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A Deakin University  
Research Priority  
Area

**EF&I**

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# 1 Description of Area, Strategic Importance, Objectives

## 1.1 Description of the Area

The Educational Futures & Innovation Research Priority Area has one core commitment:

- To conduct internationally significant research that will enable educators of today to *future proof* Australia's children for the changing, uncertain and risky world of tomorrow.

### Why 'future proofing'?

In an era of rapid social, economic and technological development the capacity to respond positively to change is a fundamental skill. In the field of technology, this capacity is known as 'future proofing', where future trends and potential crises are anticipated and planned for.<sup>1</sup> But future proofing in education is more than merely reacting to potential futures that may not arrive. It is also a way to critically think through the adequacy of education provision today, whilst researching the innovations (methods, practices and concepts) that are needed to ensure a relevant education for tomorrow.

'Future proofed' graduates are those who are prepared by their education to make a positive contribution to the changing professional, social, industrial, scientific and domestic environments, at all stages of their life. They have the following characteristics<sup>2</sup>:

- Strong literacy and numeracy skills
- Excellent multi-literacy skills, including high level capacities in the new basics of information and computer technologies
- A critical understanding of the changed and changing social, political and economic environments, and effective ways to respond to these changed circumstances
- A strong sense of self
- The ability to live harmoniously and effectively in a community characterised by social and cultural diversity
- A positive attitude to life long and life wide learning
- The resultant potential to contribute to the intellectual and economic future well-being of the nation

Building on the work completed over the last three years by its immediate predecessor, Quality Learning (QL), the Educational Futures and Innovation RPA will conduct research that investigates, trials and promotes strategies that actively enable educators to develop the above characteristics and capacities for all learners.

## 1.2 Objectives and Strategic Importance

### The social and economic benefits of future proofing:

The key goal of futures-oriented education is to ensure that all citizens are equally prepared to participate actively and positively in the society they are part of. Previous research conducted by the RPA<sup>3</sup> has demonstrated that taking a futures-oriented approach to education benefits learners because it increases the relevance of schooling by linking it to real world situations, promoting greater student engagement and hence higher student retention rates and successes. Raising the retention and graduation rates of the population is a critical component for any nation-

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<sup>1</sup> Future proofing has been variously described as 'the act of trying to anticipate future developments and taking action to minimise possible negative consequences.' See [http://en.wikipedia.org/wiki/Future\\_proofing](http://en.wikipedia.org/wiki/Future_proofing) for more definitions.

<sup>2</sup> These and similar skills have been identified by organisations such the OECD; the Smith Family; the Australian Federal Government's 'Knowledge Nation' statement; the Queensland Education Department's 'Education 2010: New Basics' initiative; and the Victorian Department of Education's 'Essential Learnings' initiative

<sup>3</sup> Rowan and Bigum: The Knowledge Producing Schools Initiative.

state intent on securing its economic and social well-being. Studies from a diverse range of transnational and national sources have shown that higher retention and graduation rates have lead to:

- Increases in workforce skill sets and participation (UNESCO, 2004)
- Improvements in social cohesion and a reduction of intolerance and discrimination (Lawrence, 2002)
- Improvements in individual and community health with attendant reductions in the cost of public health systems (AMA, 2004)
- Increases in volunteer and community work (Murdoch, 2002)
- Reductions in government expenditure on welfare (The Smith Family, 2004; Institute for Research on Poverty, 1995)
- Reductions of criminal behaviour and thus expenditure on prisons, rehabilitation and the management of crime (Institute for Research on Poverty, 1995)

Indirect benefits to individuals from completion of post-compulsory schooling include dramatically increased incomes; shorter periods of unemployment; increased consumption efficiency; increased net family assets; more stable family environments and longer life expectancy (Cummins, 1997).

By contrast, students who leave school early (or fail at their study) are at greater risk of:

- Exhibiting poor literacy numeracy skills
- Holding a negative attitude towards education
- Unplanned teenage parenting
- Criminal behaviour
- Violence, drug and alcohol-related problems
- On-going poor health (Rowan, 2001)

Despite the clear benefits of a futures-orientated educational approach, historically, Australia's education system has proven to be extremely resistant to change, accepting the large numbers of disengaged students within its institutional settings as an inevitable (albeit unfortunate) by-product. We argue that by failing to maximise the potential of Australia's education system, what is put at risk is both current individual students and our collective futures.

