MELBOURNE SCHOOL OF GRADUATE RESEARCH

THE UNIVERSITY OF MELBOURNE

Providing Additional Skills Training
- does the PhD remain 'fit for purpose'?

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PVC (Graduate Research)

The University of Melbourne

Outline

- The University of Melbourne
- The Melbourne PhD and Doctoral Attributes?
- Who/how many PhDs are we training?
- What careers are we training them for ?
- How satisfied are the candidates with the training?
- What skills do they believe they need?
- Melbourne Reponses:
  - Doctoral Attributes Workshop
  - Graduate Certificate in Advanced Learning and Leadership (GCALL)
- Conclusions

The University of Melbourne

47,000 students
4,900 research students
$700M research expenditure

9,000 staff
27% international (U/G)
22% international (RHD)

THE EVOLUTION STARTS HERE

What is the PhD at Melbourne?

- 3-4 year, supervised research experience leading to the production of a c.80,000 thesis
(or exegesis + creative works)

- Peer, external examination

- The work(s) must make a contribution to knowledge

- The successful candidate should be able to demonstrate doctoral attributes

What is expected of doctorates?

Melbourne **doctoral graduates** are expected to:

- initiate research, formulate viable research questions
- design, conduct and report original research
- contextualise research within an international corpus
- evaluate and synthesize arguments from the literature
- understand key disciplinary norms
- problem-solve
- analyse critically across a changing discipline
- have excellent oral and written communication skills
- cooperate with fellow researchers and scholars
- have a respect for ethics, truth and intellectual integrity

How many are we training?

- University of Melbourne is Australia's largest research training provider (member of Group of 8)
- 4,900 research training candidates
- 3,800 doctoral candidates + 1,100 Masters candidates (MPhil, MA, MEd..)
- **550** PhD completions per year (4+4, 3+2+4 models)

- PhD completion rate at 5 years is c.60%
- Higher in STEM*, lower in HASS*
- Better experience in STEM than HASS

- STEM – Science, Technology, Engineering, Mathematics
- HASS – Humanities, Creative Arts, Social Sciences

Distribution of enrolments - 2008

Faculty	Doc	MRes	Total
Architecture Building & Planning	88	30	118
Arts	784	261	**1045**
Economics & Commerce	117	11	128
Education	348	136	484
Engineering	367	151	518
Land & Environment	153	46	199
Law	87	20	107
Medicine, Dentistry & Health Sciences	1228	133	**1361**
Melbourne Business School	13	0	13
Music	36	65	101
Science	572	79	**651**
Veterinary Science	54	24	78
Victorian College of the Arts	37	94	131
TOTAL	3884	1050	4934

Where do doctoral graduates go?

- Historically – the 'academy', ie. Universities

- In societies (e.g. Germany) where PhDs are embedded outside of the academy, in a variety of middle/senior roles

- **PhD skills are generic** and can be applied to almost any employment situation esp. management

- How well are we training PhDs?
  - difficult to answer
  - excellent employability
  - what do candidates believe?

PhDs – Where do they want to go?
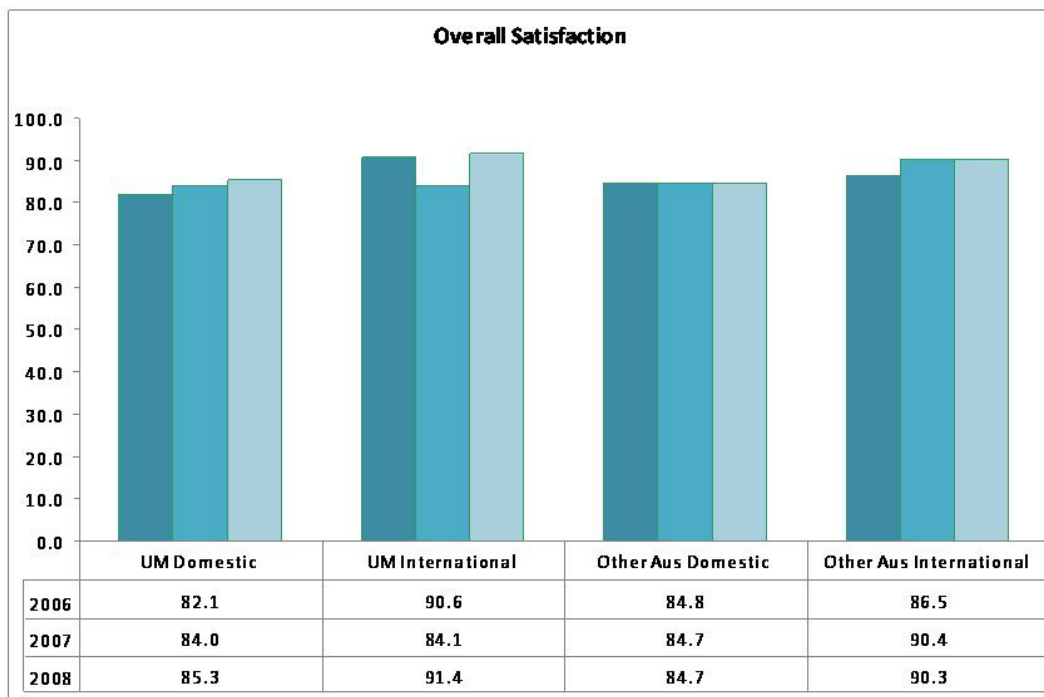
MSGR Exit Survey – n=324, '06-'08

