

...And Out Come Learning Assessments for Learning Outcomes in Graduate Program Development

Carol Beynon

School of Graduate and Postdoctoral Studies

Nanda Dimitrov

Teaching Support Centre

April 2013



Introduction

- Learning outcomes and assessment at the graduate level: Why? Why now?
- What do you hope to get out of this session?
- What prior experience do you have with curriculum design at the graduate level?



Session Outcomes

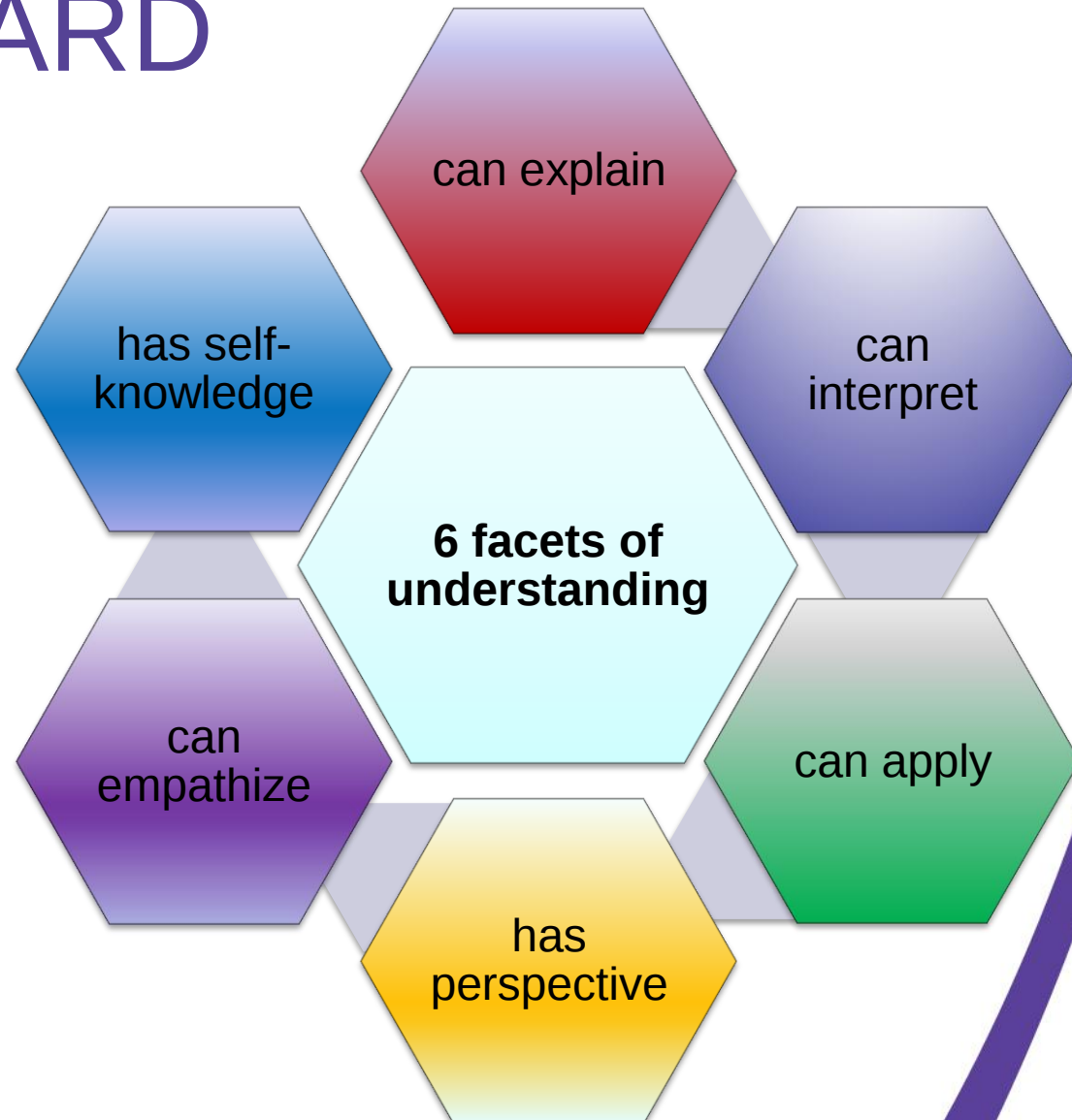
By the end of the session participants will:

