Graduate Research School





Aims for PhDs



- Candidates with doctoral competencies
- All doctoral completions within 3 years
- High-quality doctoral outcomes useful to society
- Same outcomes for 2nd-language speakers



Public concerns

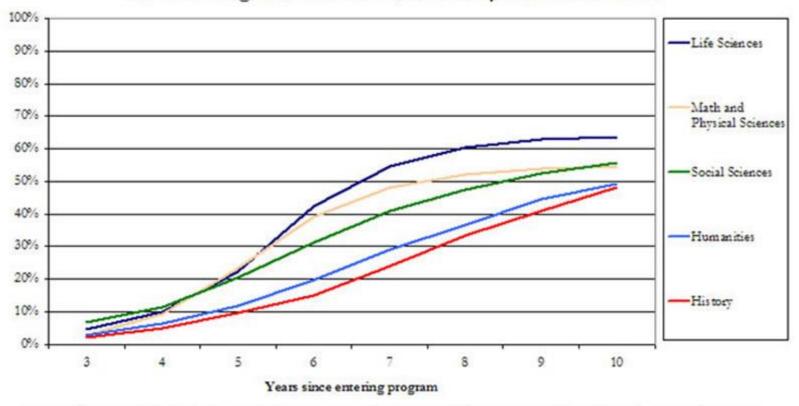


- Lack of useful PhD outcomes to society
- Worth less than cost to society (~\$500,000/PhD)
- Poor completion rate (60% but near 100% for those that submit)
- Overrun of time
- New doctors not competent or useful to society

Completion rates



Figure 1: Cumulative Completion Rates for Doctoral Students who Entered Programs 1992 to 94, in History and Broad Fields



Source: Data on broad fields from table in Inside Higher Ed article at http://www.insidebighered.com/news/2007/07/17/phd. Numbers for history are close approximations based on slide 8 of the presentation at http://www.phdampletion.org/resources/SW07_PhDC_BaselineData.ppt. Staff at the project did not respond to a request for the specific numbers.

Background



- Work study of PhD research, supervision & examination (tasks, time, critical paths, lost time)
- Research literature PhD study, supervision, education, assessment...
- Educational theory aims, objectives, curricula, learning objectives, performance criteria, assessment modes ..
- Empirical observation and testing...

Candidates' concerns



- Am I good enough?
- Is my research really a PhD?
- Have I reviewed enough literature?
- Are my research methods and analyses ok?
- How can I write such a big thesis?
- I don't feel like a doctor!
- How do I learn professional doctoral skills?
- Will I want to do this for all those years?
- Is my language good enough?
- How can I complete within time?

"What delays PhDs?



- Administration delays and errors
- Wrong kind of research project
- Faulty time plan
- Unstructured literature review process (serendipity etc)
- Unstructured/late thesis writing and thesis structure
- Reasoning and justification problems
- Personal crises
- Student skills (reasoning, writing, perspective)
- Unhelpful/contradictory guidance by supervisors

Graduate Research School Year PhD Time-line



Task	Time
Application	1 month
Candidacy and ethics approved	4 months
Literature review & data collection prep	5 months
Data collection	4 months
Analyses	5 months
Contingency & personal crises	2 months
Holidays	3 months (4 week/year)
Proofing and editing of thesis	6 months
Examination and award	5 months
Total	36 months (3 years)

Graduate Research Cool ast-Track Supervision



- Weekly meetings with student (48/year)
- Proofreading candidature/ethics
- Supervisor always knows more than student
- Pastoral care
- Face-to-face training in writing, research methods & doctoral attributes from week 1
- Candidacy and thesis writing from week 1
- Proof reading thesis from week 1

PhD competencies



- Set up and manage new research projects
- Develop new research and theory (different from their PhD)
- High level reasoning skills
- Collaborate effectively in a variety of team roles
- Good team worker
- Sound administrator
- Accurate and honest budget management
- Develop quotes for work and plan workflows and resources
- Write professional documents and reports that will stand legal scrutiny
- Manage their personal and work lives professionally
- Establish and maintain professional networks
- Make sound professional and ethical judgments
- Be politically and administratively effective

Types of Research Project



- Problem-based research (usually best for PhDs)
- Single question research (Why did the Egyptians to build pyramids? – often unsuitable)
- Blue-sky research ('What happens if...? usually not suitable for PhDs)
- Hypothesis-testing research (only for fields with highly-developed and tested body of theory)



Reasoning & Justification

- Logical (If A true and B is true then logically C)
- Casuistic (e.g. because a trusted researcher reported it on the basis of their research)
- Deontic (self-evident, e.g a cup is a cup)
- Rhetoric (persuasion through emotion or fallacies. Usually important to avoid using rhetorical justification in PhD theses)

Graduate Research School Structured It review



A common fear of PhD candidates is 'How do I know if I've reviewed enough material?

Simple structured literature review method (for Google):

- Set Google Preferences 50 items (scrolls faster)
- Identify and write down appropriate 'keywords' to search
- Google using these keywords and identify **better keywords** (by reading titles, abstracts, and exec summaries)
- Repeat until no longer useful and then use for search
- Review and save relevant documents and copy details into Endnote
- In literature review, describe and justify choice of keywords before reviewing material

Use similar process for library catalogues, journals, databases etc.

Structured thesis



- Too much effort and time goes into re-organising and re-writing PhD theses.
- Start writing thesis week 1 (with supervisor proof reading)
- Use pre-defined thesis structure of limited size
- Recommend Perry '5 Chapter Thesis'.
- 75000-80000 words (less words is better)

Perry 5 Ch Thesis



- Structure approved by examiners
- Written in shortest time with minimum content
- Demonstrates doctoral competencies
- Parts suitable for publication (thesis)

5 Ch process



- Define research problem
- Review literature how others have tried to solve research problem
- Identify research questions that provide information to resolve research problem
- Choose methods of data collection and analysis to answer research questions
- Report Results of data collection
- Explain how Results answer research questions and solve research problem
- Explain implications

5 Ch Structure



- Ch 1 Introduction
- Ch 2 Literature Review
- Ch 3 Research Methods
- Ch 4 Report of Data Collection
- Ch 5 Conclusions & Implications
- References
- Appendices

Graduate Research Scho Administration issues



Administration is consistently one of the unnecessary causes of delay in PhD completion

- Manage administration timing tightly, and
- Manage your supervisor managing administration

Graduate Research Smooth PhD



(very experienced researchers only!)

Task	Time
Application	1 month
Candidacy and ethics approved	2 months
Literature review & data collection prep	2 months
Data collection	2 months
Analyses	3 months
Proofing and editing of thesis 70,000 words	5 months
Examination and award	3 months
Total	18 months

Discussion



- 'Best practices' supervision
- Choice of research project
- Timeline
- Personal development of candidate
- Doctoral competencies
- Structured literature review and thesis
- The best way to learn reasoning, research methods & writing?
- High-level PhD administration by supervisors

Questions?



Contact details:

Dr Terence Love

t.love@ecu.edu.au

Feedback?



- Please complete the feedback sheets.
- Leave in pile by exit