- 29% want an "academy" role
- 44% want to continue research
- 6% want a consulting role
- 20% are uncertain

- Does the training experience drive choice?
- The Australian 'academy' is flat to reducing – where will the PhD graduates go? (cf. China large demand)
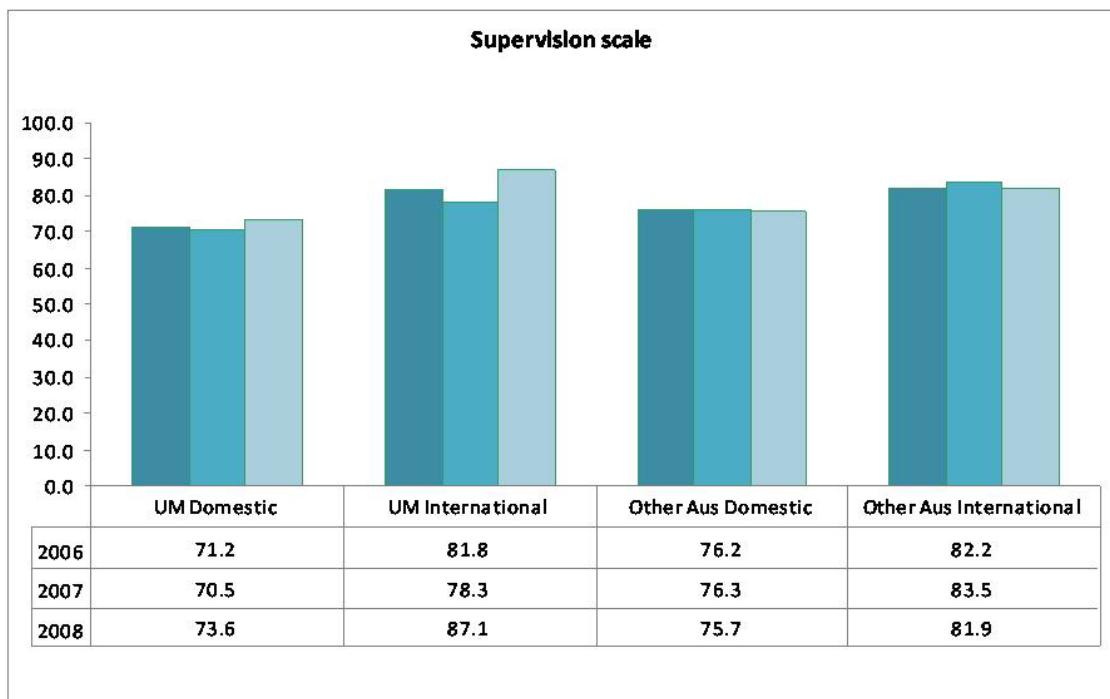
PREQ n=369 (nationally 3197)

- Postgraduate Research Experience Survey (all research trainees 3-6 months post-graduation)
- Nationally administered – comparative data
- Questioned on parameters including:
  - Overall satisfaction
  - Supervision
  - Skills development
  - Destinations (outcome and salary)
- Divided by cohort:
  - 'domestic' and international
  - UoM vs. Australia

Overall Satisfaction

	UM Domestic	UM International	Other Aus Domestic	Other Aus International
2006	82.1	90.6	84.8	86.5
2007	84.0	84.1	84.7	90.4
2008	85.3	91.4	84.7	90.3

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PREQ - Supervision

Supervision scale

	UM Domestic	UM International	Other Aus Domestic	Other Aus International
2006	71.2	81.8	76.2	82.2
2007	70.5	78.3	76.3	83.5
2008	73.6	87.1	75.7	81.9

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Are they employed?