- Understand (*i.e.*, be able to explain, interpret, and apply) why defining learning outcomes & assessments for program and course development prior to curriculum development are critical
- Be familiar with Research Skill Development Frameworks that may inform learning outcomes at the graduate level
- Gain experience articulating differences between LO's at the bachelor's and master's level



Western

BACKWARD DESIGN



Backward Design

Wiggins & McTighe (2006) – Columbia University

- 3 stages:

I. Identify desired outcomes

II. Determine evidence – assessments

III. Plan course content



Western

BACKWARD DESIGN

I. WHAT IS WORTH UNDERSTANDING?

What should students know, understand, and be able to do? What is worthy of understanding?

II. WHAT IS THE EVIDENCE OF UNDERSTANDING?

How will we know if students have achieved the desired results and met the standards? What will we accept as evidence of student understanding and proficiency?

III. WHAT LEARNING EXPERIENCES PROMOTE UNDERSTANDING, INTEREST, AND EXCELLENCE?

- What students should master & then define learning activities



Western

Think - Pair - Share

What are key differences
between the outcomes of a
master's degree and an
honours BA/BSc.
in your discipline?

Identify 3 key differences



Western

- UDLES & GUDLES
- Breadth and Depth of Knowledge
- Knowledge of Methodologies
- Research and Scholarship (Master's and Doctoral)
- Application of Knowledge
- Communication Skills
- Awareness of the Limits of Knowledge
- Autonomy and Professional Capacity



Researcher Skill Development Framework

University of Adelaide (Willison, 2008)



www.rsd.edu.au
info@rsd.adelaide.edu.au

Researcher Skill Development Framework

A conceptual framework for the explicit, coherent, incremental and cyclical development of the skills associated with researching. © Aug 2008/March 2013 John Willison, Kerry O'Regan.

