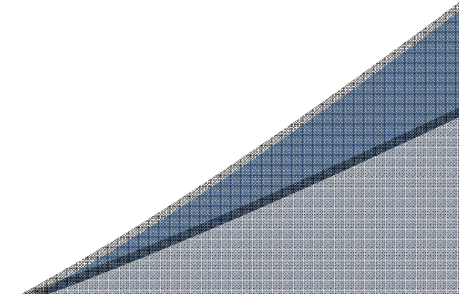


Conditions & Standards for Developing & Delivering Doctoral Programs: Australian Case Study

Presenter: Professor Ron Adams
Professorial Research Fellow
Victoria University, Melbourne

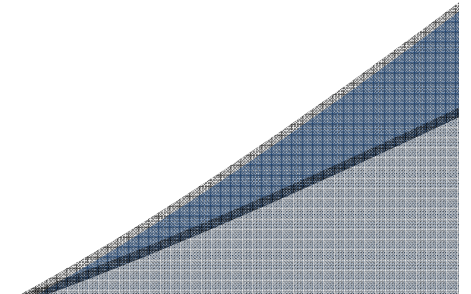
The External Context

- ◎ **Economic & Social Transformation**
 - renewed focus on human capital development
 - marginalisation of unskilled workers
 - recognition of improving educational outcomes for students from low socio-economic backgrounds
- ◎ **The Informatics Age 1965-2045**
 - ageing population & faster growth in standards of living
 - dominance of the service sector
 - rise of SMEs and pervasiveness of ICT
- ◎ **Trends in technology of learning**
 - technology key enabler to deliver education
 - e-learning crosses traditional institutional boundaries
 - galaxy of providers & partners rather than traditional 'in-house'
- ◎ **Sustainability now a fundamental design principle**
 - impact on daily lives, education & working future
 - breaking down silos of disciplines & professions



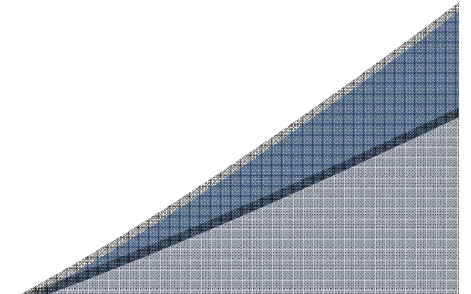
The Future Demand for Skills

- ⦿ Changing Workforce Needs
- ⦿ Industry Skills Demand
- ⦿ Global war for 'smart talent'
- ⦿ Hard to predict specific knowledge & skills requirements of 21st century graduates
- ⦿ Need for general skills to respond to changing demand



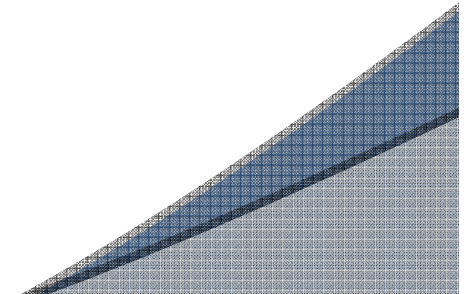
Implications for Universities

- ⦿ Commitment to wider educational, labour market & social participation
- ⦿ Stronger partnerships with training providers & industry
- ⦿ Work-based & work-integrated learning
- ⦿ Modular mode delivery for knowledge workers actively managing their careers
- ⦿ Providing broader set of generic skills for graduates - including doctoral graduates
- ⦿ Providing deeper & higher level of skills to larger number of candidates



Universities & the International Context

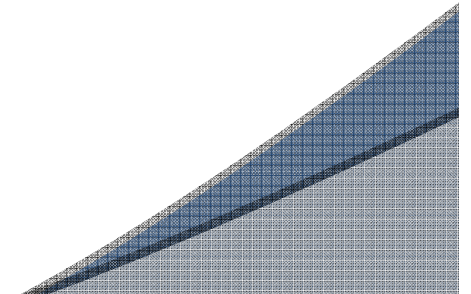
- Student mobility
- Global labour market & skill transferability
- Merging international expectations of graduate attributes



Bologna Process Third Cycle

Doctoral cycle generic descriptors ('Dublin Descriptors'):

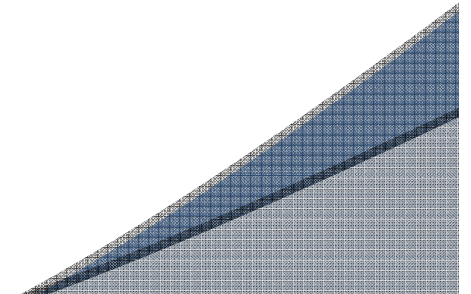
- ⦿ have demonstrated a systematic understanding of a field of study & mastery of research associated with that field
- ⦿ have demonstrated the ability to conceive, design, implement & adapt a substantial process of research with scholarly integrity
- ⦿ have made a contribution through original research that extends the frontier of knowledge by developing a substantial body of work, some of which merits national or international refereed publication
- ⦿ are capable of critical analysis, evaluation & synthesis of new & complex ideas
- ⦿ can communicate with their peers, the larger scholarly community, and with society in general about their areas of expertise
- ⦿ can be expected to promote, within academic & professional contexts, technological, social or cultural advancement in a knowledge based society



Skills Training Requirements of Research Postgraduates

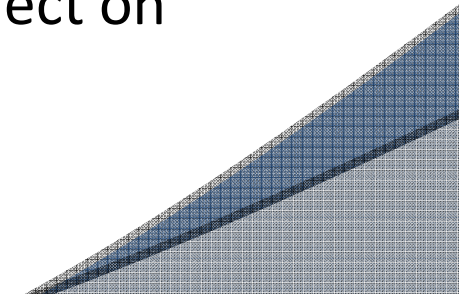
- Research Skills & Techniques
- Research Environment
- Research Management
- Personal Effectiveness
- Communication Skills
- Networking & Teamworking
- Career Management

(2001 UK Research Councils/Arts & Humanities Research Board *Joint Statement on the Skills Training Requirements of Research Postgraduates*)