	2004	2005	2006	2007	2008
Available for full-time work	76.0	78.2	73.5	72.4	76.4
(a) Working full-time	89.4	90.3	90.3	88.0	89.1
(b) Working part-time seeking full-time work	8.0	7.6	7.3	7.9	6.8
(c) Not working, seeking work	2.7	2.1	2.3	4.1	4.1
Studying full-time	9.0	4.3	8.1	7.0	7.0
Working part-time, not seeking full-time work	10.7	11.9	11.5	13.4	11.7
Not working, seeking part-time work	0.6	1.3	0.7	1.0	0.3
Unavailable for work or study	3.8	4.3	6.1	6.2	4.7
N	346	371	408	402	385
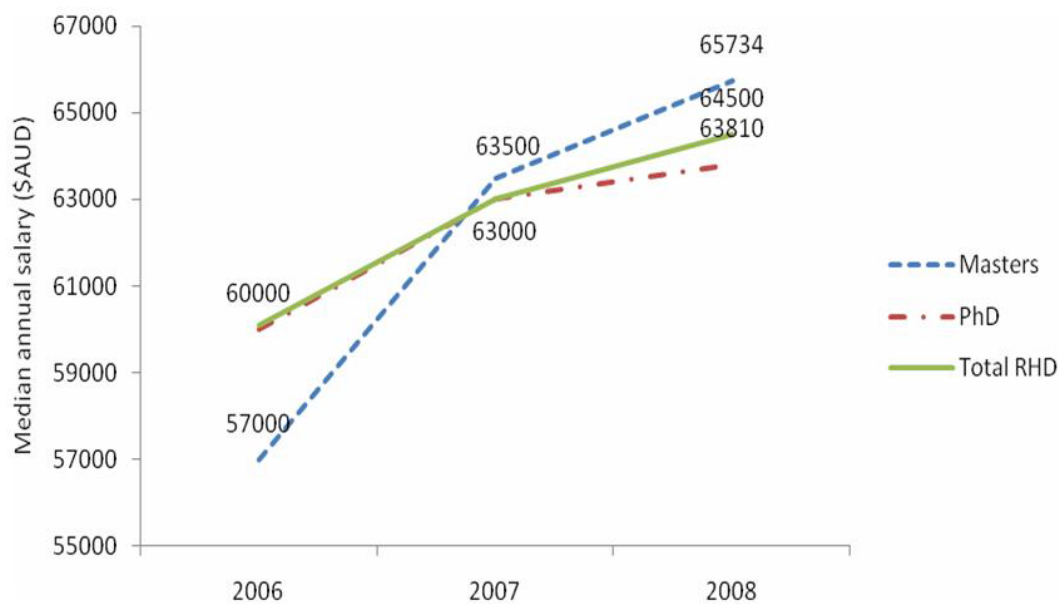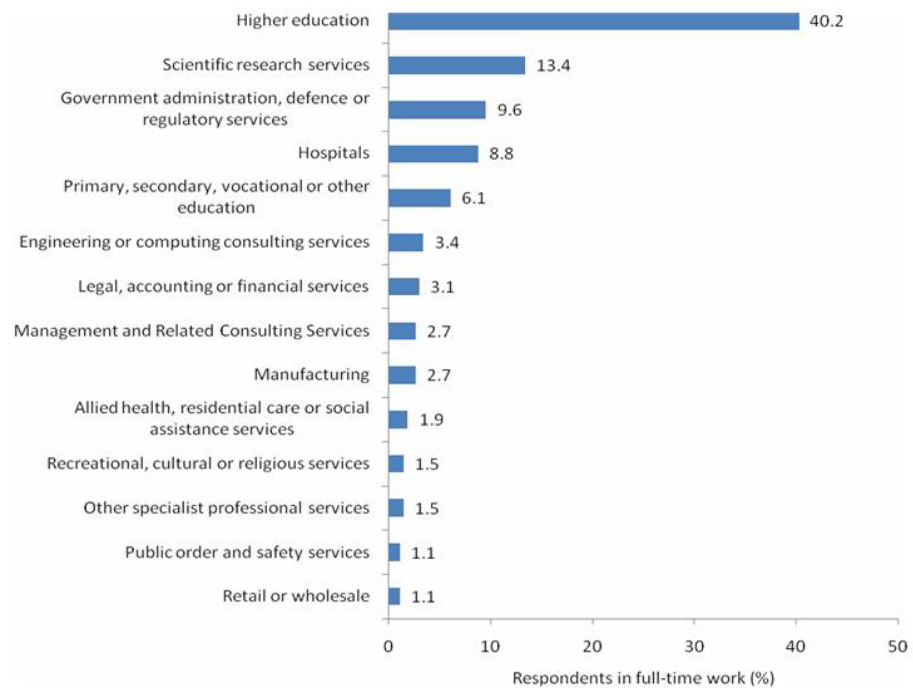
What do they earn?