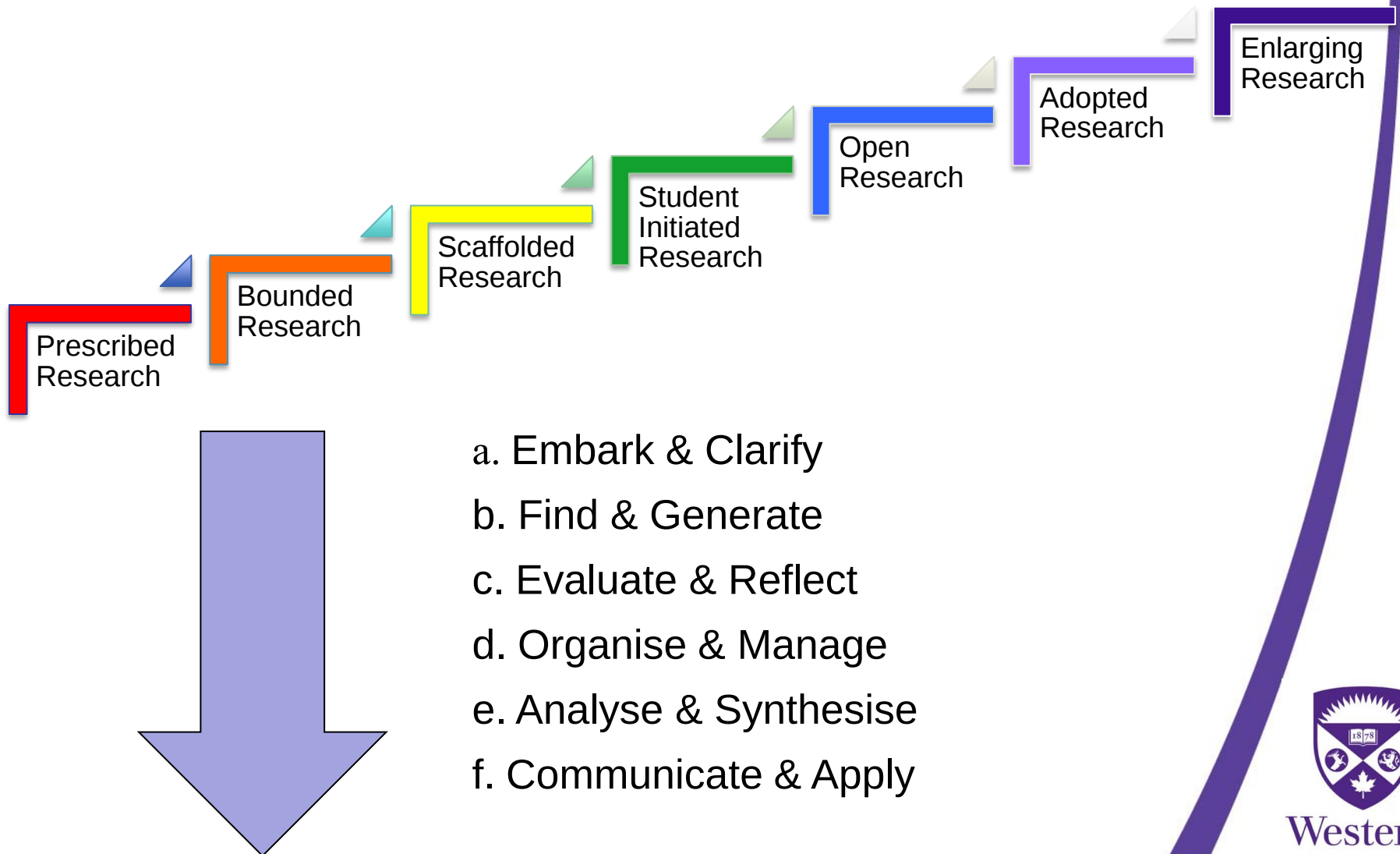
www.rsd.edu.au info@rsd.edu.au		← supervisor initiated	→ ← researcher initiated	→ ← discipline building	→			
www.rsd.edu.au info@rsd.edu.au		Prescribed Research Highly structured directions as to modelling from supervisor prompt the research.	Bounded Research Boundaries set by and limited directions from supervisor (or a few) research.	Scaffolded Research Scaffolds placed by supervisor to shape the independent research.	Researcher-initiated Researcher initiates and stipulates guidelines.	Open Research Research is within self-determined guidelines that are in accord with discipline or context.	Adopted Research Researcher adopts others' agendas.	Enlarging Research Researcher enlarges the field or inquiry.
Facet of Research	b. Embark & Clarify Respond to or initiate research and clarify or determine what knowledge is required, leading to a balance of rational and social/cultural considerations.	Curious Respond to questions/tasks arising explicitly from a closed inquiry. Use a prescribed approach to clarify questions and expectations.	Respond to questions/tasks implicitly in a closed inquiry. Choose from several provided strategies to clarify questions and requirements.	Respond to questions/tasks given one from a closed inquiry. Choose from a range of provided strategies or approaches to clarify tasks/elements.	"Generate questions/stimuli/hypotheses framed within structured guidelines".	"Generate questions/stimuli/hypotheses based on experience, expertise and literature".	Identify previously initiated gaps in literature and a rationale research directions in response to them.	Articulate research objectives that expand the field and followed by it.
	b. Find & Generate Find and generate needed information/data using appropriate methodology.	Determined Collect and record required information/data using a prescribed methodology from a prescribed source in which the information/data is clearly evident.	Collect and record required information/data using a prescribed methodology from several prescribed sources in which the information/data is not clearly evident.	Collect and record required information/data from self-selected sources using one or several prescribed methodologies.	Collect and record self-determined information/data, choosing an appropriate methodology based on structured guidelines.	Collect and record self-determined information/data, choosing an appropriate methodology.	Synthesise others' methods to form state-of-the-art methods or apply existing methods to novel applications.	Generate new methods/methodologies that are used widely.
	c. Evaluate & Reflect Determine and critique the degree of reliability of selected sources, information and/or data generated and reflect on the research processes used.	Discerning Evaluate information/data and reflect on inquiry process using simple prescribed criteria.	Evaluate information/data and reflect on the inquiry process using queries criteria.	Evaluate information/data and inquiry process using criteria related to the aims of the inquiry. Reflect judiciously to improve own processes used.	Evaluate information/data and the inquiry process using self-determined criteria structured on beliefs, experience and the literature. Refine others' processes.	Evaluate information/data and inquiry process using self-determined criteria based on experience, expertise and the literature. Refine others' processes.	Generate substantial research outcomes, so that ideas, practices or interpretations are being implemented by others.	Generate substantial research outcomes, so that ideas, practices or interpretations become foundational in field or discipline.