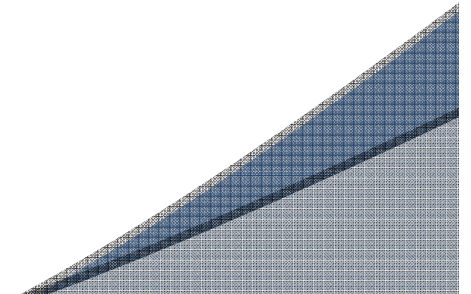
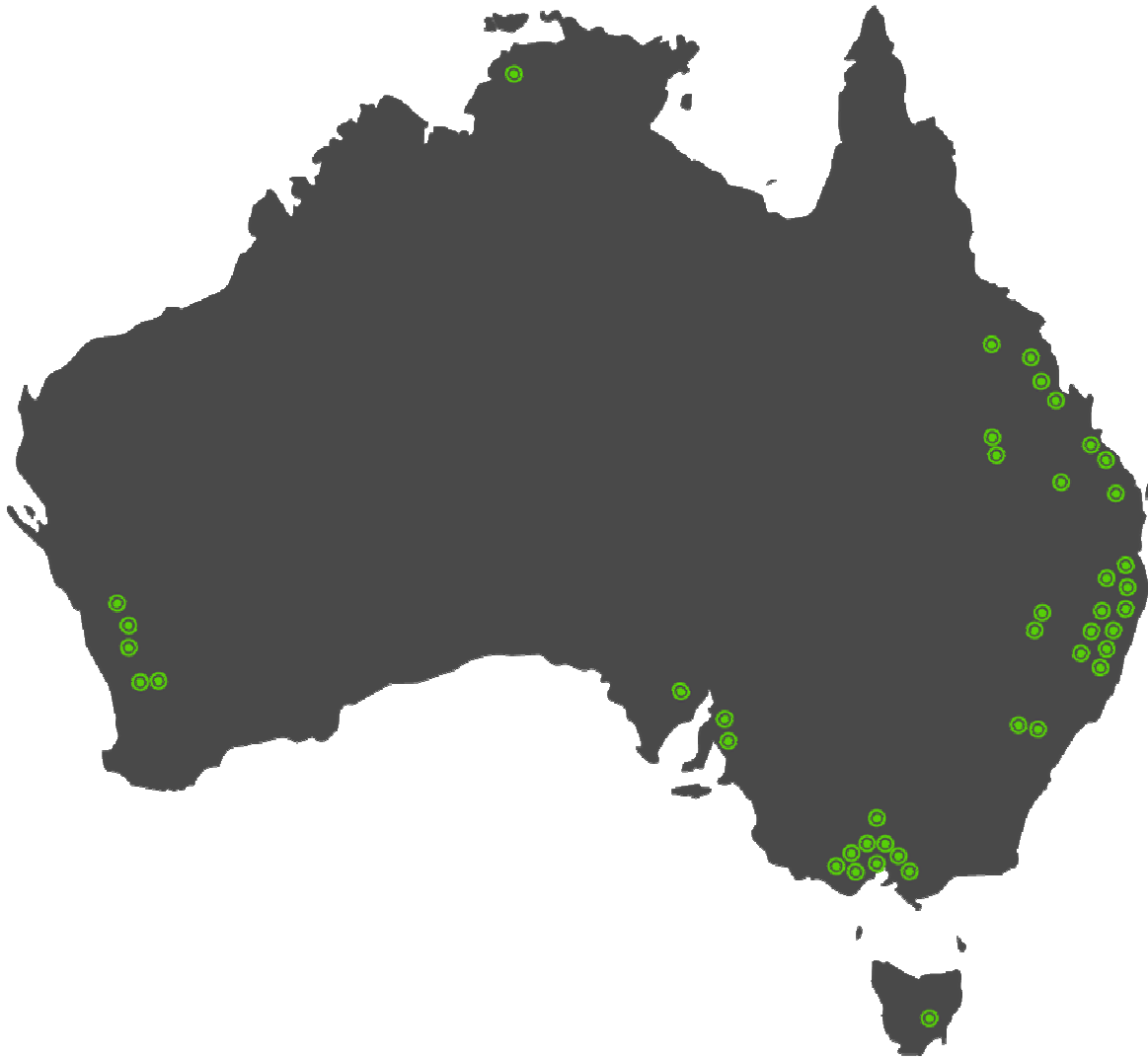


Research Skills & Techniques

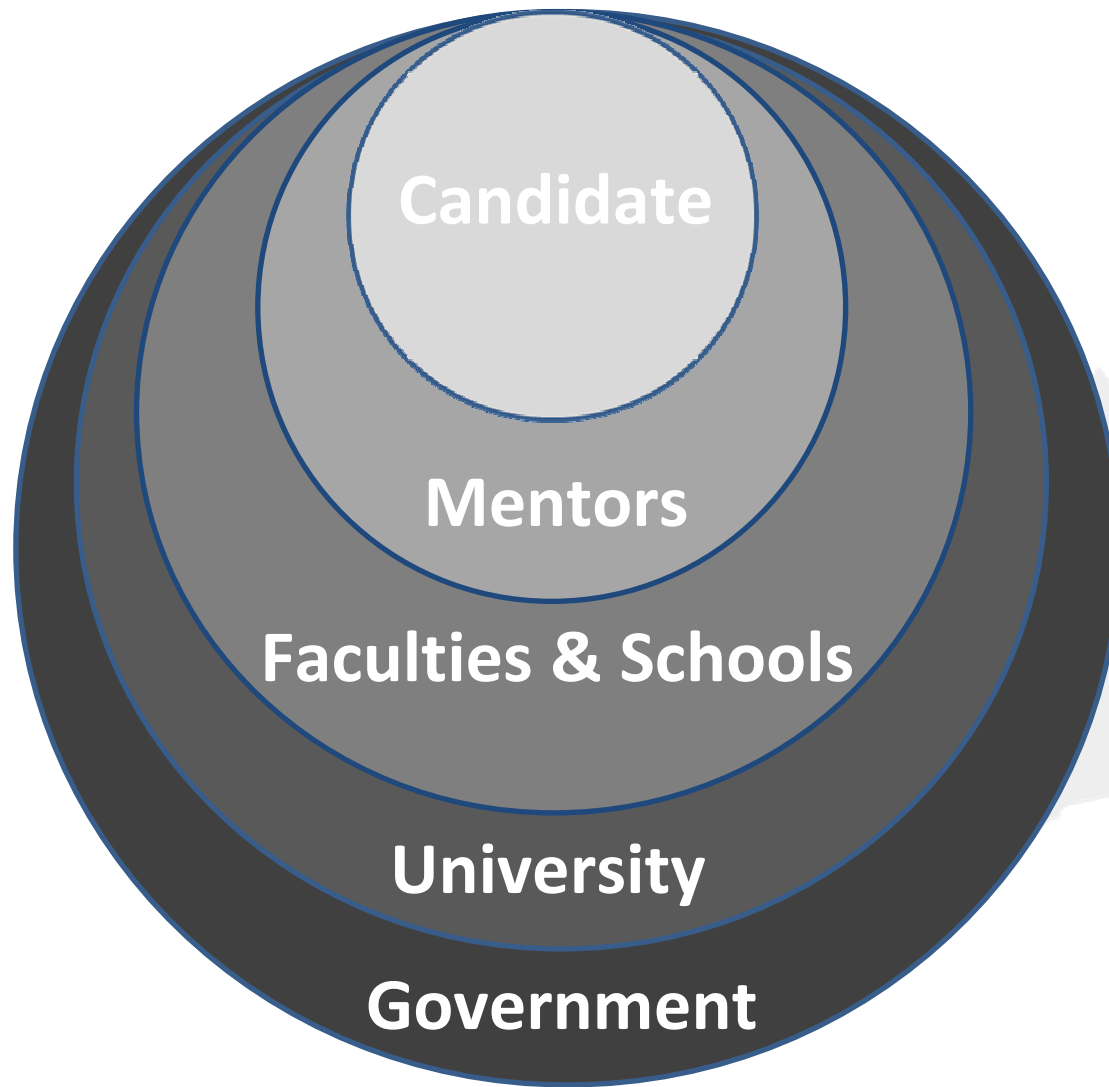
1. Ability to recognise and validate problems
2. Original, independent and critical thinking, and ability to develop theoretical concepts
3. Knowledge of recent advances within your field and in related areas
4. Understanding of relevant research methodologies and techniques and their appropriate application within your research field
5. Ability to critically analyse and evaluate your findings and those of others
6. Ability to summarise, document, report and reflect on progress



