. She is leading several funded projects on linking teaching and research. Kerri-Lee will contribute to the development and trialling of resources, models and protocols and will draw on her current Carrick funded project on the teaching research nexus to provide resources.
- Professor Mike McManus is Executive Dean of the Faculty of Biological and Chemical Sciences at the University of Queensland, He has been responsible for leading an inquiry-based undergraduate science program. He will bring to the project his extensive expertise and interest in the improvement of science education.
- Dr Susan Mayson, is Senior Lecturer in the Faculty of Business & Economics, Monash University where she is recognised for her research and policy development on research-led teaching. She will work to gather evidence and cases to inform the development of protocols for good practice in business studies disciplines.
- Dr Denise Wood, is Senior Lecturer and Program Director (Media Arts) School of Communication, University of South Australia. She is actively involved in implementing courses that engage students in research and inquiry in media arts subjects. She will contribute to the establishment of fora for the discussion of policy implications as well as research relating to the enhancement of student engagement in an inquiry based curriculum.
- Professor Brian Yates, is Head of the School of Chemistry, University of Tasmania. He brings to the project extensive experience in fostering student engagement through establishing an undergraduate research journal.

International experts

A specialist group of International Experts with demonstrated achievements in encouraging the integration of research and teaching and/or implementing undergraduate research through their

research and scholarship and/or practice has also been assembled. They are:

- Professor Nancy Hensel, Executive Director for the Council on Undergraduate Research, USA. She will draw on her extensive network of contacts through the Council, to provide contacts and places to visit within the USA. She will also provide a link to key US bodies responsible for funding undergraduate research.
- Professor Mick Healey, is Director of the Centre for Active Learning (CeAL), a Centre for Excellence in Teaching and Learning (CETL) at Gloucestershire University, UK and Vice President (Europe) of the International Society for the Scholarship of Teaching and Learning. He will be an invaluable source of information as to whom to visit drawn from his research on undergraduate research in the UK and large number of case studies he has collected from around the world.
- Dr Philippa Levy, is Director of the Centre for Inquiry-Based Learning in Arts and Social Sciences (CILASS), a CETL at Sheffield University. An expert in information literacy, Dr Levy will bring to the project her expertise in implementing inquiry-based learning within a research-intensive university. The CILASS evaluation strategy is to be used for evaluating this Fellowship and Dr Levy has agreed to provide consultancy for this.
- Professor Mike Neary, is Dean of Teaching and Learning at Lincoln University, UK. A sociologist, Mike brings to the project his experience at the University of Warwick in establishing one of the first Centres for Excellence (CETLs) in developing undergraduate Research in the UK.
- Professor Elaine Seymour, Director Emerita of Ethnography & Evaluation Research at the University of Colorado at Boulder, USA. She and her team have carried out the first in-depth research to establish the benefits, costs, and processes of undergraduate research in the USA. She will assist with providing contacts including from key US bodies responsible for funding undergraduate research and suggesting places to visit.
- Professor Linda Slakey, Director, Division of Undergraduate Education, National Science Foundation, USA will provide important input to discussions of funding undergraduate research.

5 Intended outcomes

The overall aim of the project is to enhance student engagement in learning through supporting the development in Australia of undergraduate research and inquiry. To do this it will:

1. Identify national needs in terms of moving forward practice in engaging undergraduate students in research and inquiry.
2. Establish and trial a set of readily available resources and protocols designed to bridge gaps between current and future practice, and disseminate these through a website and Regional Roundtable discussions.
3. Enhance debates concerning engagement of undergraduate students in research and inquiry by bringing together academics, academic managers, and policy makers with international and national experts.
4. Provide the foundation for the establishment of a national centre for the integration of research, teaching and learning.

Specific deliverables are:

1. A set of practical resources (models, strategies, protocols for action) that have been trialed in different institutions available in hard copy and online that facilitate Australian academics, course teams, schools and faculties, and institutions in implementing undergraduate research schemes and integrating research and inquiry within undergraduate curricula.
 2. Reports on the current state of undergraduate research schemes in Australia, and sources of funding Australia-wide. The reports will be the result of supervised undergraduate research.
 3. Five Regional Roundtables where Pro-Vice Chancellors Teaching and Learning and Research discuss with experts, issues related to undergraduate research and its implementation and are introduced to the practical resources for implementation.
 4. A National Summit on the Integration of Research and Teaching bringing together national and International Experts and leaders and managers of Australian institutions.
 5. A web site on enhancing student engagement through undergraduate research and inquiry
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linked to the Carrick Exchange.

6.A progress report and an overall project report.

Carrick Objectives

The project will contribute to the objectives of the Carrick Institute in the following ways:

- a. *Promote and support strategic change in higher education institutions for the enhancement of learning and teaching, including curriculum development and assessment* by providing opportunities for the exchange of ideas, resources and expertise in engaging students in research and inquiry within curricula;
- b. *Raise the profile and encourage recognition of the fundamental importance of teaching in higher education institutions and in the general community* by initiating and supporting debates about the role of research in students' learning and the ways in which that can be supported regionally and nationally;
- c. *Foster and acknowledge excellent teaching in higher education* by building on excellent work already being carried out in relation to the integration of research and teaching in Australian universities (some through existing Carrick projects);
- d. *Develop effective mechanisms for the identification, development, dissemination and embedding of good individual and institutional practice in learning and teaching in Australian higher education* through the establishment of a set of resources and protocols to develop practice in ways to engage undergraduate students in the joy of learning through inquiry;
- e. *Develop and support reciprocal national and international arrangements for the purpose of sharing and benchmarking learning and teaching processes* through the involvement of national and international experts in the integration of research and teaching; and
- f. *Identify learning and teaching issues that impact on the Australian higher education system and facilitate national approaches to address these and other emerging issues* through a series of Regional Roundtables and an Australian Summit on the integration of Research and Teaching and the continuation of debates in the proposed National Centre for the Integration of Research, Teaching and Learning.

6 Strategy for profile-building and dissemination

There is a sense in which, consistent with the Carrick dissemination framework, this whole Program is a strategy for profile-building and dissemination. Stages 1 & 2 are designed to embed models resources and strategies within institutions through trials within different disciplines. Stages 4 and 5 are designed to foster national debate concerning policies and practices in engaging undergraduates in research and inquiry. It is anticipated that these debates will go beyond the duration of the Fellowship and will, with the aid of the models, protocols and resources developed, contribute to ongoing dissemination and discussion. It is anticipated that this will be facilitated through the Establishment of a National Centre for the Integration of Research, Teaching and Learning (NCIRTL). This will take the work forward into the future and the groundwork for such a centre will be laid during the Fellowship including establishing a high level Steering Group to take this idea forward. It will provide a focus for the ongoing sharing of developments and resources in the integration of research, teaching and learning which will, in turn, add value, to current and future funded projects in this important field.