PREQ – Skills development

Skills development scale

	UM Domestic	UM International	Other Aus Domestic	Other Aus International
2006	89.6	90.0	91.4	91.0
2007	90.5	92.9	91.4	93.1
2008	94.0	97.7	92.8	94.4
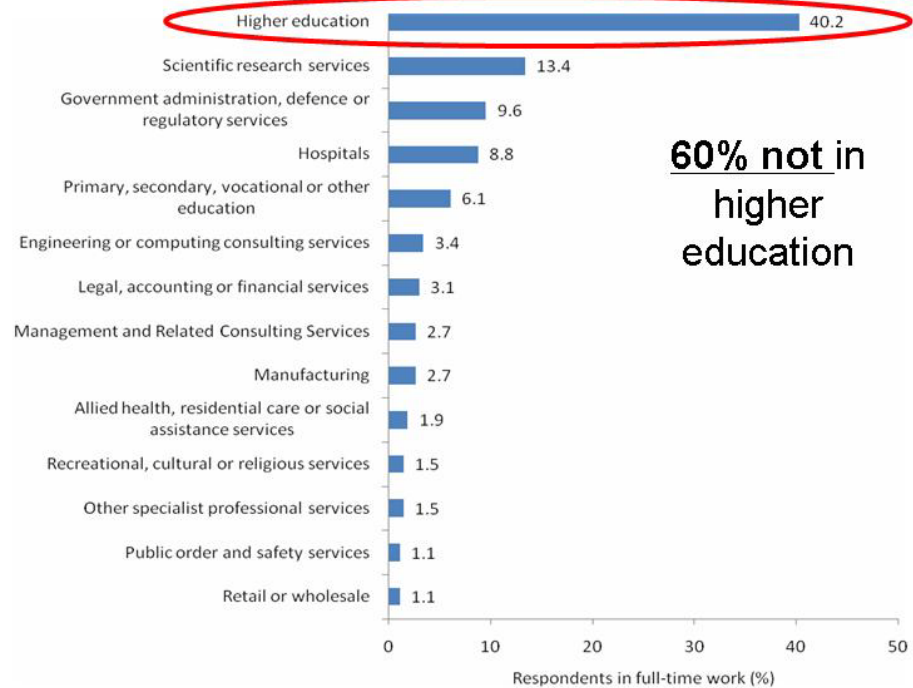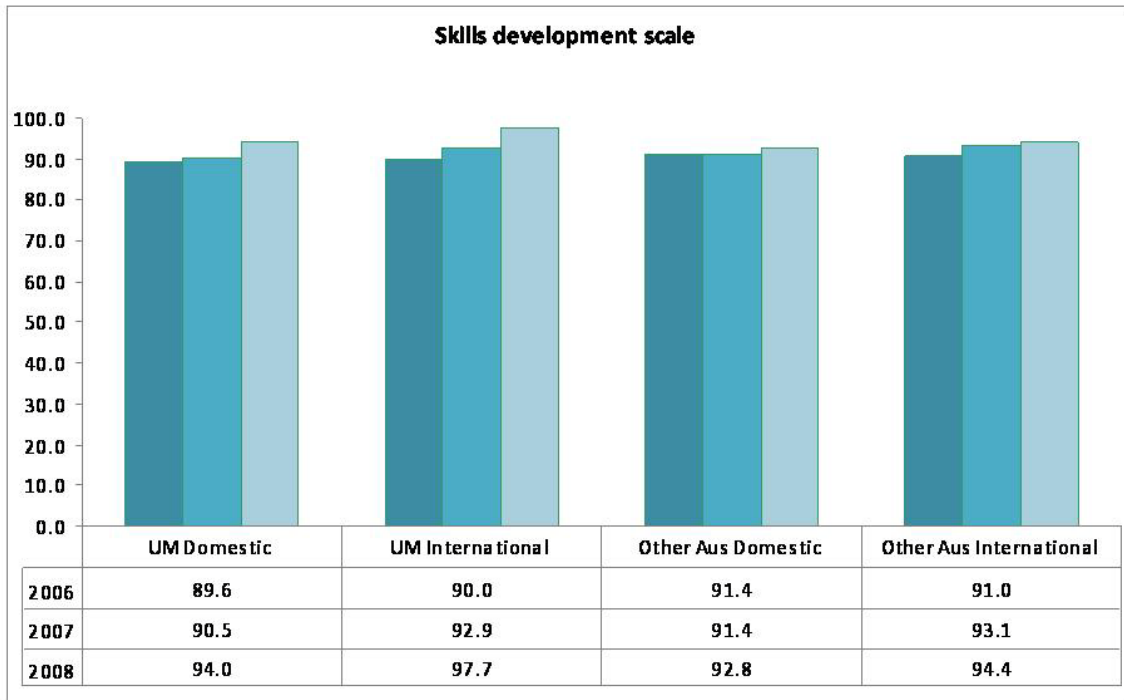
Skills