Australian Context



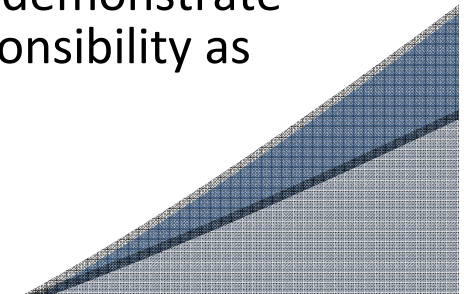
Locating the Candidate



Australian Qualifications Framework

Level 10

- **Knowledge:** "Graduates will have systematic & critical understanding of a substantial & complex body of knowledge at the frontier of a discipline or area of professional practice"
- **Skills:** "Graduates will have expert specialised cognitive, technical & research skills in a discipline area to independently & systematically:
 - engage in critical reflection, synthesis & evaluation
 - develop, adapt & implement research methodologies to extend & redefine existing knowledge or professional practice
 - disseminate & promote new insights to peers & the community
 - generate original knowledge & understanding to make a substantial contribution to a discipline or area of professional practice"
- **Application:** "Graduates will apply knowledge & skills to demonstrate autonomy, authoritative judgement, adaptability and responsibility as an expert & leading practitioner or scholar"

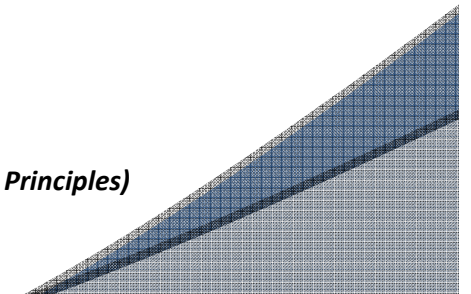


The Higher Education Sector's Response

Mentors' responsibilities include:

- ⦿ providing appropriate academic support to achieve the highest standard of research
- ⦿ suggesting ways that the candidate can make the most effective use of time
- ⦿ maintaining close & regular contact with the candidate
- ⦿ requiring written work from the candidate on a pre-arranged & agreed schedule
- ⦿ monitoring carefully the performance of the candidate relative to the required standard
- ⦿ using the university's regular reporting procedures as the minimum means for discussing and acting upon any difficulties & problems
- ⦿ comment on drafts of the thesis & certify that it is worthy of examination
- ⦿ providing career advice & guidance

(Australian Vice-Chancellors' Committee's Principles)

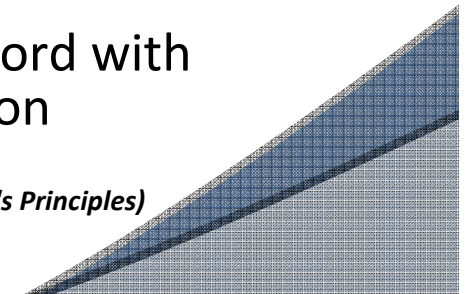


The Higher Education Sector's Response

Candidates' responsibilities include:

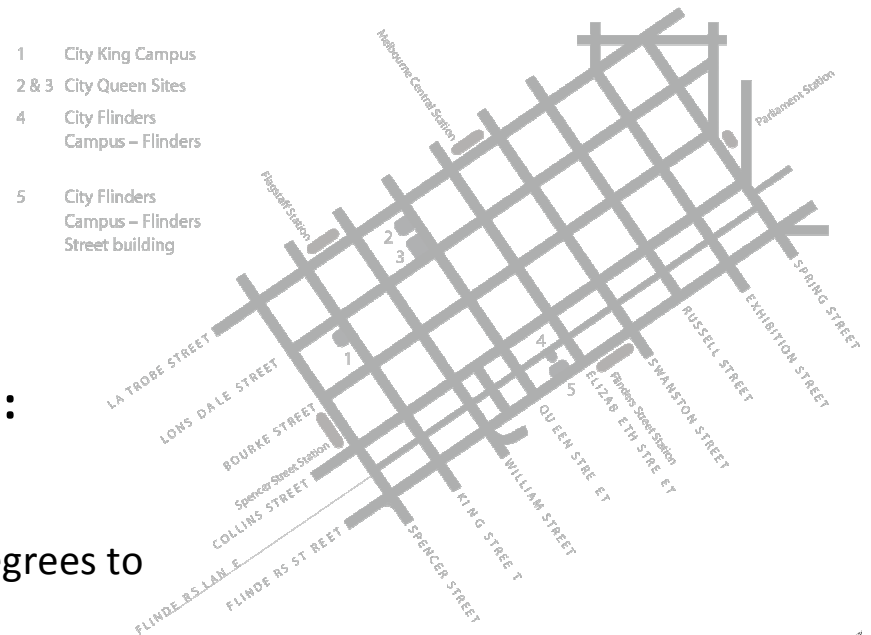
- diligently & intelligently proceeding with the research as agreed with the mentor
- being familiar with & abiding by university regulations governing the degree
- keeping to agreed schedule of meetings
- taking the initiative in raising problems or difficulties & sharing responsibility for seeking solutions
- maintaining progress of work as agreed with mentor
- providing formal progress reports, through the mentor, to appropriate committee
- adhering to safe working practices & ethical practices appropriate to the discipline & the university
- accepting responsibility for producing final thesis in accord with relevant requirements including standard of presentation

(Australian Vice-Chancellors' Committee's Principles)