During the period of the Fellowship, the work of the collaborating groups and the development of resources and protocols will be the subject of conference presentations at the Higher Education Research and Development Society of Australasia (HERDSA) national conference, as well as disciplinary-based education conferences. The work will also be presented overseas at the International Improving Student Learning Symposium (UK). It is anticipated that two articles for international refereed journals such as *Studies in Higher Education* and *Teaching in Higher Education* will also provide vehicles for dissemination as will articles in *Campus Review* and the *Times Higher*.

The artifacts produced, such as the models, strategies and protocols will be disseminated on the Program website linked to the Carrick Exchange and made available in print form. They may constitute a folder representing a "Manual" for practitioners that could be widely distributed to Australian universities. The final report will also be available for widespread distribution.

7 Evaluation method

The evaluation strategy to be used for this program is an adaptation of the ‘Theories of change’ approach to evaluation developed in the Centre for Inquiry-based Learning in Arts and Social Sciences (CILASS) at the University of Sheffield. The involvement of the Centre’s Director, Dr Philippa Levy, in the International Team, will provide a link to the experiences of evaluating that Centre’s work. This evaluation approach blends evaluation of impact (i.e. outcomes) with practitioner-led scholarship and pedagogical research (i.e. processes) in order on the one hand to meet accountability requirements, and on the other to feed into academic and curriculum development. Inquiry is central to these activities, as it is to this Fellowship Program overall. The CILASS approach to evaluation develops the Theories of Change (ToC) approach to facilitate practitioner-led and community-focused critical reflection on practice at a number of different levels (CILASS 2007). The evaluation, by its very nature will take place throughout the Program, commencing with the establishment of a ‘theory of change’ framework and detailed evaluation plan for the Program at an early stage.

8 Timeline

Time period	Stage	Activity
July- August 2008	Stage 1	<i>Bring together national team to identify existing protocols and resources. Identify gaps that need to be filled.</i>
September – December	Stage 2	<i>Implement two undergraduate research projects.</i> <i>Carry out overseas study tour to identify new resources and protocols to meet the identified needs. Document approaches that impact on practice.</i> <i>Present paper at Student Learning Symposium, UK.</i> <i>National team to review additional resources in the light of identified needs.</i>
Jan-March 2009	Stage 3	<i>Work to adapt and prepare protocols, establish website and publications (booklets, leaflets) for dissemination. Interim report.</i>
April – May 2009	Stage 4	<i>Series of Regional Roundtables to disseminate resources and discuss policy issues.</i>
June 2009	Stage 5	<i>Australian Summit on the Integration of Research and Teaching</i> <i>Establish National Centre Steering Group to carry ideas beyond the Fellowship</i> <i>Documentation of outcomes</i>
July 2009		<i>Debriefing and planning with the Carrick Institute</i> <i>Presentation of conference paper at HERDSA Conference</i>
August 2009	Stage 6	<i>Final evaluation</i> <i>Preparation of “Manual” of resources and protocols, journal articles & report</i>

9 Other academic duties that will be undertaken during the period of the fellowship.

Other academic duties will be minimised during the period of the Fellowship. There will be doctoral student supervision of two candidates, and ongoing research on preparation for an ARC Discovery Project.

Part D: Brief outline addressing the selection criteria (1 page maximum)

In particular, provide a description of leadership roles that demonstrate record of leadership and influence in higher education/discipline

the standing and academic record of the nominee, etc.

I am one of the most highly cited Australians in regard to publications on the relationship between research and teaching. This work has involved extensive collaboration with academics in a range of disciplines in Australia, the UK, USA, Canada, Sweden, Belgium and the Netherlands. Publications on the relationship between research and teaching and the scholarship of teaching include three books published by international commercial publishers, six papers in international refereed journals and five chapters in books. My books have received positive critical reviews. I am co-editor of the *International Journal for Academic Development*, the key international journal in the field of academic development and have been invited to serve on the editorial board of three international peer reviewed journals, one from the UK, and two from the USA.

the nominee's record of leadership etc.

I have nine years' experience as Director or Acting Director of educational development units and 7 years' experience as Director of the University of Sydney Strategic Project on Research-enhanced learning and teaching. I have been recognised as a leader in the field of research and development in higher education by being elected President of the Higher Education Research and Development Society of Australasia. In this capacity, I made a major contribution to developing the professionalism of teachers and teaching in higher education when I established the HERDSA Recognition and Development Scheme.

the extent of the nominee's international recognition;

I have presented my work in a number of keynote addresses in major international conferences and have recently been invited to present keynote addresses at higher education conferences in Thailand and in South Africa. I have given invited and funded seminars or workshops at many Australian and overseas universities (including: UBC, Queen's and Alberta, Canada; Linköping University, Sweden; Edinburgh, Imperial College, Oxford, Sheffield and UCL, UK).

In recognition of my work in this field I have become consultant to the Scottish Quality Assurance Agency, and two Centres for Excellence in Teaching & Learning in the UK (the Reinvention Centre for Undergraduate Research, and the Centre for Inquiry-based Learning in the Arts & Social Sciences). I provided advice to the Director of Learning and Teaching in the UK's Higher Education Funding Council for England which resulted in £40 million of government money being allocated to research-informed teaching initiatives. My achievements and influence in higher education has been acknowledged by recently being made a Fellow of the Society for Research into Higher Education.

the nominee's record of achievement as an educator in higher education, etc.

An example of my achievements as an educator in higher education is my leadership of an online Research Higher Degree Supervision Development Program. I established and directed this internationally recognised program of supervision development that engages research higher degree supervisors in critically reflecting on their practice. The pioneering module I developed which requires supervisors to demonstrate that they have improved their supervision, is the only known example of the assessment of supervisors' training in the world. The Program was nominated by the University of Sydney for an Australian Award for University Teaching and has now been made mandatory for new supervisors. Engagement in the program has demonstrably contributed to improvements in supervision throughout the university. Another large research-intensive university in Australia is now running a generic version of this program under commercial licence.