- but

- which skills?

- Academic or Transferrable?

Skills development scale

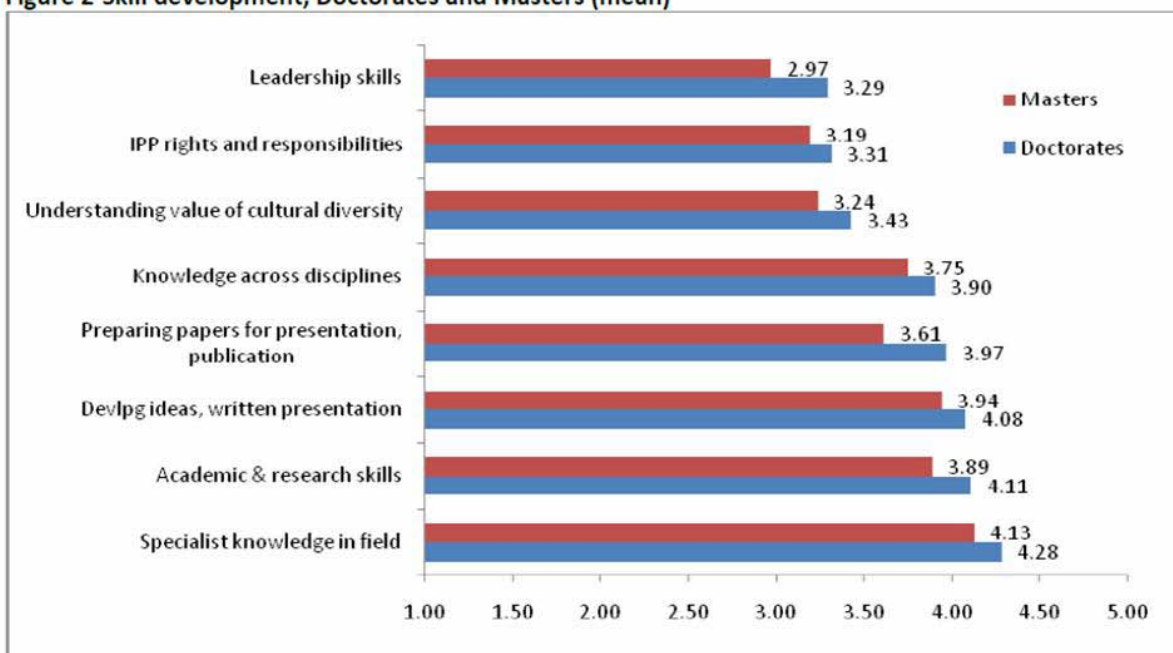|	UM Domestic	UM International	Other Aus Domestic	Other Aus International
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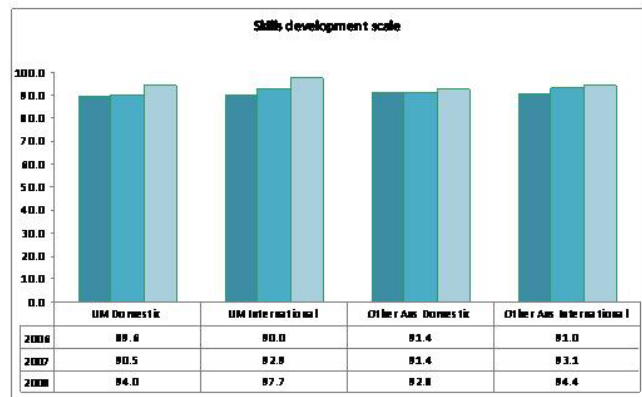
All Candidates - MRES