#### **The over-arching research question:**

Taken together, all of the contextual challenges outlined above leave us with one, overarching, but multi-dimensional research question:

- How can educators develop in students, teachers and schools capacities that will allow them to conceptualise, anticipate and manage positively the demands of rapid social, economic and technological change?

#### **The research program:**

In order to address the complex set of factors that shape educational futures, the Educational Futures and Innovation RPA will extend QL's holistic approach to research by bringing together scholars with expertise in each of the core areas discussed above—literacy, numeracy, technology, youth culture, teacher renewal and educational innovation—to formulate fundamentally interdisciplinary research projects. The core members of the Educational Futures and Innovation RPA have international reputations, a track record of attracting external research grants and an established ability to create partnerships with industry. The RPA offers them the opportunity to work together in more systemic and sustained ways.

This inter-disciplinarity is a unique feature of the RPA. Few other educational research centres take such an approach, tending to focus on one or two particular areas (eg maths and science; or literacy and technology). But just as the well-being of a patient with heart disease is improved if they have access to professionals with a range of expertise doctors, nurses, dieticians, physiotherapists, counsellors and so on—so, too, do students and teachers experimenting with

new approaches (and hence risk) benefit most from educational innovations that are able to bring together teams of experts with complementary research strengths.

The Educational Futures and Innovation RPA is in a particularly strong position to pursue this interdisciplinary approach because it already has members with internationally recognised expertise in working on educational lighthouse projects that cut across traditional discipline boundaries.

We currently have six research priority strands, working on projects that aim to identify ways of overcoming the barriers educators face to future proof learners, through innovative approaches to:

- Re-imagining School Science Education (with projects led by Russell Tytler)
- Literacy education (with projects led by Leonie Rowan)
- Technology education (with projects led by Catherine Beavis and Chris Bigum)
- Leading and Managing for Educational Reform (with projects led by Jill Blackmore)
- Young people, schooling and social change (with projects led by Julie McLeod)
- Doctoral education (with projects led by Terry Evans and Barbara Kamler)

Each strand leader will work with researchers from the other strands and the RPA coordinator, to ensure that the interdisciplinarity, which has been a hallmark of Quality Learning, remains strong across the Educational Futures and Innovation RPA.

## 2 The Competitive environment

The research environment for education faculties is increasingly competitive. In 2003 out of 875 ARC discovery projects only 15 were awarded in Education. In 2004 only 21 out of 1051 discovery projects were in Education with only 7 out of 237 Linkage Projects going to education initiatives. Despite this context, the RPA has maintained a good record for attracting research income (detailed in the appendix)

In addition, RPA members have high national and international profiles. Each year since its establishment, a significant number of RPA members have been invited contribute to international refereed publications; deliver keynote addresses and offer papers at international conferences; and participate in national and international research activities (details of these activities are documented throughout the 2003, 2004, and 2005 reports).

Although the University of Newcastle has recently raised its profile in this area, and the State government has, over the last three years, committed substantial amounts of money toward government-based educational innovation initiatives, our two major competitors in Australia remain:

- Melbourne University
- Monash University

Both Universities generally out perform the RPA in terms of their success in attracting ARC Grants and in the staff member/publication ratio. However, the introduction of the RQF provides the RPA with a significant opportunity to improve research standing. Deakin University has long out-performed other Education Faculties on publications measures and the RPA's core members have established international publication profiles. Capitalising on this strength will be a key target for the 2006-2008 period.

### 3 Management, Leadership Structure

The Educational Futures and Innovation Executive Committee consists of:

- Chair (Professor Barbara Kamler)
- Dean of the Faculty of Education (Professor Shirley Grundy)
- Co-ordinator (Mr Craig Smith)
- Administrative Assistant (Ms Josephine Wee)
- Two members nominated from the membership (Professor Jill Blackmore, Associate Professor Catherine Beavis)
- One co-opted member (Dr Leonie Rowan)
- One co-opted external representative (outside the Faculty of Education): Professor Bill Logan

The Executive Committee sets directions, makes key policy decisions, and supports the membership in the development of their research program.

In addition to this, each member of the RPA belongs to a Priority Research Strand. The leaders of these strands have responsibility for helping all members set publication, impact and income targets and for managing any funds devolved to the strand.