An example of my standing and reputation as an educator is demonstrated in the invitation by Professor Olive Yonge, *Vice Provost (Academic Programs)* University of Alberta to assist with integrating research and teaching. I held high level meetings, gave presentations and contributed to curriculum meetings in many different disciplines.

the relevance of the nominee's curriculum vitae to the proposed activities;

The Fellowship activities build naturally on my work. I have published a book on the topic and have been invited to be a member of numerous related projects nationally and internationally (see cv for details). I have presented numerous seminars on the topic of the Fellowship and am recognised as a leading authority in this field.

Part E: Budget and justification

The total budget, exclusive of GST, should not exceed \$330 000

Budget item	Amount
1 Senior Fellow Stipend (maximum \$160 000)	155,480
2 Travel to the Carrick Institute (maximum \$5 000)	000
3 Support for home institution (\$25 000) (The institution can determine how this money is allocated, you may wish to come to some agreement)	25,000
4 Overseas study expenses (maximum \$36 000) <i>Airfares and accommodation</i>	35,739
5 Expenses for collaborative team's attendance at seminar (maximum \$34 000) <i>Initial meeting of National Team in Sydney (\$4769)</i> <i>Regional Roundtables in Adelaide, Brisbane, Melbourne & Tasmania (\$2800)</i> <i>Regional Roundtable in Perth (\$1600)</i> <i>International Experts Attendance At Summit in Sydney (\$13959)</i> <i>National Team attendance at Summit (\$3600)</i>	26,728
6 Fellowship activity development support and infrastructure (maximum \$66 000) <i>Administrative support and project management (\$27886)</i> <i>Website development (\$4000)</i> <i>2 Undergraduate student stipends (\$2400)</i> <i>Domestic travel (\$11896)</i> <i>Cost Of Summit (\$12200)</i> <i>Conference attendance, public lectures and other travel (\$5000)</i>	63,382
7 Evaluation expenses (maximum \$4 000)	4,000
8 TOTAL BUDGET (exclusive of GST)	310,329

Part E: Budget and justification

Senior Fellow Stipend

I receive a salary at the top of the Associate Professor scale with a salary loading. My substantive salary with on-costs of 28% has been allowed for.

Carrick Institute residency period and other domestic travel

There is no cost in visiting the Carrick Institute because I live within walking distance.

Overseas study expenses

London/Belgium/Vancouver/Edmonton/Washington/Colorado (Qantas Round the world airfare at Jan 2008 prices = \$4,519). Internal travel within countries – rail, taxis etc. \$1500.

Accommodation and expenses for Europe and USA for 2-3 months as follows:

Glasgow and Cheltenham. Accommodation, \$200 per day 5 days (= \$1000), meals & incidentals (\$260 x 5 = \$1300) in each location (Total = \$2300)

London, Leuven, Edmonton, Washington, Colorado. Accommodation, \$200 per day 10 days (= \$2000), meals & incidentals (\$260 x 10) = \$2600) in each of the five locations (Total = \$18200).

Based on per diem rates from the ATO rates for 05-06 daily expense allowances.

Expenses For Collaborative Team's Attendance At Seminar

Initial meeting of National team in Sydney. Airfares to Sydney from: Brisbane (3 @ \$180 = \$540); Tasmania (1 @ \$246); Adelaide (1 @ \$211); Melbourne (1 @ \$172). All fares Qantas supersaver valid Jan 2008. Total = \$1169. One night's accommodation (\$200 x 6 = \$1200) and expenses for 6 people for 2 days each (\$2400).

Regional Roundtables in Adelaide, Brisbane, Melbourne & Tasmania. Each with the local person plus one other team member. Airfares (\$200), accommodation for 1 person (\$200) and expenses for 2 people (\$300) (Total = \$700 each roundtable).

Regional Roundtable in Perth with two members of the team. Therefore airfares (2 x \$400), accommodation (\$400) and expenses (\$400) for 2 people (Total = \$1600).

International Team Attendance At Summit in Sydney. Airfares: From USA (3 @ AU\$2223 = AU\$6669; From UK (3 @ AU\$2353 = AU\$7059. Three nights accommodation (200 Per Night For 6 People = 3600) And Expenses (\$205 X 3 Days For 6 People = \$3690) (Total = \$13959).

National team attendance at summit. Airfares from: Brisbane (3 @ \$180 = \$540); Tasmania (1 @ \$246); Adelaide (1 @ \$211); Melbourne (1 @ \$172). Total = \$1169. Two nights accommodation (\$400 x 6 = \$1200) and expenses for 6 people for 3 days each (\$3600).

Fellowship activity development support and infrastructure

Administrative support and project management, including preparing material for the website, organising travel and meetings, coordination of team members etc. The equivalent of three days per week for 35 weeks HEO level 5 step 3, University of Sydney rate of \$37.94 per hour (including on-costs) (total = \$27,886).

Website development. Approximately 60 hours of web development at \$65 per hour (total = \$4000)

2 Undergraduate student stipends to carry out investigations. Two tax-free stipends of \$200 per week for a total of 6 weeks each is requested (total = \$2400). This is consistent with undergraduate research stipends in the University of Sydney Faculty of Health.

Domestic travel assumes (1) one visit to National Team members in their institutions, (2) two visits to each of the cities where the Regional Roundtables will take place, to set up and conduct the events (3) Participation of the Carrick Project in two national/disciplinary conferences. Costs based on University of Sydney figures.

Melbourne – 3 visits, total of 6 days. Airfares (3 x \$172) \$516; Accom & expenses (6 x 365) \$2190.

Brisbane - 3 visits, total of 6 days. Airfares (3 x \$180) \$540; Accom & expenses (6 x 376)

\$2256. *Adelaide* - 3 visits, total of 6 days. Airfares (3 x \$211) \$633; Accom & expenses (6 x 350)

\$2100. *Tasmania* - 3 visits, total of 6 days. Airfares (3 x \$246) \$738; Accom & expenses (6 x 365) \$2190.

Perth - 2 visits, total of 8 days. Airfares (2 x \$726) \$1452; Accom & expenses (8 x 395) \$3160.

Cost Of Summit. Catering 120 people at \$60 per head (\$7200). Room hire, publicity, AV and other costs (\$5000)

Conference fees for two conferences in Australia and two overseas (\$2000), public lectures and other visits (\$3000)

Evaluation expenses

\$2000 stipend and expenses for consultant evaluator (Dr P Levy), \$2000 stipend and expenses for two summative evaluators (total= 4000).