- PREQ – survey given to all <u>completed</u> candidates
- Melbourne Research Experience Survey – given to 4173 research training candidates (April 2009)
- MRES – 41% response rate (n=1716)
- Responses align with Faculties, ages and degree types

MRES – skills development

**Figure 2 Skill development, Doctorates and Masters (mean)**

Skill	Masters	Doctorates
Leadership skills	2.97	3.29
IPP rights and responsibilities	3.19	3.31
Understanding value of cultural diversity	3.24	3.43
Knowledge across disciplines	3.75	3.90
Preparing papers for presentation, publication	3.61	3.97
Devlpg ideas, written presentation	3.94	4.08
Academic & research skills	3.89	4.11
Specialist knowledge in field	4.13	4.28

MRES – skills development

Figure 2 Skill development, Doctorates and Masters (mean)

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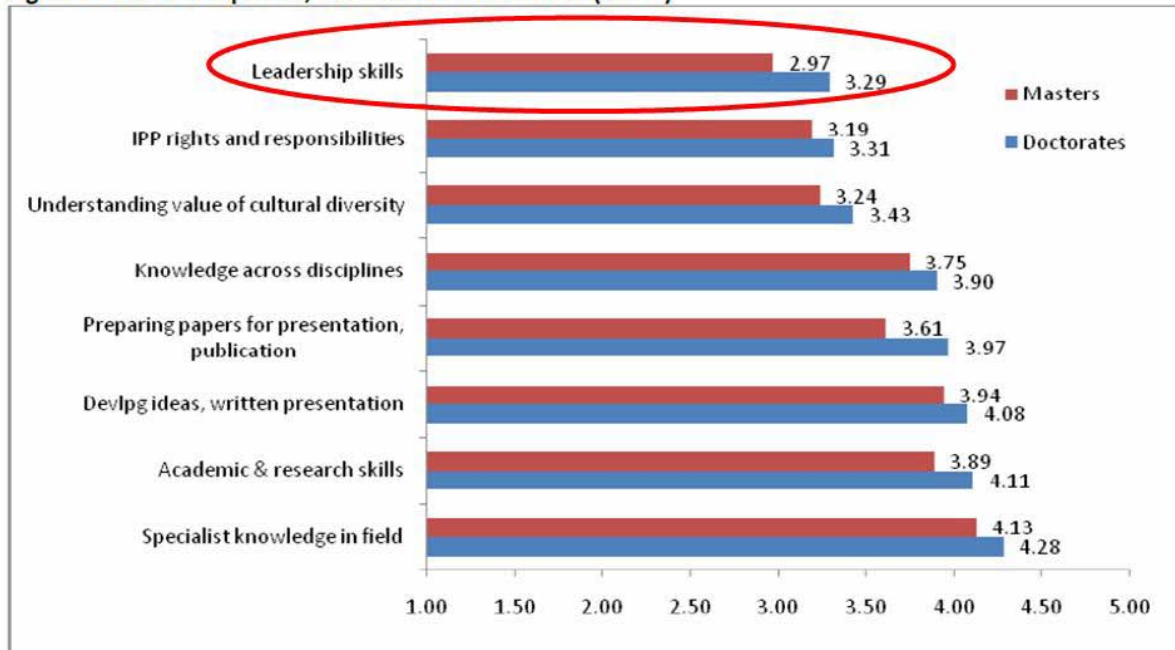
Melbourne Response to Skills