	d. Organise & Manage Organise information and data to reveal patterns and themes, and manage teams and research processes.	Harmonising Organise information/data using prescribed structure. Manage linear process provided.	Organise information/data using a choice of given structures. Manage a process with variable native pathways.	Organise information/data using recommended structures. Manage self-determined processes with multiple possible pathways.	Organise information/data using self-determined structures, and manage the processes, with stipulated parameters.	Organise information/data using self-determined structures and management of processes.	Form a research team or a team of community-based practitioners.	Form and develop research networks/communities.
	e. Analyse & Synthesise Analyse information/data critically and synthesise new knowledge to produce coherent individual/team understandings.	Creative Analyse and synthesise information/data to reproduce existing knowledge in prescribed format. "Ask relevant researchable questions".	Analyse and synthesise information/data to reorganise existing knowledge in standard format. "Ask relevant researchable questions".	Analyse and synthesise information/data to construct new knowledge. "Ask relevant researchable questions".	Analyse and create information/data to fill knowledge gaps stated by others.	Analyse and create information/data to fill self-determined gaps or extend knowledge.	Synthesise others' concepts or interpretations to frame a novel outcome. May also address a substantial concern of a community.	Develop new concepts or interpretations that expand the field or discipline. May also address a substantial concern across communities.
	f. Communicate & Apply ethically Write, present and perform the processes, understandings and applications of the research, and respond to feedback, according to ethical, social and/or legal (ESG) issues.	Constructive Use prescribed genres to demonstrate understanding. Apply to a similar context the knowledge developed. Follow prompts on ESG issues.	Use discipline-specific language and prescribed genre to demonstrate understanding from a stated specific and for a specified audience. Apply to different contexts the knowledge developed. Clarify ESG issues.	Use discipline-specific language and genres to demonstrate scholarly understanding for a specified audience. Apply the findings to diverse contexts. Specify ESG issues in writing, conducting, communicating.	Use discipline-specific language and genres to address gaps or self-selected audience. Apply judiciously the knowledge developed to a different context. Probe and specify ESG issues in each relevant context.	Use appropriate language and genre to extend the knowledge of a range of audiences. Apply judiciously the knowledge developed to multiple contexts. Probe and specify ESG issues that emerge broadly.	Change the conversation within the discipline/field through publicly available communication of knowledge/understanding. Articulate and promote ESG issues previously initiated.	Change the direction of the conversation across disciplines/fields. Articulate and promote ESG issues previously initiated.