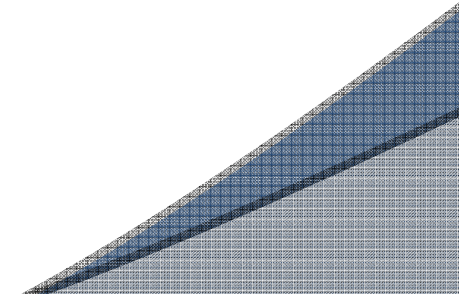
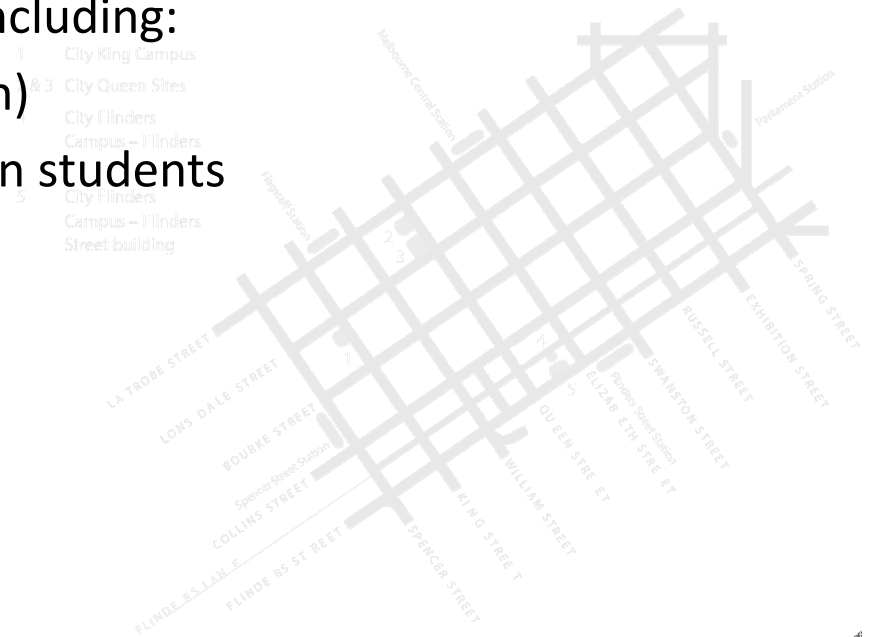
Victoria University Overview

- **Established in 1990 as an experimental multi-sector university**
- **Higher Education**
 - Faculty of Arts, Education & Human Development
 - Faculty of Health, Engineering & Science
 - Faculty of Business & Law
- **Vocational Education**
 - Faculty of Workplace Development
 - Faculty of Technical & Trades Innovation
- **Further Education**
 - Victoria University College
- **With articulated learning pathways from:**
 - VCE (upper secondary years) to
 - Certificate courses to
 - Diplomas, Advanced Diplomas & Associate Degrees to
 - Degrees, Graduate Certificates & Diplomas to
 - Masters by Coursework and/or Research to
 - Doctoral Studies



Victoria University Student Numbers

- ◎ **54,000 students, including:**
 - 15,000 International students
 - 24,000 Higher Education students, including:
 - 4,700 Postgraduate (800 research)
 - 30,000 Technical & Further Education students

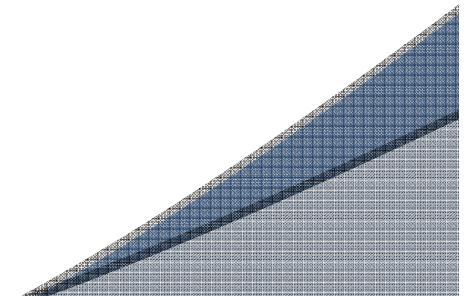


Victoria University Going to the Students



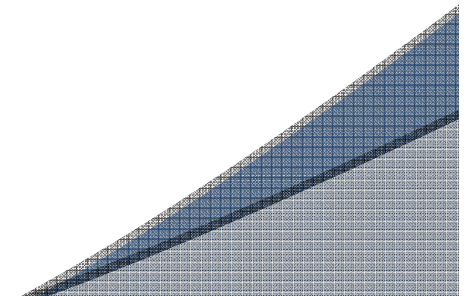
Victoria University Higher Education Faculties & Research Centres

- ① **Higher Education Faculties**
 - Arts, Education & Human Development
 - Health, Engineering & Science
 - Business & Law
- ② **Research Centres & Institutes**
 - Cultural Diversity & Wellbeing
 - Logistics & Supply Chain Management
 - Sustainability & Innovation
 - Sports, Exercise & Active Living
 - Diversity, Educational Access & Success
 - Environmental Safety & Risk Engineering
 - Strategic Economic Studies
 - Telecommunications & Micro-Electronics
 - Work-based Education
 - Applied Informatics



Victoria University Doctoral Programs

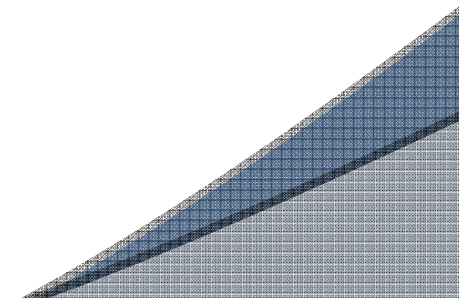
- ◎ **Doctor of Philosophy**
 - Standard Thesis
 - Thesis by Creative Project
 - Thesis by Publication
- ◎ **Professional Doctorate**
 - Doctor of Psychology
 - Doctor of Applied Psychology
 - Doctor of Business Administration
 - Doctor of Education
 - Doctor of Social Work



Doctor of Philosophy (Standard Thesis)

- Objective of producing independent researchers
- Conducting independent, original & high quality research
- Expected to uncover or create new knowledge by:
 - discovery of new information
 - formulation of theories
 - development of new approaches
 - innovative reinterpretation of existing ideas, theories or approaches
- Thesis: 60,000 - 100,000 words

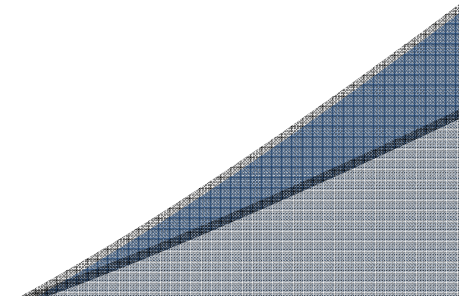
- 1 City King Campus
- 2 & 3 City Queen Sites
- 4 City Flinders
Campus - Flinders
- 5 City Flinders
Campus - Flinders
Street building



Doctor of Philosophy Thesis by Creative Project

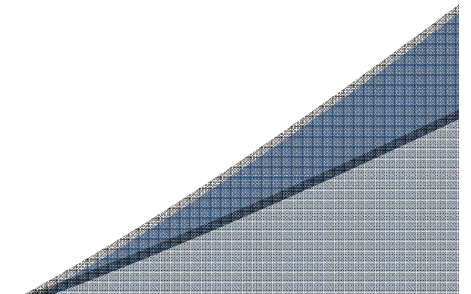
- ① **A substantial creative project presented in the format of one or more creative works**
 - e.g. novel
 - drama script
 - exhibition of art, sculpture
- ② **Plus analytical written component, usually an exegesis to**
 - elucidate the purpose of the creative work
 - reflect and comment critically upon its processes of production
 - place it into a broader disciplinary & research context
- ③ **Creative product & exegesis to equate to thesis of 60,000 - 100,000 words**