- Help candidates better understand what attributes they already have obtained, and

- 'Teach' self-selected candidates leadership and how to work in teams, esp. interdisciplinary teams.
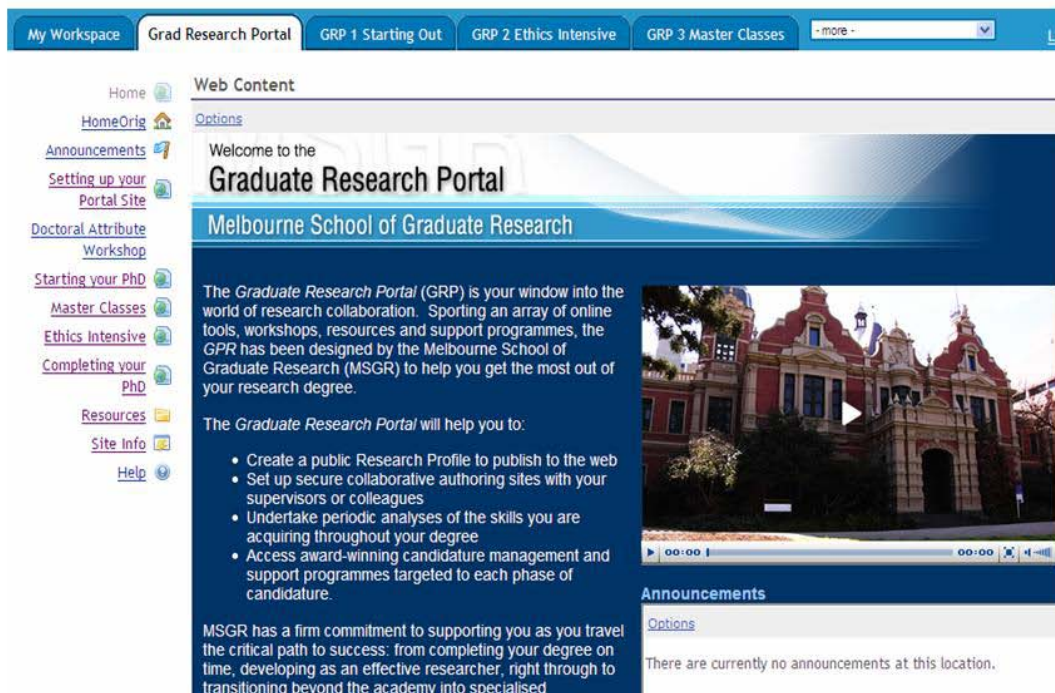
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Identifying Doctoral Attributes

- Melbourne has developed a **Graduate Research Portal**
- Sakai-based ('open access')
  - online document storage
  - collaborative authoring and research tools
  - web 2.0 tools (research wikis & blogs)

- Provides environment to develop joint projects, log experience, test their training against Doctoral Attributes Workshop (DAW)

- DAW helps candidates recognise their skills

Graduate Research Portal

Doctoral Attributes Workshop

Doctoral Attribute Workshop

Introduction | Activity survey | Activity reports | Doctoral attributes | Reflective task | Reflection summary | Conclusion

Activity Survey

Reflect upon the specific activities that you undertake (or think you should undertake) as part of your day-to-day research agenda. These can be as broad or as specific as you like. From discussing your latest research findings in a meeting with your supervisor, right through to presenting at an international conference, the important thing is whether you feel they are or should be a significant part of completing a PhD and developing for your future career.

Record these activities in the tables below. You will need to assign each activity a timeframe, indicating whether this is something you are currently doing, plan to do or have already completed. Don't worry if you don't have an even spread at first. Each time you undertake the *Doctoral Attribute Workshop* these lists will change depending upon how fast you are progressing through your degree, or according to the changing importance of some of these tasks. These lists will not remain static over the course of your degree. In the first instance try to record at least ten activities.

To create or edit a recorded activity simply click on the appropriate button and provide as much detail as possible in the pop-up box. Pay particular attention to how you classify each activity according to its importance to you, how long you think you will need to complete the task, and what activity type best describes that task (e.g. is it best described as a networking task or a research practice task. If you can't choose feel free to enter the activity twice to adequately reflect the skill types). Remember this is a reflective exercise. There are no correct answers and no prizes for rushing.

Once you have created a satisfying list of activities you will be able to generate a number of reports from the data you have entered by navigating through to the 'Activity Reports' screen.