Western

Researcher Skill Development Framework

University of Adelaide (Willison, 2008)



Examples of RSD in the disciplines

Second entry undergraduate/professional programs:

- Doctor of Veterinary Medicine:
management accounting project
- Oral Health Wiki Project – Dentistry
- History – Second Life Research Project



Western

Ancient Philosophy Master's Program

Degree Level Expectations	Learning Outcomes	How the Program Supports the Outcomes	Examples of Evaluation Methods
Professional Capacity / Autonomy	a. Students will demonstrate skill in independent learning and responsible preparation for class sessions.	a. Expected standards will be communicated to students in orientation sessions, during class sessions, in symposia and on course outlines. Faculty will model independent learning and responsible preparation	Students will be assessed on: Preparedness for each class session as outlined in prospectus. Active class participation Group activities involving use of arts media (e.g., plays) to develop language and translation skills

Ancient Philosophy Master's Program

Degree Level Expectations	Learning Outcomes	How the Program Supports the Outcomes	Examples of Evaluation Methods
Professional Capacity / Autonomy	b. Students will demonstrate skill in working independently on a significant research problem or question.	b. Acquired and evaluated through the Summer Research Paper (SRP) component of the program.	b. Abstract of proposed research project, with preliminary bibliography due to proposed supervisor on March 15 of Year 1; regular submission of drafts, outlines, annotated bibliographies; consultation with supervisor, submission of final paper by August 15 of Year 1.

Ancient Philosophy Master's Program

Degree Level Expectations	Learning Outcomes	How the Program Supports the Outcomes	Examples of Evaluation Methods
Professional Capacity / Autonomy	c. Students will demonstrate independence and develop the practical skills of research activities and academic conduct.	c. Students will work with their mentors and SRP supervisor to integrate these skills into their academic conduct.	c. Students will engage in seminar presentations, creation of thesis proposal and successful defense

Ancient Philosophy Master's Program

Degree Level Expectations	Learning Outcomes	How the Program Supports the Outcomes	Examples of Evaluation Methods
Professional Capacity / Autonomy	d. Throughout, and by the end of the program, students will consider varied professional outcomes for the master's in ancient philosophy	d. Students will be encouraged to attend professional learning sessions (e.g., 360; TSC) for teaching assistants, sessions about applying for employment, options after grad school etc. Students will organize regular seminars within program and faculty to share research	d. Completion of courses taken at the TSC to be recorded on transcript Feedback provided on role as teaching assistant by students and supervisor Students will receive pass/fail credit for organizing and participating in seminars Students to devote one seminar each term to Life after Grad School – What to do with an Ancient Phil degree

University of Ottawa – Ph.D Nursing

Autonomy and Professional Capacity

Upon completion of the program, students will be able to:

- Engage with academic and professional organizations related to their field of scholarship
- Demonstrate leadership within their chosen field of health care
- Model/facilitate the development of scholarship in novice and developing practitioners (inside and outside their field) (mentorship)
- Demonstrate ethical behaviour consistent with academic integrity and the responsible conduct of research

Parson (2010)



Western

Professional Capacity & Communication

Examples of graduate program outcomes & authentic assessments

Environment & Sustainability Master's (Western)

- Students design multimedia project to introduce visiting speaker – outcomes related to collegiality; professional communication; use of technology

Anthropology (Ph.D.) ; Clinical Psychology (Western)

- Students organize interdisciplinary conference from start to finish (review proposals, select presenters etc.)
- Psychology – collaboration with nearby university
- Outcomes related to professional communication, collaboration; autonomy



Western

Professional Capacity & Communication

Examples of graduate program outcomes & authentic assessments

Women's Studies & Feminist Research

Modern Languages (Ph.D programs – Western)

- Course design project as comprehensive exam
- Design 2 courses - 1 first year, 1 advanced
- Develops teaching self-efficacy, professional capacity
- Many students have opportunity to teach the course



Professional Capacity & Communication

- U Waterloo - Conrad Grebel University College
- **Master of Peace and Conflict Studies** – Internship experience or conflict management workshops
- **University of Cumbria – Masters in Medical Imaging**
- Prof. Gina Marshall
- conventional exams replaced with assignments that assess job skills, such as: poster displays, risk assessments, information leaflets, costed research protocols and an evaluation of a communication incident.
- <http://assimilate.teams.leedsmet.ac.uk/case-studies>