As mentioned in section 1, strand leaders in 2006 are: Professor Tytler, Professor Blackmore, Associate Professor Beavis/Professor Bigum, Professor Kamler/Professor Evans, Dr Rowan and Dr McLeod.

### 4 International Advisory Board

The Executive committee is supported by an international advisory board:

- Professor Fazal Rizvi (University of Illinois)
- Professor Bridget Somekh (Manchester Metropolitan University)
- Professor Diana Leonard (London Institute of Education)
- Professor Mimi Bloch (University of Wisconsin)
- Professor Rob Walker (University of East Anglia)

Individual members of the advisory board meet with the Executive Committee on a regular basis, and once each year, a full International Advisory Board meeting is held. This meeting is designed to occur at one of the key international education conferences (in 2004 this International Advisory Board meeting was held before the Australian Association for Research in Education. In 2005, the meeting was held before the British Educational Research Association annual conference). In 2006 the International Advisory Board will meet in Adelaide prior to the Australian Association for Research in Education Annual Conference. In addition to this members of the International Advisory Board and the RPA Executive Committee are in regular contact via email (and telephone) regarding our key initiatives, and planned activities.

## 5 Members of the Area

Membership of the area was refined throughout 2005, and even further streamlined at the beginning of the year for 2006. A membership of 67 in 2004 was reduced to 44 in 2005 and to 17 for 2006. Core members are:

Professor Barbara Kamler	Dr Julie McLeod
Dr Andrea Allard	Associate Professor Ian Robottom
Dr Catherine Beavis	Dr Leonie Rowan
Professor Chris Bigum	Dr Ninetta Santoro
Professor Jill Blackmore	Dr Peter Smith
Professor Terry Evans	Mr Craig Smith
Associate Professor Susie Groves	Professor Karen Starr
Professor Shirley Grundy	Professor Russell Tytler
Dr Julianne Lynch	

## 6 Strategic Plan 2006 - 2008

In 2005 the RPA (formerly known as Quality Learning) was reviewed by the University and the Executive Committee. The reviews looked at its activities, achievements, membership, organization and projected targets throughout 2005. This process has resulted in a clarification of our aims/objectives; a subsequent reworking of our activities; and clarification of our targets and the strategies we will use to achieve these targets. This revised focus is indicated in this three year plan.

### Objectives

- 1 Advance an internationally recognized, high impact program of research investigating innovative educational approaches to the challenges associated with 'future proofing' all learners
- 2 Increase the research profile of the Educational Futures and Innovation RPA, as measured by esteem/impact factors, in international, national and state contexts
- 3 Contribute to the current Research Quality Framework trial and make a significant contribution towards Deakin's performance in any future Research Quality Framework exercise
- 4 Strengthen the interdisciplinary research links within the Educational Futures and Innovation RPA
- 5 Increase and diversify research income

### Objectives, Strategies, Targets: 2006-2008

#### Objective 1:

Over the next three Years Become an internationally recognized Centre of research investigating innovative educational approaches to the challenges associated with 'future proofing' all learners

#### Strategies:2006-2008

- Contribute to the production of knowledge in the area of educational futures and innovation
- Conduct leading edge research that leads to the production of high-quality, publications
- Foster conferences, symposia and/or research workshops that bring together RPA members and distinguished international and national scholars
- Provide forums for building international profile, disseminating research and fostering industry and international links
- Develop joint research project/initiatives with international partners

- Support intellectual exchanges through members' participation in key conferences and/or symposia, within Australia and internationally

**Targets:**

- Conduct internationally significant research in the area of educational futures and innovation
- Develop at least one joint research project/initiative with international partners—particularly the members of the existing International Centres for Applied Research in Education Alliance (ICARE - Deakin, Manchester Metropolitan University, University of East Anglia & University of Illinois)
- Organise regular, bi-annual conferences, symposia and/or research workshops that bring together RPA members and distinguished international and national scholars
- Organise regular research conferences and/or symposia with potential industry partners
- Facilitate the participation of on-line discussions/seminar series and exchange programs for HDR students to internationally recognised overseas institutions. Particular emphasis is to be placed on developing these exchanges within the ICARE group of universities.