Part F: Members of collaborative team

(Please provide a list of any proposed collaborators, including overseas people. Accompanying the list should be a short curriculum vitae of no more than one half page for each individual, which includes their name, title, current affiliation and a brief summary of their expertise, achievements and activities relevant to the proposed fellowship activities.)

International experts

Name: Professor Mick Healey

Current affiliation: University of Gloucestershire, UK

Mick Healey is Director of the Centre for Active Learning (CeAL), a Centre for Excellence in Teaching and Learning, at the University of Gloucestershire. He is Regional Vice-President (Europe) of the International Society for the Scholarship of Teaching and Learning; and Senior Advisor to The Higher Education Academy's Subject Centre for Geography, Earth and Environmental Sciences.

In 2000 he was awarded a National Teaching Fellowship. He has twice been awarded the *Journal of Geography in Higher Education* Biennial Award for Promoting Excellence in Teaching and Learning. In 2004 the Council of the Royal Geographical Society conferred on him the Taylor and Francis Award for 'contributions to the promotion of learning and teaching in higher education'. In 2007 he was one of the first 14 people to be awarded a Senior Fellowship of the Higher Education Academy.

Mick has given over 250 educational presentations in 13 countries and has written and edited over 100 papers, chapters, books and guides on various aspects of teaching and learning in higher education. Linking research and teaching is one of his main interests. He is currently working on projects on this topic for the Higher Education Funding Council for England (HEFCE), the Higher Education Academy, and the Carnegie Academy. He is Director of a National Teaching Fellowship Project on 'Leading, promoting and supporting undergraduate research in the new university sector'. He has advised many universities and national bodies on research-teaching links, including HEFCE, Quality Assurance Agency for Scotland and the Irish and Canadian governments. In 2006 he was visiting HERDSA (New Zealand) Fellow. He is familiar with higher education in Australia. He has been visiting fellow/advisor at four universities and made 20 presentations at universities in Australia. He has also advised two Carrick funded projects and has been invited to be the keynote speaker in Australia at the launches of the Academic's and Policy-Makers's Guides to the Teaching-research Nexus.

Name: Professor Nancy H. Hensel

Current affiliation: Council on Undergraduate Research, USA

Nancy Hensel is Executive Officer, Council on Undergraduate Research. The mission of the Council on Undergraduate Research is to support and promote high-quality undergraduate student-faculty collaborative research and scholarship. Members include nearly 3,000 individuals and 553 colleges and universities. Nancy was formerly President of the University of Maine at Presque Isle, 1999-2004 and before that held positions as Provost and Vice President for Academic Affairs, and Dean, College of Education, Health, and Rehabilitation, University of Maine at Farmington. Professor Hensel has held numerous research grants including a National Science Foundation grant entitled *Two-Year Technician Education and Transfer Programs, Tapping the Potential of Undergraduate Research* and another collaborative Workshop Initiative by the Council on Undergraduate Research to Establish, Enhance and Institutionalize Undergraduate Research. Other grants include work to support research-active biology academics, planning successful science research programs at historically black colleges and universities, increasing the Involvement of Black Colleges and Universities in the Council on Undergraduate Research and implementing a summit on transformative research.

Name: Professor Mike Neary
Current Affiliation: University of Lincoln, UK

Mike Neary is the Dean of Teaching and Learning at the University of Lincoln. Previously, Mike was the Director of a Higher Education Funding Council for England (HEFCE) Centre for Excellence at the Universities of Warwick and Oxford Brookes: the *Reinvention Centre for Undergraduate Research*. The purpose of this Centre is to support and enable the provision of undergraduate research across the curriculum at Warwick and Oxford Brookes and throughout the HE sector in the UK. Mike has been an advisor and consultant for the UK's Higher Education Learning and Teaching Subject Centre in Sociology, Anthropology and Politics funded by the Higher Education Academy. As a sociologist Mike has written extensively on issues to do with the sociology of work and related issues, including unemployment.

Increasingly Mike's writing focuses on matters to do with Higher Education, and, in particular his own teaching practice in the context of national and international educational policy. Mike was made a National Teaching Fellow in 2007. Mike's contribution to the fellowship will be to provide a sociological as well as an educational context, very direct experience of implementing undergraduate research programmes in research intensive universities, both as a classroom teacher and as a Dean with responsibility for enhancing teaching and learning across a university.

Name: Dr Philippa Levy
Current affiliation: University of Sheffield

Philippa Levy is Director of the Centre for Inquiry-based Learning in the Arts and Social Sciences (CILASS) at the University of Sheffield. CILASS is a Centre for Excellence in Teaching and Learning (CETL) that was awarded to the University by the Higher Education Funding Council for England (HEFCE) in 2005. With a budget of £4.85M, its 5-year programme encompasses strands focusing on educational development and innovation, reward and recognition, research and evaluation, enhancement of the University's physical estate for learning and teaching, and dissemination. CILASS has received very positive external and internal evaluation as a successful change facilitation initiative. Dr Levy is also Senior Lecturer in the Department of Information Studies and received a University of Sheffield Senate Award for Excellence in Teaching in 2002.

Dr Levy's personal teaching and research interests are in the areas of learning, teaching and learning support in higher education. She has numerous publications in these areas, including a 'best international paper' award. As part of the CILASS programme, she is currently leading a longitudinal, qualitative study of undergraduate students' experiences of inquiry and research, and a study of students' use of digital technologies in inquiry-based learning. She recently also led an 18-month project funded by the HEFCE Joint Information Systems Committee (JISC) as part of its Design for Learning Programme ("DeSILA: Designing and Sharing Inquiry-based Learning Activities"). She has previously been involved as Principal or Co-Investigator in *circa* £450K of external research and development funding, including for teaching-related projects.

Through her role with CILASS Dr Levy has become involved in the design of new learning and teaching spaces for student inquiry and research, including an 'inquiry collaboratory' that has gained national recognition by HEFCE-JISC as a 'best practice' exemplar of a technology-rich learning space.

Name: Professor Elaine Seymour
Current affiliation: University of Colorado at Boulder, USA

Elaine Seymour was for seventeen years Director of Ethnography & Evaluation Research (E&ER), the University of Colorado at Boulder. The group includes both social and physical scientists whose research focuses on issues of change in STEM education and careers (Seymour, 2001, 2006, 2007), including evaluation of initiatives seeking to improve quality and access in these fields. The issues of women in these disciplines have been a special focus and, in recognition of this work, Elaine received

(from WEPAN) the 2002 Betty Vetter Award for Research. Elaine's best-known published work may be *Talking about Leaving: Why Undergraduates Leave the Sciences*, (1997), co-authored with Nancy M. Hewitt). She and her group have been evaluators for several national and institution-based innovations including two NSF-funded chemistry consortia.