1 City King Campus
2 & 3 City Queen Sites
4 City Flinders
Campus - Flinders
5 City Flinders
Campus - Flinders



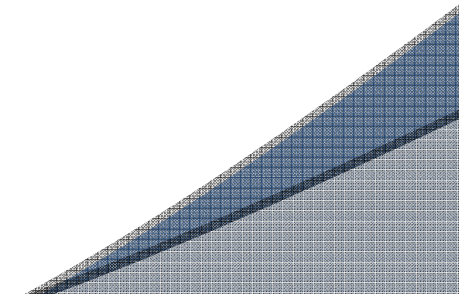
Doctor of Philosophy Thesis by Publication

- **Format of published &/or submitted papers normally developed & submitted during candidature**
- **Only papers with demonstrated peer review processes are considered suitable**
 - must meet standard expected in ERA-ranked journals & ranked conferences
 - book chapters or monographs contracted to be published by a Higher Education Research Data Collection (HERDC) publisher
- **Must contain some published or in-press publications**
- **Must include additional framing & linking material to:**
 - contextualise the research problem
 - justify the theoretical framework
 - review the relevant literature
 - account for the research design, including linking papers to the broader research problem & approach
 - draw conclusions re overarching research theme's contribution to knowledge, its limitations & future development
- **Papers to equate to thesis of 60,000 - 100,000 words**



Professional Doctorate

- Objective of developing a candidate as a professional, able to research into their professional field at a high level of originality & quality
- Expected to extend knowledge that will impact on professional practice, in
 - psychology
 - applied psychology
 - education
 - business
 - social work
- Up to one third coursework that supports the development of the thesis
- Thesis: 45,000 - 60,000 words



Victoria University Levels of Responsibility for Doctoral Education

Central

- Office for Postgraduate Research
- Library
- Writing Support

Faculties & Schools

- Programs & Seminars
- Mentoring

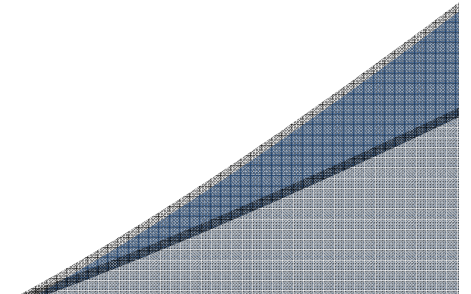
Candidates

- Equipping & empowering them as *independent* researchers



Office for Postgraduate Research (OPR)

- ◎ **Central University unit responsible for range of programs:**
 - development seminars, over 100 each year
 - program for new researchers
 - introduction to research methods
 - program to assist with writing the thesis
 - one to one consultations for candidates experiencing English language difficulties
 - special events & programs for international research candidates
- ◎ **Administrative responsibilities, including:**
 - administering scholarships
 - monitoring quality of postgraduate research education & mentoring
 - developing policies & procedures governing postgraduate research
 - oversight of all research degree programs & quality assurance mechanisms
 - administering thesis examination & overseeing administration of candidature & progress
- ◎ **Works in partnership with Faculties but autonomous**



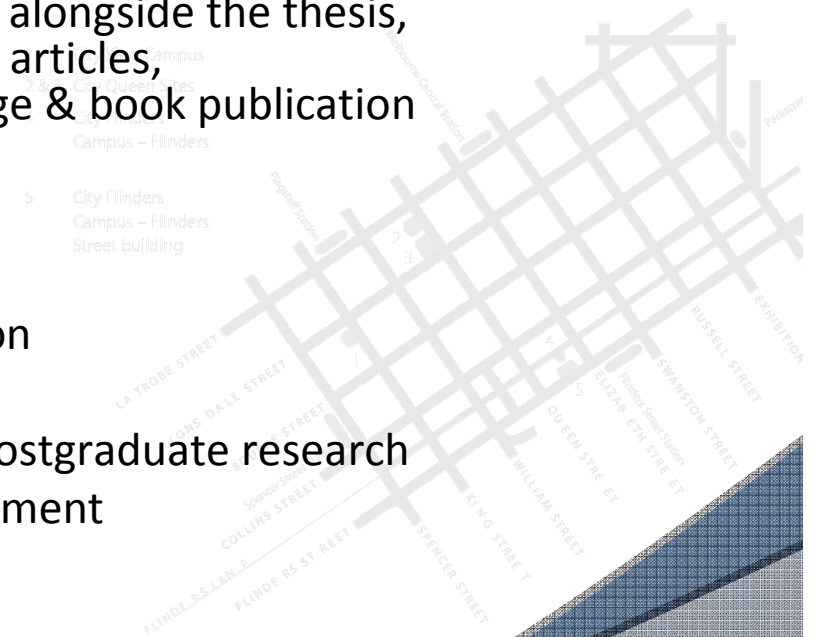
OPR Research Training

○ Research Development Stages

- Stage 1: Workshops on foundational skills in areas of research capability for candidates in first 6-9 months of candidature
- Stage 2: Workshops on sharing of practice in different areas of research, e.g. nexus between theory & practice, for candidates who have achieved candidature through to end of data collection & analysis
- Stage 3: Workshops on achieving outcomes alongside the thesis, including conference presentations, journal articles, commercialisation of results, media coverage & book publication

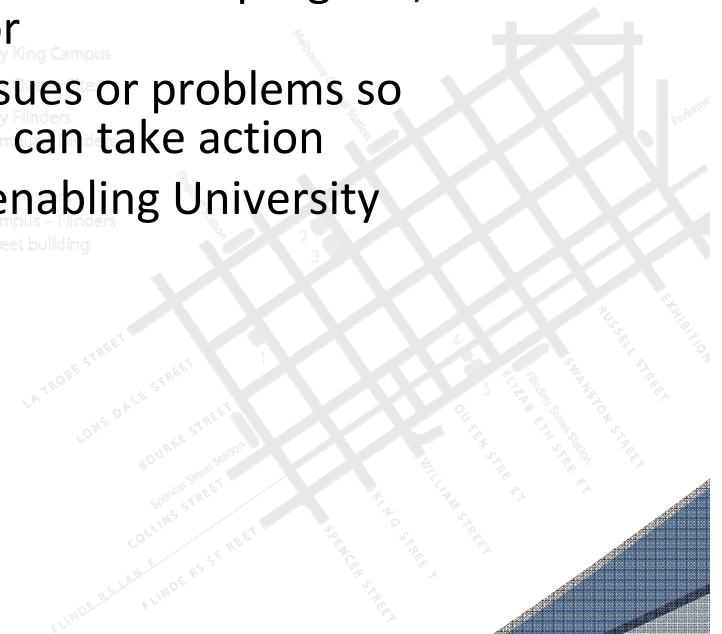
○ Research Graduate Capability

- Workshops on information literacy
- Workshops on IT & technical skills
- Workshops on written & oral communication
- Workshops on research design & methods
- Workshops on processes & procedures in postgraduate research
- Workshops on wellness & personal development