**Objective 2:**

Increase the research profile of the Educational Futures and Innovation RPA, as measured by esteem/impact factors, in international, national, and state contexts

**Strategies: 2006-2008**

- Produce high-esteem international, refereed publications
- Host significant, publication-driven conferences that bring together RPA members and distinguished international and national scholars
- Support high-impact participation of members for conferences within Australia and internationally
- Raise media profile of RPA
- Expand web site and associated material
- Fund public seminars focused on topical issues
- Connect publications to diverse audiences outside academia

**Targets:**

- Over the next three years, the submission of at least one publication per annum, to a high-esteem international, refereed publication from each designated research strand
- Submission of at least one publication per annum to a high-impact refereed publication from each member of the RPA
- Host regular public seminars focused on topical issues (e.g. use of gaming technologies in youth culture, reading and boys)

**Objective 3**

Contribute to Deakin's 2006 Research Quality Framework trial and make a significant contribution toward



## Improving Deakin's performance in any future Research Quality Framework exercise

### **Strategies:2006-2008**

- Key RPA members to provide support for the current RQF trial through the provision of RPA contextual statement, impact and esteem factors and research activities
- Conduct information sessions for all members about significance of RQF trial and first round
- Fund RPA's priority research strands to support the development of grant applications, from which high quality publications will be drawn
- Conduct writing workshops with the RPA membership and other researchers in the faculty, to increase the quality and impact of their publications
- Conduct seminars led by internationally recognised writers/editors on successful publishing strategies, especially in regard to acceptances from high quality/high impact journals
- Provide mentoring support to early career researchers who have recently completed PhD's to assist them to publish out of their theses. The aim is to fast-track publication so that early career researchers can quickly move into the next phase of their research program

#### **Targets:**

- Establish and implement an internal grant application development program that supports the development of at least one major application per research strand (i.e. 6 in total) per annum
- Run regular writing workshops that produce a quality paper ready for submission
- Provide ongoing academic mentoring for early career researchers

### **Objective 4**

Strengthen the interdisciplinary research links within the Educational Futures and Innovation RPA

### **Strategies:2006-2008**

- Maximise contributions of all members
- Promotion of an interdisciplinary research culture
- Realign RPA to the new 'future proofing' direction
- Identify concentrated research strands and appoint a senior researcher to head each strand

- Employ coordinator to ensure RPA focus of research strands
- Publicise the new name within and beyond the University
- Ensure an on-going involvement of the international advisory board in RPA activities

**Targets:**

- Appoint a Research Fellow (0.5) as co-ordinator to facilitate the work of the RPA
- Implement new name, plan and set new direction
- Monthly seminars, presented by different strand leaders on an aspect of their current research
- Meet with international partners on a regular basis to develop and maintain joint/collaborative research initiatives

**Objective 5**

Increase and diversify research income

**Strategies:2006-2008**

- Increase external funding for research activities
- Facilitate an interdisciplinary research culture that will extend and contribute to the quality of the RPA's funding proposals
- Encourage the production of submissions that are innovative and of direct interest to a variety of potential funding bodies beyond the ARC
- Provide funds and expertise to develop high quality research grant applications
- Seek and raise awareness of diverse funding sources and timelines within the RPA membership

**Targets:**

- Increase external funding grants by 10% per annum for the next three years
- Develop at least one major funding application per research strand (i.e. 6 in total) per annum
- Seek new funding opportunities, especially from Federal and State government agencies, philanthropy and corporate Australia
- Facilitate regular meetings, forums between non-ARC funding providers and RPA members
- Ongoing information and updates to RPA members regarding funding sources and timelines