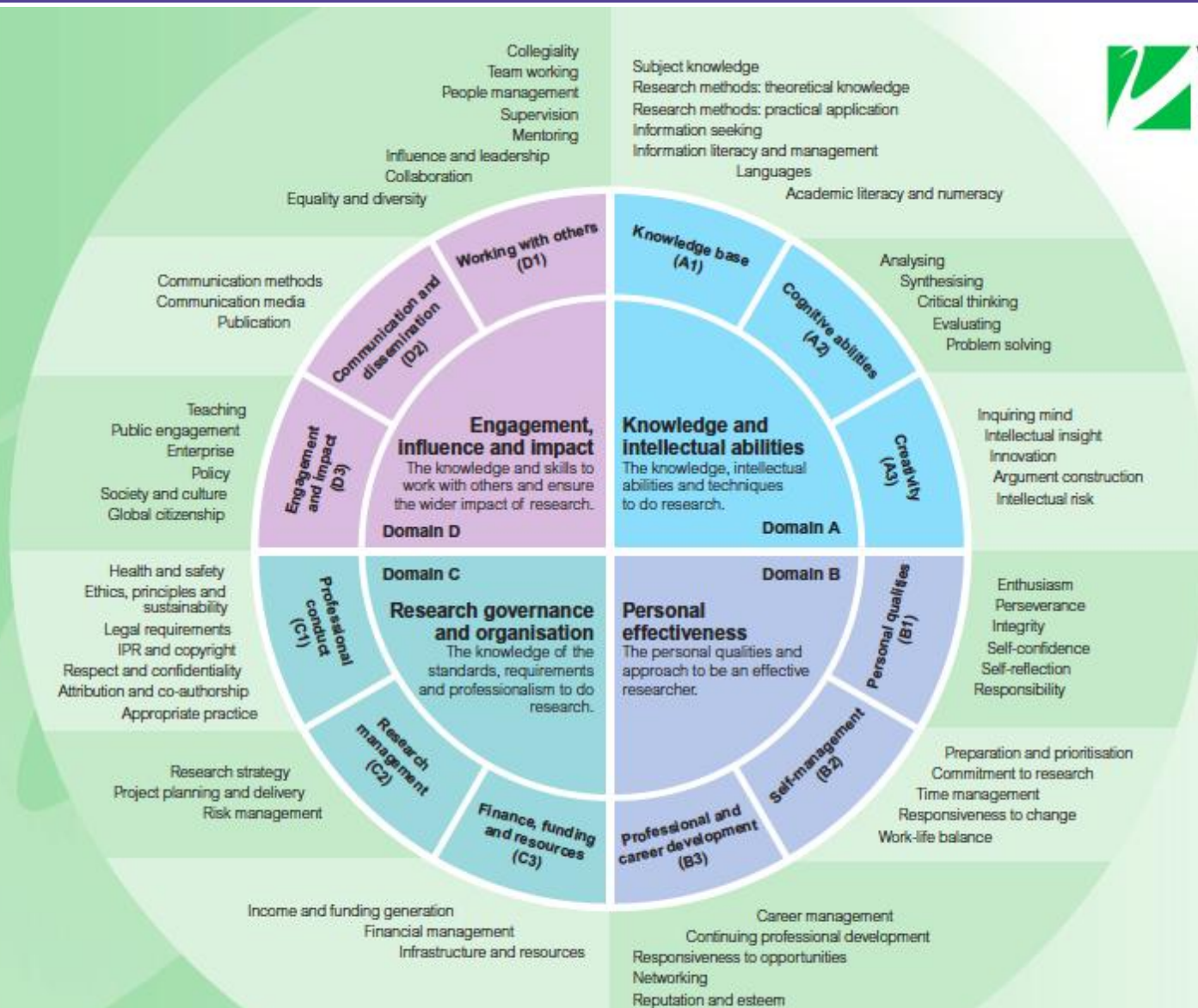
Western

Assessing Communication and Professional Capacity

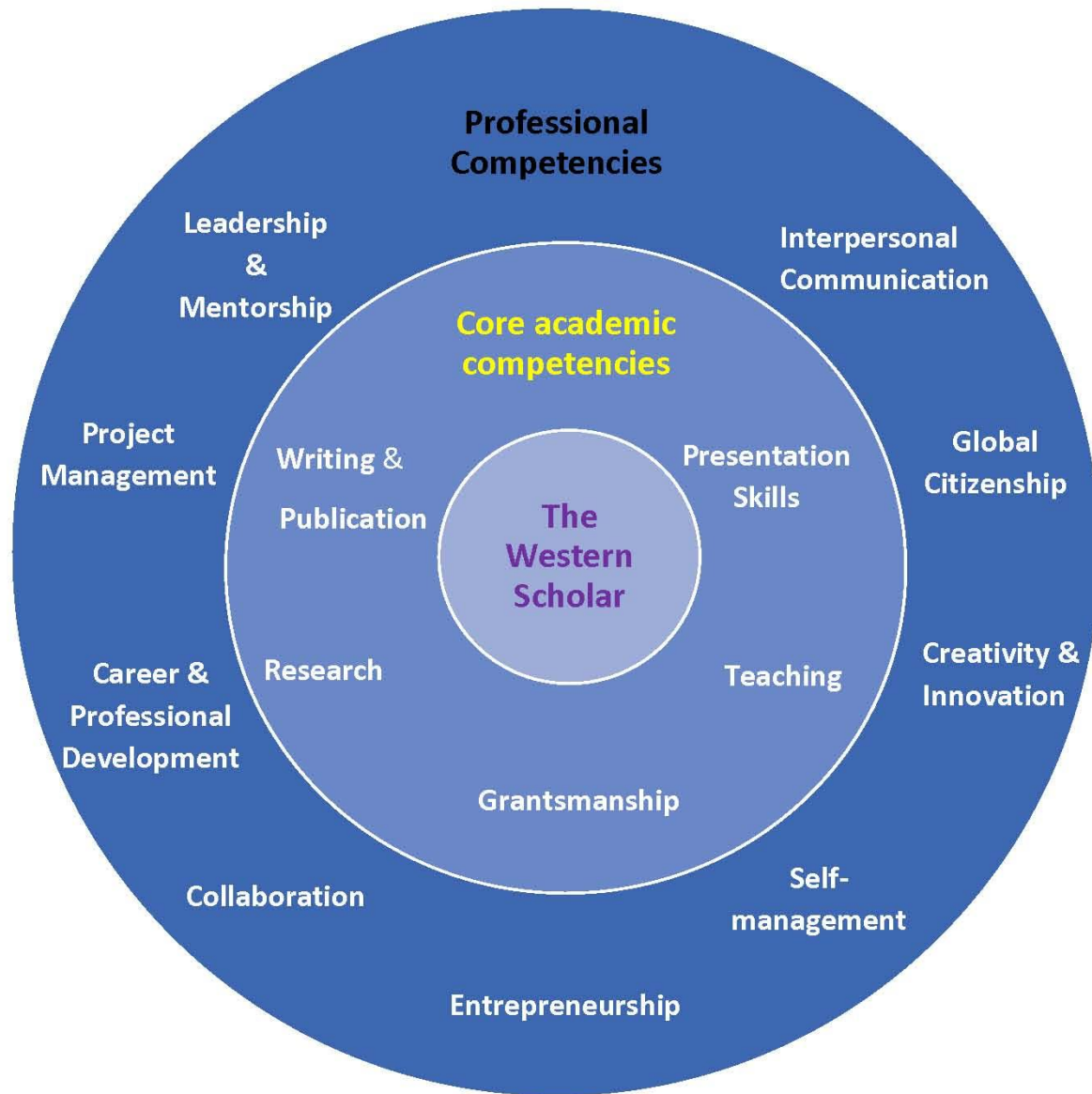
- Find a couple of colleagues in similar disciplines
- Brainstorm creative strategies for assessing communication competencies or professional capacity
- Master's or Doctoral level
- Think of examples beyond traditional papers, presentations; conference presentations



Vitae Researcher Development Framework _ UK



Graduate Competencies at Western



Campus-wide support for achieving graduate program outcomes

- **Western**
 - 360 Initiative; Teaching Support Centre
 - Writing Centre, Graduate Studies, Libraries
 - 3 Minute Thesis Competition
- **University of Melbourne** * Upskills Program
- **McGill University** * Skillsets Program