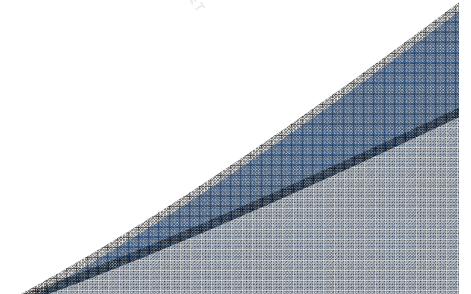
OPR: Progress Report

- Completed by all candidates March & September each year
- Candidate completes report, discusses it with mentor, & submits to Head of School, to be forwarded to OPR
- Candidates can bypass mentor & Head of School & submit report directly to OPR
- Designed to provide a structure for planning & reflection on progress, & opportunity to review & plan work with mentor
- Provides regular opportunity to document any issues or problems so that mentors & University are alerted to issues & can take action
- Candidate can demonstrate activity & progress, enabling University to assess its candidate cohort's experience of
 - supervision
 - research environment
 - facilities & resources
 - research skills training
 - processes & procedures
 - overall satisfaction



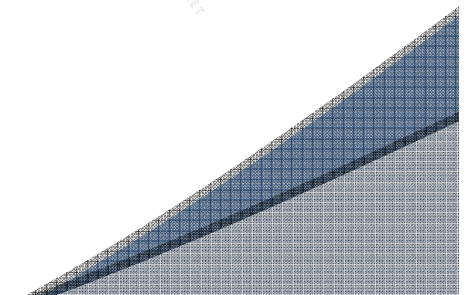
OPR PhD 1st Year Common Coursework

- Aligns Victoria University with international practice
 - US tradition of extensive formal coursework
 - Bologna Declaration 1999
 - UK 'Roberts Agenda' (2002) to develop 'transferable' or 'generic' skills
- Supports government ambitions for a knowledge & innovation-led economy
 - research graduates able to compete in global knowledge economy
 - with skills demanded by private sector employers
 - equipped for collaborative, multidisciplinary research
- Addresses Quality Assurance
 - preparedness for candidature
 - timely completion & attrition
 - reconceptualises postgraduate research within contemporary paradigms
- Acknowledges new profiles of postgraduate researchers
 - increased numbers from 'non-traditional' academic & social backgrounds
 - more diverse pathways into postgraduate research
 - wider career expectations than working in the academy



Common Coursework for Transition to Independent Researcher

- ① Developing a high level of theorised & critical understanding of their fields of research & advanced skills in, & critical understanding of, the relevant methods and methodologies of their research, *appropriate to the AQF Level 10*
- ① Formally developing scholarly engagement with others both within research areas & across disciplines, *in accord with international emphasis on interdisciplinarity*
- ① Developing a thorough & advanced understanding of the ethical & social responsibilities of themselves as contemporary researchers, *in accord with best research practice & codes of conduct & international emphasis on socially responsible research*



Coursework Component

A: Conceptualising & Contextualising Research

Content

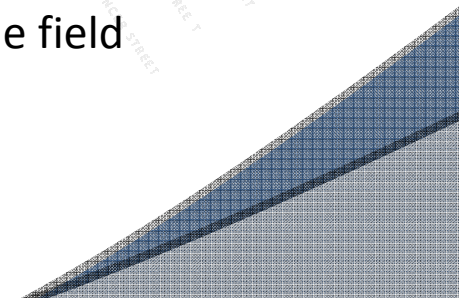
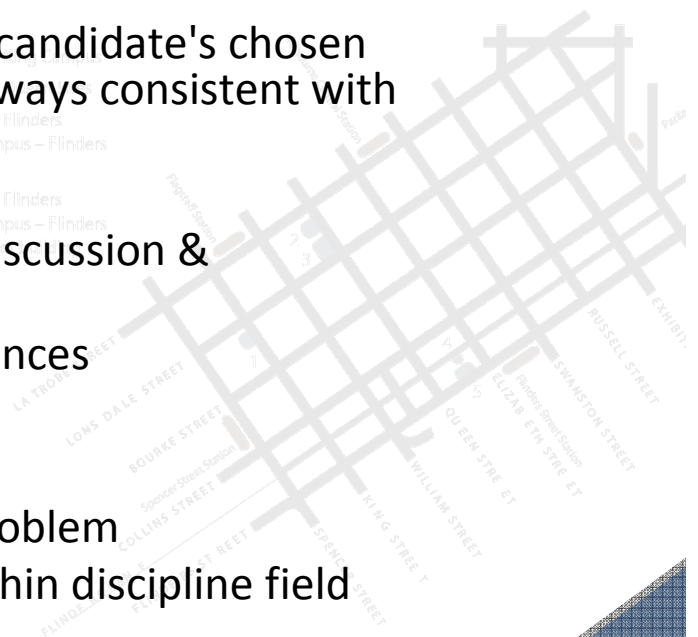
- disciplines & fields: discourses, paradigms & academic tribes; what does 'knowing' mean in candidate's field?
- epistemologies & their links to methodologies: how does candidate choose a theory and appropriate methodology?
- critical engagement: what/who is an authority in candidate's chosen field? How can they evaluate authority's ideas in ways consistent with their field/discipline?

Pedagogy

- starter papers moving to participant-generated discussion & interaction
- self-reflection on learning styles & cultural differences
- mentors encouraged to attend

Assessment/outcomes

- poster or short paper presentation of research problem
- reflective portfolio of candidate as researcher within discipline field
- progression to candidature



Coursework Component

B: Global Research Ethics & Integrity

Content

- problem-based with discussion (in abstract & case studies) of research integrity, human & animal research, intellectual property, commercialisation
- Victoria University's policies & requirements for integrity & ethics in research & research approval

Pedagogy

- on-line & self-directed learning
- supported by facilitated workshops & seminars

Assessment/outcomes

- short presentation on ethics & integrity areas in relation to proposed research
- outline of submission for ethics approval (if relevant)
- demonstrated understanding of integrity & ethical issues in research generally & in relation to own research