## 6.1 KPI and Targets for 2006-2008

	Targets Set in 2004			Achieved/	Revised Targets*		
	2005	2006	2007	2005	2006	2007	2008
<b>Research income \$000</b>							
Commonwealth	400000	600000	800000	324,211			
Other public sector (non commonwealth)	400000	600000	800000				
Industry and other				251077			
Total	800000	1.2	1.6	565,288 <sup>4</sup>	600,000	660,000	720,000
<b>Staff involvement in seeking funding</b>							
					2006	2007	2008
Number of grants >\$20k received	14	16	18	9	12	13	14
Number of staff involved as CIs on grants	18	20	20	16	16	17	18
Number of applications for grants >\$20k	15	16	18	18	12	14	16
<b>Collaboration with users</b>							
					2006	2007	2008
Number of serious user partners	6	7	8	9	10	11	12
Number of serious visits from user partners							
<b>Research output</b>							
					2006	2007	2008
Publications weighted for authorship	58	68	78	63	34 <sup>5</sup>	36	38
Deakin staff who are authors	34	36	38	32	17+17 <sup>6</sup>	17+20	17+22
HDR completions	12	13	14	9	5 <sup>7</sup>	5	5
New HDR graduates taken up by employers				All			
<b>Research training</b>							
					2006	2007	2008
Commencing HDR candidates (EFTSU)	10	10	10	Tbc	Tbc	Tbc	Tbc
Continuing HDR candidates (EFTSU)	28	28	28	Tbc	Tbc	Tbc	Tbc
Total HDR candidates (EFTSU)	38	38	38	Tbc	Tbc	Tbc	Tbc
<b>Researchers</b>							
Number of staff seriously involved (>4 days/mth)					2006	2007	2008
Deakin	16	18	20		17 <sup>8</sup>	19	20
External					3	3	3
<b>Technology transfer</b>							
					2006	2007	2008
Take up of results by users					4	5	6
Conferences, workshops held for users	3	5	7	3	4	4	4
Number of HDR projects involving users	4	5	6		2	2	2
Number of collaborative projects with industry	4	5	6	9	9	10	11
Licenses negotiated for use of IP	NA	NA	NA				

<sup>4</sup> Reduction in membership size necessitates reduction in targets.

<sup>5</sup> Reduction in membership size also necessitates reduction in publication targets

<sup>6</sup> The RPA has a membership of 17. All 17 members are expected to have an active profile. It is also anticipated that they will encourage/facilitate/co-publish with at least one non-member.

<sup>7</sup> Reduction in membership size also means a corresponding reduction of HDR students, hence the reduction in completion targets

<sup>8</sup> Current RPA membership of 17 will be increased slowly

# Educational Futures and Innovation

## Operational Plan 2006

	<b><u>Objectives &amp; Targets</u></b>	<b><u>Accountability</u></b>	<b><u>Action</u></b>
1.	Advance an internationally recognized, high impact program of research investigating innovative educational approaches to the challenges associated with 'future proofing' learners		
1.1	Contribute to the production of knowledge in the area of educational futures and innovation	Executive Committee, Coordinator & Strand Coordinators	Conduct internationally significant research in the area of educational futures and innovation
1.2	Conduct leading edge research that leads to the production of high-quality, publications	Chair, Coordinator & Strand Coordinators	Develop at least two joint research project/initiatives with international partners—particularly the members of the existing ICARE
1.3	Foster conferences, symposia and/or research workshops that bring together RPA members and distinguished international and national scholars	Chair, Coordinator	Organise two conferences, symposia and/or research workshops that bring together RPA members and distinguished international and national scholars  Coordinate 2 international conference initiatives explicitly designed to produce international publications  Support members' participation in key conferences and/or symposia, within Australia and internationally
1.4	Provide forums for building international profile, disseminating research and fostering industry and international links	Chair, Coordinator	Organize regular research conferences and/or symposia with potential industry partners
2.	Increase the research profile of the Educational Futures and Innovation measured by esteem/impact factors, in international, national, and state contexts		