Elaine has led E&ER's comparative, longitudinal inquiry into the nature, benefits, and costs of undergraduate research experiences, and the processes whereby gains are achieved, as perceived by both student and faculty (Seymour et al 2004, Hunter et al, 2006). The team is currently writing a series of articles arising from their work and a book tentatively entitled, "Doing undergraduate research: issues, processes, and outcomes," to be published in 2009 by Jossey Bass.

In response to the needs of faculty innovators, she designed the online Student Assessment of their Learning Gains Instrument (SALG). This instrument has been used by over 1,000 faculty in 3,000 courses with 65,000 students and, in a pre-post version, was part of E&ER's evaluation of a national, STEM education reform initiative (SENCER). She is currently working (with NSF funding) with a three-university team to redesign the SALG site and expand it into a suite of instruments for faculty, departmental, program evaluator (and ultimately institutional) use. New instruments include the first online, research-grounded, student assessment instrument for undergraduate research programs (URSSA). Other current work includes: co-development of an NSF-funded national endeavor to marshal post-secondary STEM education resources to meet global challenges, and a study of the nature and sources of resistance to innovation that draws on her data from several science education initiatives. She recently led E&ER's evaluation of an NSF ADVANCE grant designed to accelerate the career progress of STEM faculty women. Elaine has served as an evaluator and as a member of national visiting committees and advisory boards for many STEM education change projects. She is a sociologist and a British-American whose education and career have been conducted on both sides of the Atlantic.

Name: Professor Linda Slakey

Current affiliation: National Science Foundation, USA

Professor Slakey joined the National Science Foundation in November of 2006 as Director of the Division of Undergraduate Education. She is a graduate of Siena Heights College (B.S. in Chemistry), and the University of Michigan (Ph.D. in Biochemistry.) She did postdoctoral research at the University of Wisconsin. Dr. Slakey was appointed to the faculty of the Department of Biochemistry at the University of Massachusetts Amherst in 1973. Her scientific work focused on lipid metabolism and vascular biology, and was funded by the National Institutes of Health, the American Heart Association, and the National Science Foundation. She was Head of the Department of Biochemistry from 1986 until 1991, and Dean of the College of Natural Sciences and Mathematics (NSM) from 1993 until 2000. In September of 2000, she was appointed Dean of Commonwealth College, the honours college of the University of Massachusetts Amherst. As Dean of NSM and of Commonwealth College she was active in supporting teaching and learning initiatives throughout the University, with particular attention to engaging undergraduate students in research, to faculty development activities that promote the transition from lecturing to more engaged pedagogies, and to the support of research on how students learn. .

National team

Name: Professor Sally Kift

Current affiliation: Faculty of Law, Queensland University of Technology

Sally Kift is a Professor of Law at the Queensland University of Technology, Australia (QUT). Over 2006-2007, she has been seconded to the QUT Chancellery as the institution's Director, First Year Experience Project. From 2001-2006, she served as Assistant Dean, Teaching & Learning in the QUT Faculty of Law. Her research interests include criminal law, legal education, first year experience, sessional staff development, and the teaching, learning and assessment of graduate attributes/transferable skills.

Sally was a recipient of a National Teaching Award in 2003, winning the Australian Award for University Teaching (AAUT) in *Economics, Business, Law and Related Studies*. Amongst other things, that award acknowledged her work in first year curriculum design, support for sessional teaching staff, enhancing the student experience and the development of graduate attributes in core curriculum. In 2006, Sally was awarded one of three inaugural national Carrick Institute Senior Fellowships for a project entitled, *Articulating a transition pedagogy to scaffold and to enhance the first year learning experience in Australian higher education*. In 2007, a Project Team that she led was awarded a further Carrick Institute National Teaching Award for the QUT Law Faculty's Assessment and Feedback practices.

Sally's contribution to this Fellowship will be to explore how engaging undergraduate students in research and inquiry might be harnessed to enhance the first year student experience.

Name: Professor Kerri-Lee Krause

Current affiliation: Griffith Institute for Higher Education, Griffith University

Kerri-Lee Krause is Professor of Higher Education and Director of the Griffith Institute for Higher Education. Her research expertise and experience spans broadly across higher education policy areas with a particular focus on the student experience in higher education and implications for policy and practice. She currently directs a national Carrick-funded project examining teaching-research linkages across the disciplines and at the institutional policy level. Professor Krause is also a member of a Carrick project team examining the implications of emerging technologies for learning and teaching among the 'digital generation'. In her work across these two projects, she is presently investigating the role of ICTs in facilitating teaching-research linkages for undergraduate students. A significant part of her work involves providing policy and practical advice to university academics, policy-makers, administrators and student support staff on implications of her research for managing and responding to the changing student experience in higher education settings.

She will contribute to the collection and trialling of the resources, models and protocols for facilitating teaching-research linkages in undergraduate learning in her university. She will also draw on the outcomes of her current Carrick teaching-research nexus project to contribute to the design and dissemination of professional development resources that support policy and practice in relation to enhancing undergraduate engagement in research and inquiry across year levels and disciplines.

Name: Dr Susan Mayson

Current affiliation: Faculty of Business and Economics, Monash University.

Susan Mayson is Senior Lecturer in the Department of Management, Faculty of Business and Economics, Monash University and teaches into both undergraduate and postgraduate courses, including first year core subjects. She has published a number of articles in academic journals in the area of teaching and learning in higher education. At Monash, she is recognised for her research and policy development on research-led teaching in higher education with colleague Dr Jan Schapper. In 2006-2007 she worked with a small team of academics on an innovative university-wide project designed to develop an evidence-base for Monash University's research-led teaching strategy for the Office of the Deputy-Vice Chancellor (Education). Within the faculty of Business and Economics, again with colleague Dr Jan Schapper, she has advised and collaborated with the Deanery on developing the faculty's research-led teaching strategy. The faculty has been proactive in promoting research-led teaching, leading the university by creating the position of *Associate Dean Research-led Teaching* and embedding a research-led teaching strategy within the broader faculty strategic plan for 2008 onwards.

Her contribution to this Fellowship will be to work with the project team to gather evidence of good practice and develop case studies in the business disciplines to inform the development and sharing protocols for good practice in engaging undergraduates through research and inquiry.