1 City King Campus

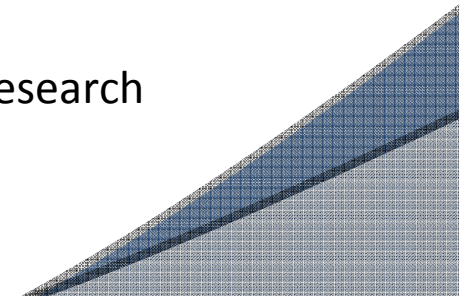
2 & 3 City Queen Sites

Campus - Flinders

5 City Flinders

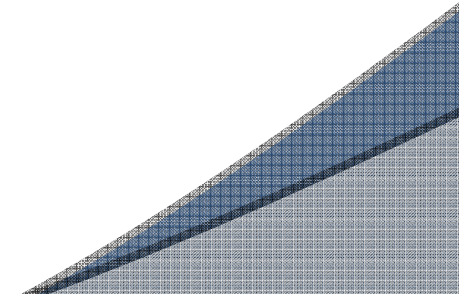
Campus - Flinders

Street building



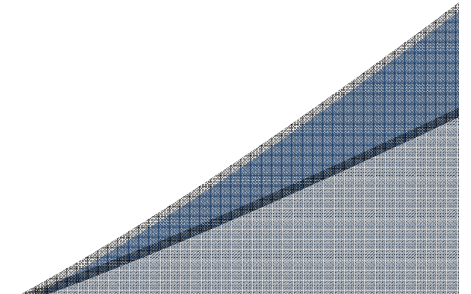
Library Training & Support for Researchers

- Training workshops for candidates & research staff
- Hands-on practical sessions in computer laboratories
- Tailored 'in-house' training to any small group of research candidates & mentors
- Specialist one-on-one training & assistance from discipline Liaison Librarian - customised to candidate's specific needs at a time convenient to them
- Candidates can discuss their training needs with their Liaison Librarian



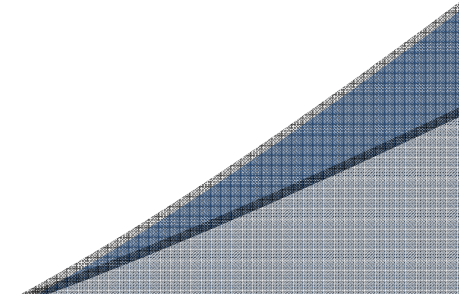
Library Research Training Programs

- Library Research Overview
- Searching the Literature
- Finding Full Text (Document Request System)
- Scholarly Googling
- Managing Information chaos
- Beginners EndNote
- EndNote What's New / Refresher
- Advanced EndNote
- Where to Publish
- Measuring Research Impact



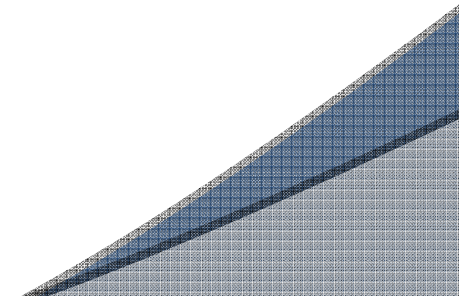
Writing Support by OPR & School of Language & Learning

- ⦿ **Individual appointments with English as a Second Language (ESL) specialists**
- ⦿ **Candidates bring in & discuss their own research writing, such as**
 - proposals
 - literature reviews
 - research articles
 - thesis chapters
- ⦿ **Not correction, editing or proof-reading sessions**
- ⦿ **Aimed at helping candidates develop writing & editing skills in the context of their own writing**



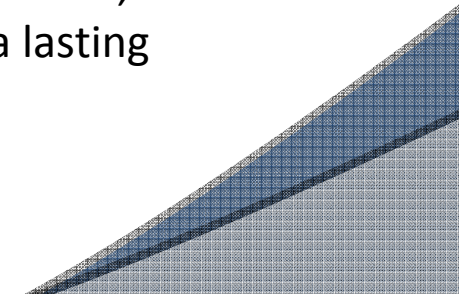
Faculty/School & Research Centre/Institute Programs 1

- ⦿ **Complement central University programs, with greater emphasis on discipline-specific issues**
- ⦿ **Example from Graduate School of Business, 12 week program: *Contemporary Business Research***
 - Introduction to the business research environment
 - Research paradigms
 - Literature review
 - Research methodology: design & method
 - Qualitative research: techniques & analysis
 - Quantitative research: techniques & analysis



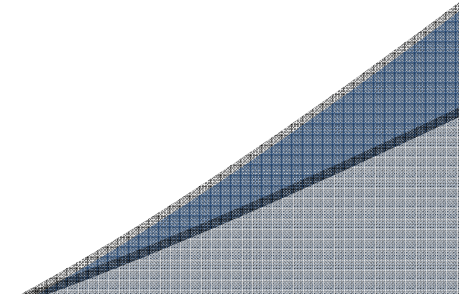
Faculty/School & Research Centre/Institute Programs 2

- **Example from Faculty of Arts, Education & Human Development,
*Candidature Information Workshop***
 - Guide to the Written Candidature Application
 - Title & abstract
 - Research problem /question & aims
 - Literature review
 - Theoretical framework
 - Methodology & conceptual framework
 - Contribution to knowledge & significance
 - Guide to the Oral Candidature Presentation
 - Why do we confirm your candidature?
 - The oral presentation: function, navigating between 'talk & text', knowing your audience, responding to questions, leaving a lasting impression



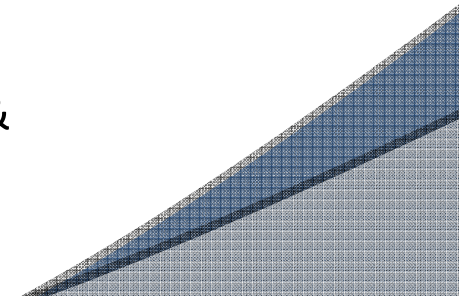
Mentors

- ◎ **A system is only as good as its people**
- ◎ **To be registered to supervise, mentors must undertake professional development each year (currently only 2 hours)**
- ◎ **OPR mentor training schedule includes:**
 - Mentor induction
 - Demystifying Thesis Supervision (2 full days or 8 two-hour workshops)
 - PhD by Publication workshop
 - Processes & Procedures workshop
 - Assisting candidates improve their writing skills
 - Working effectively to support candidates' development of research
 - Research Integrity within the Candidate-Mentor Relationship
 - Working with Professional Editors
 - Best practice in thesis examination



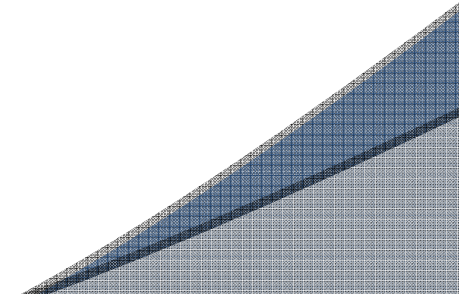
Candidates

- **“It is unreasonable to expect supervisors [mentors] to be able to develop all of the attributes expected of doctoral candidates”**
(Supervising doctorates downunder)
- *Demystifying the Thesis* program developed to inspire & empower candidates to control all elements of producing a thesis – from initial generation of ideas through to final page layout
- Not a blueprint – & does not replace mentor’s central role
- Demystifies key tasks & processes involved in producing a thesis by providing candidates with the confidence, knowledge & skills for asking the questions relevant to their particular needs & circumstances
- Developed to meet the needs of 'non-traditional' doctoral candidates:
 - low socio-economic & first generation postgraduates with insufficient academic cultural capital
 - adults returning to study
 - people balancing work-study commitments
- Interactive experiential pedagogy for effective engagement & learning