Resources & References

- Willison, J. and O'Regan, K. (2008). *The Researcher Skill Development Framework*. Accessed from <http://www.adelaide.edu.au/rsd2/framework/rsd7/>
- Sister Frameworks:
- Work Skill Development Framework:
- http://www.jcu.edu.au/teaching/public/groups/everyone/documents/advice/jcuprd_047283.pdf
- Clinical Reflective Skill Development Framework
- http://www.adelaide.edu.au/rsd/framework/frameworks/CRS_Framework.pdf



Resources & References

ASSIMILATE Project (UK)

- Assessing Master's Level Students Internationally
- Innovative Assessment Case Studies
- <http://assimilate.teams.leedsmet.ac.uk/case-studies>



Western

Vitae Researcher Development Framework

- Main Framework website
- <http://www.vitae.ac.uk/rdf>
- 2 page handouts
- http://www.vitae.ac.uk/CMS/files/upload/CIPD%20Handout_4pp%20A5_Web.pdf
- Lenses on the RDF (Employability Lens, Engineering Lens, Leadership; Teaching, Entrepreneurship, Intrapreneurship Lenses)
- <http://www.vitae.ac.uk/researchers/437191/Increasing-the-impact-and-engagement-of-researchers.html>



Questions

Carol Beynon

beynon@uwo.ca

Nanda Dimitrov

nanda.dimitrov@uwo.ca



Western

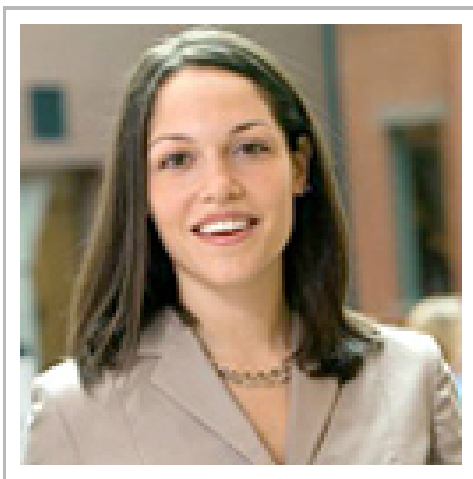
References

- Gardner, S. K. (2008). What's Too Much and What's Too Little?: The Process of Becoming an Independent Researcher in Doctoral Education. *The Journal of Higher Education*, 79(3), 326-350. doi:10.1353/jhe.0.0007
- Gardner, S. K., Austin, A. E., & Mendoza, P. (2010). *On Becoming a Scholar: Socialization and Development in Doctoral Education*. Stylus Publishing, LLC.
- Gilbert, R., Balatti, J., Turner, P. Whitehouse, H. (2004). The generic skills debate in research higher degrees. *Higher Education Research and Development*, 23(3), 375-388.
- Parson, R. (2010). Integrating the GDLEs at uOttawa: Example of the Doctoral Program in Nursing. June 2010. COU Symposium on Learning Outcomes, McMaster University.
- Wiggins, G.P., & Tighe, J. (2006). *Understanding by design*. (2nd Ed.). Upper Saddle River, NJ:Pearson.
- Willison, J. and O'Regan, K. (2008). *The Researcher Skill Development Framework*. Accessed from <http://www.adelaide.edu.au/rsd2/framework/rsd7/>



Cornell University

How are the learning goals achieved for graduate and professional students?



Students in the [Park Fellowship Program](#) such as Shahnaz Shustari, MBA '08, make a significant commitment through a Service Leadership Project, which serves as capstone for leadership development, allowing students to practice leadership skills, integrate diverse disciplines, and develop an enduring commitment to public service.



Cornell Service/Leadership Projects

- Fatherhood initiative in local prison
- Cross-cultural integration initiative
- Business team for solar decathlon (\$500,000 fundraising)
- Creative Design Course for Affordability (expand internationally in year 2)- multi-faculty collaboration
- Many projects sustainable, or continue for several fellowship years

- <https://www.johnson.cornell.edu/About/Why-Johnson/Leadership/Leadership-Opportunities/Park-Leadership-Fellows-Program/Leadership-Curriculum.aspx>