Name: Professor Michael E. McManus

Current affiliation: Faculty of Biological & Chemical Sciences, University of Queensland

Mike McManus is Executive Dean of the Faculty of Biological & Chemical Sciences at the University of Queensland (UQ) and prior to this he was Head of the Department of Physiology & Pharmacology from 1993 to 1997. His substantive academic appointment is as Foundation Professor of Pharmacology and he was President of the Australasian Society of Clinical & Experimental Pharmacologists & Toxicologists (ACEPT) from 2000 – 2001. In November 2004 he was the principal convenor of a very successful international meeting entitled “Science Teaching & Research: Which Way Forward for Australian Universities?” This meeting has made significant recommendations about the future of science education in Australia. This was followed by another successful teaching & learning meeting at UQ in 2007 entitled “Integrating Research, Teaching and Learning in Higher Education: A Challenge for the 21st Century University.” In the teaching & learning area Mick’s biggest contribution has been in leading the development of a new UQ Bachelor of Sciences degree that is contributed to by the Faculties of Engineering, Physical Sciences & Architecture, Social & Behavioural Sciences and Biological & Chemical Sciences (<http://www.bacs.uq.edu.au/review-introduction>).

In his capacity as Executive Dean he is the Convenor of the Universitas 21 Deans of Science Group. Prior to his arrival at the University of Queensland he was a National Health & Medical Research Council Principal Research Fellow in the Department of Clinical Pharmacology at Flinders University in Adelaide. During his career Mick has been the recipient of a Fogarty International Fellowship/Associateship, an Anti-Cancer Foundation Fellowship of the Universities of South Australia, and also an International Union against Cancer Fellowship (Yamagiwa-Yoshida Memorial International Cancer Study Grant). He continues to have a strong research interest in the area of xenobiotic metabolism, especially the role human sulfotransferases play in this process. At the recent Australasian Society of Clinical & Experimental Pharmacologists & Toxicologists meeting in Adelaide in December, 2007, Mick was awarded the Inaugural Service to the Society Award.

Name: [Dr. Denise Wood](#)

Current affiliation: [School of Communication, University of South Australia](#)

Denise Wood is Senior Lecturer and Program Director (Media Arts) & Magill Campus Director for MBIA and MBIC programs, School of Communication, University of South Australia As Teaching and Learning portfolio leader in the School of Communication, a member of the Teaching and Learning Committee in the Division of Education, Arts and Social Sciences and Chair of the Division's Equity Committee at the University of South Australia, Dr Wood plays an active role in promoting scholarly research and publication in teaching and learning, with a particular focus on strategies for strengthening the teaching and research nexus. Dr Wood is currently co-investigator in a University funded Teaching and Learning Grant that will lead to the development of a database of case studies showcasing effective strategies for enhancing the teaching and research nexus. She is also a recipient of a number of University awards for teaching excellence. Several of her courses have been revised to incorporate opportunities for undergraduate students to engage in research activities throughout their academic program beginning in first year and trials undertaken in 2007 indicate positive response from students to the research focus (the outcomes were reported at conferences in late 2007 and peer reviewed publications are forthcoming in 2008). She is the leader of a Carrick funded project that involves the development of a peer review instrument for online learning and teaching, and a co-investigator in a 2006 Carrick funded project that has led to the development of a feedback and assessment tool. Her research relating to the teaching and learning research nexus and her own experience as a teacher have informed both these projects. Recently, Dr Wood has been collaborating with Associate Professor Angela Brew, Professors Kerri-Lee Krause, Paul Trowler, Mick Healey and Emeritus Professor Alan Jenkins on a proposed teaching and research nexus project over the last six months.

Name: Professor Brian Yates

Current affiliation: School of Chemistry, University of Tasmania

Brian Yates is Head of School of Chemistry, University of Tasmania. He has been involved over several years in a project at the University of Tasmania aimed at fostering undergraduate student engagement through publication of student research in the UTAS journal *Nexus*. This journal makes use of a mentoring approach in which students write their initial report and then work with lecturers to achieve the final product. The results of this project have been presented most recently at the Carrick forum on the teaching research nexus in Adelaide in August 2007, and the project has been submitted as a Carrick "example of good practice". Brian's teaching has been rewarded with five Teaching Merit Certificates, a UTAS Teaching Excellence Award, and the Carrick national Award for Teaching Excellence in the physical sciences 2006. He has received one national (CAUT) teaching grant (1996) and six UTAS teaching development grants. He is a regular presenter at teaching and learning conferences and has published three papers relating to teaching practice. He also currently holds three ARC grants and supervises several PhD students.

Part G: Curriculum vitae of the nominee (5 pages maximum)

(The curriculum vitae should document the nominee's career achievements, including research, but with a particular emphasis on achievements in higher education learning and teaching.)

Work Address: Faculty of Education and Social Work, A35, The University of Sydney NSW
2006 Australia
Telephone +61 (02) 9552 4402 (home); +61 (02) 9351 4820 (work)
Email A.Brew@usyd.edu.au

Degrees: BA (Hons) Philosophy (University of Wales, UK).
MA Sociology (University of Essex, UK).
PhD "Research as Learning" (University of Bath, UK).

Awards and distinctions:

Elected Fellow of Society for Research into Higher Education (SRHE) (2007)
Fellowship of the Staff and Educational Development Association (1994)

Employment History

2008 - Associate Professor, Faculty of Education and Social Work, The University of Sydney
2003 - 2007 Associate Professor, Institute for Teaching and Learning, The University of Sydney
1995 - 2002 Senior Lecturer, Institute (formerly Centre) for Teaching and Learning, The University of Sydney, including Acting Director (1999 –2000)
1988 - 1995 Principal Lecturer, Director of the Educational Development Unit and Director of Academic Staff Development, University of Portsmouth.
1978 - 1988 Researcher and Consultant working for a number of corporate clients (e.g. University of London. Institute of Education; The Open University, University of Essex; University of London Department of Extra Mural Studies; Guys Hospital Medical School, Department of General Practice).
1976-1978 Research Assistant Social Sciences Research Council project: The use of an Open University course by a conventional university. University of Essex and the Open University, UK.
1977-1980 Sociology tutor, Department of Sociology, University of Essex, UK.
1975-1987 Study Skills Coordinator, University of Essex.
Assistant Staff Tutor Social Sciences, The Open University, UK.