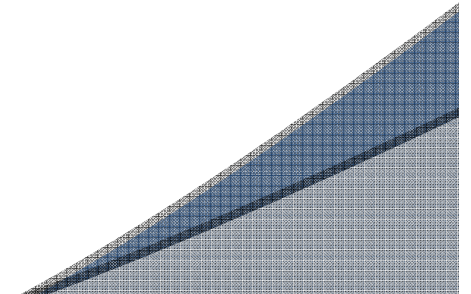
Demystifying the Thesis

- ⦿ **Program comprises four separate but related strands:**
- ⦿ ***Beginning a Thesis*** one-day workshop for commencing International candidates
- ⦿ ***Demystifying the Thesis*** two-day workshop for all research candidates
- ⦿ ***Demystifying Thesis Supervision*** two-day workshop for mentors & prospective mentors
- ⦿ ***Performing the Word*** five-day writing retreat for qualitative research candidates



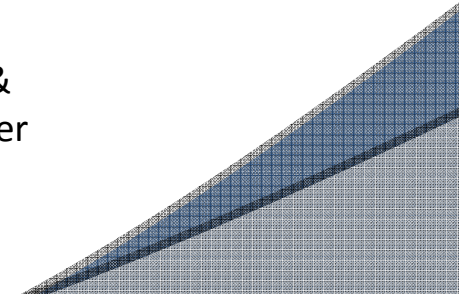
Beginning a Thesis for commencing international candidates

- ⦿ *What constitutes independent research?* – introduces candidates to what is expected of an independent researcher completing a thesis in Australia
- ⦿ *What expectations do mentors and examiners have of you?* – identifies expectations & provides strategies for meeting them
- ⦿ *What is 'originality' and how do you avoid plagiarism?* – goes beyond plagiarism & provides candidates with a strategy for using others' ideas without being derivative and repetitive
- ⦿ *How do you survive the loneliness of the 'long-distance' researcher?* – offers practical strategies for building relationships & consolidating their emerging researcher identity



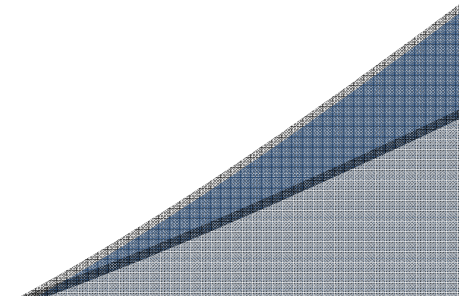
Demystifying the Thesis for all research candidates

- *Getting the most out of your mentor*, with strategies for better managing the relationship
- *Being an independent researcher is more than writing a thesis*, outlining the range of skills candidates are expected to acquire
- *What is a thesis?* dealing with the common elements that any thesis is expected to display
- *Developing a research question*, with a strategy for arriving at a central research question
- *The literature review – when to start and when to stop*, with a technique for critically reviewing the literature
- *Finding your voice in what you write*, challenging candidates to be different & to develop their own research ‘voice’
- *The architecture of a thesis*, with key conceptual issues of thesis design & practical design and writing skills
- *Controlling your chapters*, a simple practical strategy for managing the design & development of chapters to elicit constructive feedback from mentors & increase candidates’ writing control
- *What examiners look for*, ‘deciphering’ the guidelines sent out to examiners & developing a strategy for persuading examiners that the thesis meets examiner expectations



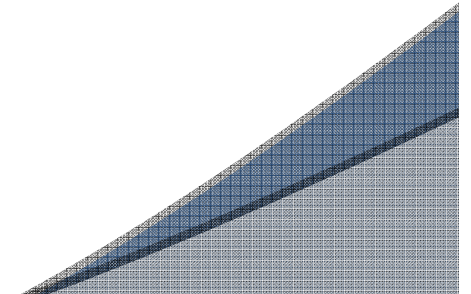
Demystifying Thesis Supervision for mentors & prospective mentors

- **Where mentors find out what I've been telling their candidates & share their own strategies for dealing with:**
- What candidates expect from their mentors
- Becoming an independent researcher
- Understanding what a thesis is
- Helping candidates develop a Research Question
- Helping candidates navigate the literature review
- Helping candidates find their voice in what they write
- The architecture of a thesis
- Working with candidates to brainstorm and plan chapters
- What examiners look for



Performing the Word writing retreat for qualitative research candidates

- Pre-Retreat exercise writing a 400 word story encapsulating their central thesis idea
- Exercise 1. Introducing research project and reading out a sample of their experiments in writing
- Exercise 2. 'Nothing is written until it is read': reading how other writers engage with the reader
- Exercise 3. Joining the reader's imagination: techniques writers use for going beyond the words
- Exercise 4. Intriguing the reader by using the Introduction to provoke the reader
- Exercise 5. Rehearsing their 400 word story written before the Retreat
- Exercise 6. Critiquing each other's stories
- Exercise 7. Performing the words: reading their story out loud, & giving feedback to others
- Exercise 8. Responding to critiques: sharing the experience of hearing the reactions of others
- Exercise 9. Reworking their story on the basis of critiques & self-reflection
- Exercise 10. Learning the 3-Step technique for brainstorming a chapter or article
- Exercise 11. Planning their own chapter using the 3 Step technique
- Exercise 12. Cooking up a feast: reflecting on the limitations of planning
- Exercise 13. Reviewing what they've written using the dot point summary technique
- Exercise 14. Making the text flow: applying a strategy for linking paragraphs
- Exercise 15. Bookending their text with exemplary introductory & concluding paragraphs
- Exercise 16. Musical interlude: Vivaldi's *Four Seasons* as a model for performative writing
- Exercise 17. Writing a perfect sentence that tells its own story
- Exercise 18. Writers bootcamp: reworking their text with disciplined writing
- Exercise 19. Their writing destination & a road-map for getting there
- Evaluation in the form of a script for future performances



Capacity-building for better outcomes – looking to the future

- ◎ ***Demystifying the Thesis* addresses capacity-building needs of:**
 - **Candidates**
 - **Mentors**
 - **Faculties & Schools**
- ◎ Received 2010 Australian Learning & Teaching Council Award for Enhancing Postgraduate Education
- ◎ Program conducted at universities across Australia
- ◎ Catalyst for e-based national mentor network to develop best practice research supervision
- ◎ Addressing problems shared across the higher education sector – national & international
- ◎ **Only shared responses will pay long-term dividends**