List of suggested activities to get you going

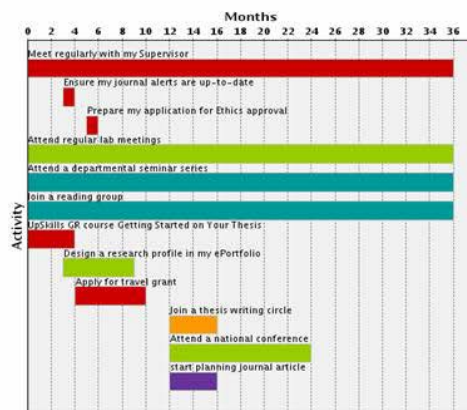| Done	Doing	Planning
☐ *Conduct my literature review*	☐ *Meet regularly with my Supervisor*	☐ *Prepare my application for Ethics approval*
	☐ *Ensure my journal alerts are up-to-date*	☐ *Join a reading group*
	☐ *Attend regular lab meetings*	☐ *UpSkills GR course Getting Started on Your Thesis*
	☐ *Attend a departmental seminar series*	☐ *Apply for travel grant*
	☐ *Design a research profile in my ePortfolio*	☐ *Join a thesis writing circle*
		☐ *Attend a national conference*
		☐ *start planning journal article*

Doctoral Attributes Workshop

Doctoral Attribute Workshop

Introduction | Activity survey | Activity reports | Doctoral attributes | Reflective task | Reflection summary | Conclusion

Timeline Report : Activity Schedule

Months
0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36

Activity:
- Meet regularly with my Supervisor
- Ensure my journal alerts are up-to-date
- Prepare my application for Ethics approval
- Attend regular lab meetings
- Attend a departmental seminar series
- Join a reading group
- UpSkills GR course Getting Started on Your Thesis
- Design a research profile in my ePortfolio
- Apply for travel grant
- Join a thesis writing circle
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- start planning journal article

Legend:
- Research practice
- Research publication
- Networking
- Knowledge transfer
- Development of transferable skills
- Related professional activity
- Maintaining momentum

Completed Activities (Done)
1. Conduct my literature review

d reporting.

t to obtaining your PhD by allowing you to generate a dual tasks, skills acquisition and the ultimate goal of

ed as a PDF to your ePortfolio as a record of this session's

tivity types that relate to research D can be illuminating of just how all of your activities are tending to here.

Activity type
(click to open)

h will give you an 'at-a-glace' most out of your Melbourne ay particular attention to the colour ful in showing you if your activity list

Importance report
(click to open)

demands each activity places upon , as well as according to activity y activities have been scheduled

Timeline report
(click to open)
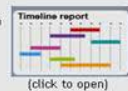
GCALL

- 'For award' (Graduate Certificate), ie. student pays
- GC in Advanced Learning and Leadership
- 2 subjects
- **Ethical Leadership**
  - week long intensive at Business School Facility, off campus
  - Working aught using classical (eg. Plato) and contemporary texts, led by students with high level guests
- **Future Projects**
  - Small interdisciplinary group collaboration to solve problem (eg. environmental)

GCALL

Ethical Leadership @ Mt. Eliza

GCALL

How will you reach beyond your PhD?

How do great leaders meet ethical challenges?

What is power and what are the responsibilities of the powerful?

What will be your contribution?

Melbourne School of
Graduate Research
Presents

Graduate Certificate in Advanced Learning and Leadership (GCALL)
Commencing in March 2009

The GCALL is a program of advanced interdisciplinary coursework designed exclusively for doctoral candidates at the University of Melbourne.

It consists of two 25-point subjects:
Ethical Leadership and The Futures Project.
Places are strictly limited.

Full course details, application and enrolment information available at:
www.gradresearch.unimelb.edu.au/gcall

http://www.msgr.unimelb.edu.au/docs/GCALL/GCALL_postcard_web.pdf

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Conclusions

- Research Training pedagogy driven by history and needs of academy
- Academy is only one option for PhDs in 2010
- Time to examine the PhD and increase its relevance to non-academicians?
- Supplement PhD core skills with transferrable skills – candidates want this training
- Two strategies adopted at Melbourne:
  - Help candidates understand their experience and skills that have acquired
  - 'teach' ethical leadership and interdisciplinary collaborative skills