Visiting appointments

Funded

University of Alberta, Canada (March-April 2007), Australian National University (2006. Adjunct appointment continues), University of Exeter, UK (October-November 2004), Linköping University, Sweden (1998 & 2004)

Unfunded

University of Oxford, UK (2004 & 2002), University of Edinburgh, UK (2002), University College London, UK (2001), Institute of Education, University of London, UK (1998).

RESEARCH

Current Research projects

Influences on researcher decision-making in Universities.. A/Prof Angela Elizabeth Brew and Prof David J Boud. This project investigates through a questionnaire, how and why academics do or do not become full members of research communities. University of Sydney Bridging Support Project (\$40,000) achieved for high ranking ARC non-funded application.

The scholarship of academic research (Brew & Lucas).

The aim of this project is to develop important new insights into the impacts of socio-political agendas on researcher identities. The project will result in a book that will provide new understandings of the ways research is experienced in higher education.

Integrating Research and teaching.

There are currently four projects in which I am involved:

Biologists and Geographers Conceptions of ‘Research’ and ‘Teaching’: developing the links between these activities to enhance student learning. Higher Education Academy project to improve the quality of the student learning experience (Lucas & Deem). I am a member of the international advisory group for this project.(Funded)

Leading, promoting and supporting undergraduate research in the new university sector. Higher Education Academy, Teaching Fellowship Scheme, UK (Healey).[member of International Advisory Group] (Funded)

Postgraduate supervision in Australian universities. A/Prof Jenny Hammond on behalf of fIRST (for Improving Research Supervision and Training) Consortium [Member of fIRST Steering Group]. Carrick Institute for Learning and Teaching in Higher Education Competitive Grant (Funded)

Enhancing the teaching/research nexus in professional domains in higher education. Prof Kerri-Lee Dawn Krause, Prof Kerry P Green, A/Prof Angela Elizabeth Brew, Dr Denise Wood, Dr Jacqueline Ann Cook, Dr Sheila Doreen Scutter, Ms Susan Myburgh, Prof Paul Richard Trowler, Em/Prof Alan Malcolm Jenkins, Prof Mick Healey. (not yet funded)

Summary of Publications

	Published	In press / Accepted	Submitted for publication	In progress	TOTAL S
Books sole authored	2		1		3
Edited and other Books	5			2	7
Papers in international refereed journals	25	1		2	28
Book chapters in commercially published works	16	2	1		18
Other work in refereed journals	13				13
Refereed conference presentations	14				14
Keynote conference presentations	15				15
Other conference presentations	47	1			48
Commissioned articles in non-refereed journals	8				8
Significant university/departmental reports	20				20

Relevant Publications

Books

Brew, A. (2006). *Research and Teaching: Beyond the divide*. London: Palgrave Macmillan.

Jenkins, A, Breen, R., & Lindsay, R. with Brew, A. (2003). *Reshaping Teaching in Higher Education: Linking Teaching and Research*. London: Kogan Page.

Brew, A. (2001). *The nature of research: inquiry in academic contexts*. London, RoutledgeFalmer.

Brew, A. & Sachs, J. (Eds.) (2007). *Transforming a University: The Scholarship of Teaching and Learning in Practice*. Sydney, NSW: Sydney University Press.

Chapters in books

Brew, A. (2007). Approaches to the scholarship of teaching and learning. In A. Brew, & J. Sachs, (Eds.). *Transforming a University: The Scholarship of Teaching and Learning in Practice*. Sydney: Sydney University Press.

- Peseta, T., Brew, A., McShane, K., & Barrie, S. (2007). Encouraging the scholarship of teaching and learning in an institutional context. In A. Brew, & J. Sachs, (Eds.). *Transforming a University: The Scholarship of Teaching and Learning in Practice*. Sydney: Sydney University Press.
- Brew, A. (2007). Integrating research and teaching: understanding excellence. In A. Skelton (Ed.) *International perspectives on teaching excellence in higher education* (pp.74-88). London: Routledge.
- Brew, A. (2007). Academic autonomy and research decision-making: the researcher's view. In M. Tight, C. Kayrooz, & G. S. Akerlind, (Eds.). *International Perspectives of Higher Education Research, Vol 4 - Autonomy in Social Science Research: The view from United Kingdom and Australian Universities* (pp. 47-64). Oxford, UK: Elsevier.
- Brew, A. (2006). Learning to develop the relationship between research and teaching at an institutional level. In C. Kreber (Ed.). *New Directions for Teaching and Learning: Exploring research-based Teaching* (pp. 13-22). New York: Jossey-Bass/Wiley.

Refereed articles

- Brew, A., & Ginns, P. (in press 2008). The relationship between engagement in the scholarship of teaching and learning and students' course experiences. *Assessment and Evaluation in Higher Education*. [accepted for publication]
- Brew, A. (2003). Research and the academic developer: a new agenda. *International Journal for Academic Development*, 7, 2, 112-122.
- Brew, A. (2003). Teaching and research: new relationships and their implications for inquiry-based teaching and learning in higher education. *Higher Education Research and Development*, 22, 1, 3-18.
- Brew, A. (2001). Conceptions of Research: A phenomenographic study. *Studies in Higher Education* 26, 2, 271-285. Reprinted as: Brew, A. (2004). Conceptions of Research: a phenomenographic study. In M. Tight (Ed), *The RoutledgeFalmer Reader in Higher Education* (pp. 214-230). London: RoutledgeFalmer.
- Brew, A. (1999). Research and Teaching: changing relationships in a changing context. *Studies in Higher Education*. 24, 3, 291-301.
- Brew, A. & Boud, D. (1995). Teaching and research: establishing the vital link with learning. *Higher Education*, 29, 261-273.

Editorial Boards

1. *Reinvention: a Journal of Undergraduate Research (UK)*(2007)
2. *Journal on Excellence in College Teaching*, USA (2006)
3. *Studies in Higher Education*, (the ISI top rated journal in the field (2005)
4. *Higher Education Research and Development* (2007)
5. *International Journal of the Scholarship of Teaching and Learning*, Indiana, USA (2005).

Co-editor *International Journal for Academic Development*

Co- editor and Program Director for the 2005 International Higher Education Research and Development Society of Australasia Annual conference (2004) with 460 delegates.

I have regularly refereed papers for 4 ISI rated and 7 other international peer reviewed journals.

TEACHING

Current teaching consists of graduate programs of study for university academics and leadership of key institutional strategic projects.