2.1	Improve the impact of the RPA against international measures	Chair, Coordinator & Strand Coordinators	<p>Support members to keep clear records regarding:</p> <ul style="list-style-type: none"> <li>- Membership of Editorial Boards</li> <li>- Invited keynote addresses and presentations</li> <li>- Invitations to contribute to refereed journals and books</li> <li>- International refereeing (grants, articles, promotions)</li> <li>- International collaborative activities (research networks and partnerships)</li> </ul> <p>Produce high-esteem international, refereed publications</p> <p>Support high-impact participation of members for conferences within Australia and internationally</p>
2.2	Improve the esteem of the RPA on national measures	Chair, Coordinator & Strand Coordinators	<p>Encourage members to be active in the following areas:</p> <ul style="list-style-type: none"> <li>- Examination of theses (include name of university and year)</li> <li>- Maximise publicity for national keynotes delivered by members</li> <li>- Reviewing (grants, new books)</li> <li>- Contributing to High Profile professional activities (curriculum or govt committees, reviews, policy bodies)</li> </ul> <p>Host regular public seminars focused on topical issues (e.g. use of gaming technologies in youth culture, reading and boys)</p>
2.3	<p>Increase publicity for each of these achievements</p> <p>Connect publications to diverse audiences outside academia</p>	Coordinator	<p>Update RPA website, undertake marketing of RPA focus</p> <p>Pursue advice from media unit/experts</p> <p>Expand web site and associated material</p>
<b>3. Contribute to Research Quality Framework trial and make a significant contribution toward improving Deakin's performance in any future RQF exercise</b>			
3.1	<p>Contribute to the RQF trials</p> <p>Faculty's target of publications weighted by authorship of at least 85.</p>	Chair & Strand coordinators	<p>Participate in all RQF trials and conduct training workshops for memberships</p> <p>Provide funding to buy out teaching of RPA membership</p>
3.2	Improve quality of academic writing	Chair & Coordinator	Conduct Writing Workshops (with proven success at producing publications) to improve awareness of publishing opportunities and maximise chances of publications

3.3	Improve the standard of scholarship, especially among emerging or new researchers	Chair	<p>Continue provision of academic mentoring to Faculty members recently completed their PhDs to facilitate the development of next generation of scholars</p> <p>Provide opportunities for members to work with highly successful international academics</p> <p>Facilitate the participation of on-line discussion and seminar series and exchange programs for HDR students to internationally recognised overseas institutions. Particular emphasis is to be placed on developing these exchanges within the ICARE group of universities</p>
3.4	Establish and implement an internal grant application development program	Executive Committee & Coordinator	Produce at least 6 high quality grant applications each year out of which internationally esteemed publications can be drawn
3.5	Develop joint research project and academic exchange with international partners	Chair & Coordinator	<p>With Nicholas Burbles, the Grayce Wicall Gauthier Professor of Education University of Illinois, convene a conference, international workshops and submission writing sessions</p> <p>Host research workshops with international partners (ICARE)</p>
<b>4. Strengthen interdisciplinary research links within Educational Futures and Innovation RPA</b>			
4.1	Promotion of an interdisciplinary research culture	Executive Committee	<p>Identify concentrated research strands and appoint a senior researcher to head each strand</p> <p>Clarify the role of the former steering committee by re-examining the terms of reference and renaming it as Executive Committee</p> <p>Monthly seminars, presented by different strand leaders on an aspect of their current research</p>
4.2	Realign RPA to the new 'future proofing' direction	Executive Committee Coordinator	<p>Implement new name, plan and set new direction</p> <p>Hold regular meetings of membership to debate key issues and ensure RPA remains on target to achieve all key outcomes</p>
4.3	Employ coordinator to ensure RPA focus of research strands	Executive Committee	Appointment of 0.5 Research Fellow to act as co-ordinator to facilitate the work of the RPA
4.4	Ensure an on-going involvement of the international advisory board in RPA activities	Executive Chair, Coordinator and Strand leaders	Convene annual meeting of international advisory board
<b>5. Increase and Diversify Research Income</b>			
5.1	<p>Increase external funding grants by 10% per annum for the next three years</p> <p>Seek new funding opportunities, especially from Federal and State government agencies, philanthropy and corporate Australia</p>	<p>Executive Chair, Coordinator and Strand leaders</p> <p>Coordinator and Strand leader</p>	<p>Ensure that each of the six strands, which comprise the Educational Futures and Innovation Research Priority Area, submits at least one quality grant applications.</p> <p>Facilitate regular meetings, forums between non-ARC funding providers and RPA members</p> <p>Extend existing, high profile, high impact SiMRR initiative to involve more members</p>

5.2	Improve communication of information and updates to RPA members regarding funding sources and timelines	Coordinator	Provide information and updates to RPA members regarding funding sources and timelines
5.3	Raise the quality and breadth of funding applications	Chair, Coordinator and Strand leaders	Identify and make available seed funding, writing support and submission appraisals re external funding opportunities (non-ARC), especially for new or emerging researchers.
5.4	Contribute to the Faculty target of raising Higher Degree by research completions to at least 18	Chair	Sustain Writing Workshops  Initiate on-line doctoral seminars involving 4 ICARE universities