Program, project or units taught

Masters in Education (Higher Education)

Research-enhanced teaching and Learning EDPR 5003 (graduate certificate unit of study)

Scholarship of University Teaching and Learning EDPR5011 (graduate certificate postgraduate unit of study)

The Academic Profession Challenges and changes in higher education

Role

Course coordinator
(Co-taught)

Unit coordinator (co-taught)

EDPR6011 (Masters unit of study)	Unit coordinator
Principles and Practice in University Teaching (three-day program)	Selected sessions
Research higher degree supervision development program	Program Director
Research-led teaching and scholarship of teaching project	Project director
PhD Candidates	Supervisor

Selected recent teaching achievements

Invited to serve on Carrick Institute for Learning and Teaching in Higher Education Expert Panel to judge applications for Australian Awards for Programs that enhance students' learning.

Invited by Dr Linda Hort, Director of the Centre for Educational Development and Academic Methods at the Australian National University to assist with initiatives to integrate research and teaching.

Invited by Professor William Richardson at the University of Exeter to serve as consultant to the Certificate in Academic Practice (2004). I provided advice to the course team, evaluated and participated in sessions presented for academics and provided advice concerning future directions for this Certificate (2004).

Invited by Professor Stephen Rowland at University College London to serve as the official 'Scrutineer' for a Certificate in Teaching and Learning in Higher Education and a Masters in Academic Practice I provided a commentary on the course documentation prepared for validation at (2002).

The innovative flexible Postgraduate Supervision Development Program was for three years running the University of Sydney's nomination for an Australian Award for University Teaching (2000-2002) in the category "Innovative and practical approach to the enhancement of the quality of teaching and learning in the applicant's institution." I have directed the program since 1997.

PhD Supervision

In progress

Kathryn Aufflick	The Transformation of Self: Teachers practicing and teaching lifelong learning
Pam Roberts	The influence of academics' beliefs on curriculum decision-making and the significance of research.

Completed

Helen Forbes	2007	Nurse teachers' perceptions of nursing and their approaches to teaching undergraduate students.
Lynne Leveson	2006	A phenomenographic study of individual approaches to teaching accounting in higher education.
Tai Peseta	2005	Learning and Becoming in Academic Development: An autoethnographic inquiry
Peter Kandlbinder	2004	Reconstructing educational technology: A critical analysis of online teaching and learning in the university
Patricia M Lyon	2001	Teaching and learning in the operating theatre

CONTRIBUTIONS TO THE PROFESSION AND COMMUNITY

Recent Invited Seminars

2007

University of Edinburgh, UK	University of South Australia
University of Alberta, Canada	Victoria University
Scottish Quality Assurance Agency, UK	La Trobe University
Sheffield University, UK	

2006

Brighton University	Sydney-basin Network of University
Australian National University	Science Educators (SNUSE)

2005

Griffith University	Murdoch University
HERDSA Western Australian Branch	

2004

Oxford University, UK.	Anglia Polytechnic University, UK.
Exeter University, UK.	Westminster University, UK.
Queens University, Canada	Charles Sturt University
Linköping University, Sweden	

Recent Professional achievements and contributions

Invited and funded by Professor Olive Yonge, *Vice Provost (Academic Programs)* to visit the University of Alberta for a month to assist with integrating research and teaching (2007). During this funded visit, I carried out consultations with individuals including Professor Yonge, Professor Paul Sorenson, *Vice-Provost and Associate Vice-President (Information Technology)* and Professor Gary Kachanowski, *Vice President Research*. I was consulted by faculty curriculum committees in the Faculties of Medicine and Dentistry, Nursing and Arts. I also attended meetings of the high level Strategic Policy Practice and Planning Steering Group, the working group on research-led teaching, and undergraduate research presentations by students of the Faculty of Agriculture. In addition, I acted as invited respondent to a public Forum on community-based learning, and gave 8 presentations and seminars in various faculties and campuses.

Invited and funded to act as external examiner for HERDSA Fellowships Development Scheme. I was required to comment on the development of this aspect of the scheme by reading completed portfolios (2006-7).

Invited to serve on Steering Group for the Macquarie University Carrick Institute for Learning and Teaching in Higher Education funded project: *Leadership and Assessment: Strengthening the Nexus*. (2006 Ongoing)

Invited and funded to serve as external evaluator to the Reinvention Centre for Excellence in Undergraduate Research (CETL) (Universities of Warwick and Oxford Brookes, UK) (2004-Ongoing).

Invited and funded to present professional development workshops for general practitioner supervisors on how to develop a learning practice. (2004 & 2005)

Invited and funded consultant to the Advanced Scholarship initiative, Southampton Institute, UK (2004).

Invited and funded consultant to Project LINK (Linking Teaching with Research and Consultancy in the Built Environment) Higher Education Academy, UK (2000-2003).

Invited and funded Consultant to the Learning and Teaching Support Network (LTSN) Project on Linking Teaching and Research in the disciplines, UK (2000 – 2003).

Member of the Council of the International Consortium for Educational Development (ICED) (2001-Ongoing).

President of the Higher Education Research and Development Society of Australasia (HERDSA) (1999 – 2003). This was a national position of leadership within the profession of higher education teachers and academic developers.

Contributions to University Committees

2006	Excellence in Support of the Student Experience Awards Committee
2006	Excellence in Teaching Awards Committee
2003	Excellence in Research Higher Degree Supervision Awards Committee
2003	Member of the Vice-Chancellor's Showcase <i>Graduates for the World</i> Advisory Committee
2002 – 2007	Chair, Research-led Teaching and Scholarship of Teaching Working Group
1996 – 2000 & 2002 - 2003	Academic Board (An elected representative of Academic Forum on Academic Board)
1996 – 2000 & 2002	Academic Forum (An elected representative of the Faculties of Education (one year) and Arts (four years))
2001	Chair of the 2001 <i>Showcase of Scholarly Inquiry in Teaching and Learning</i> Advisory Committee.
1997 - 2000	University's Teaching and Learning Committee
2000	Alternative Chair of the Teaching and Learning Committee.
2000	Graduate Studies Committee (Represented Teaching and Learning Committee)

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- Seymour, E., Hunter, A. B., Laursen, S. L., & Deantoni, T. (2004). Establishing the benefits of research experiences for undergraduates in the sciences: first findings from a three-year study. *Wiley InterScience*, DOI 10.1002/sce.10131.

Part H: Three references

(Attach references from three internationally recognised scholars in a relevant field or discipline. The references should support the proposed fellowship activities and the nominee's capacity to conduct these successfully.)

References from the following are attached:

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