A Report of the Discussion and Recommendations from the Graduate Coordinator Retreat (April 5, 2016)

School of Graduate Studies

April, 2016
Overview

A narrative that we have all heard over the last several years is that the academy cannot absorb the growing number of PhD graduates and, either directly stated or in the subtext, that PhD graduates are ill-prepared for any other job. The employment outcomes by sector of PhD graduates have remained unchanged since at least 2001 despite a near doubling of the number of PhD degrees granted. However, the expectations of PhD graduates to take on leadership roles, work as part of a team and enter the job market equipped with a myriad of professional skills have been elevated as employers have reduced investment in professional development training by about 40% over the past two decades. It is also important to appreciate that it is incumbent upon the PhD graduate to communicate the importance, relevance and (potential) impact of what they have accomplished as well as the knowledge and skills they have acquired to prospective employers. Being able to convey the attributes and value they bring to an organization is both empowering and critical in a competitive job market. As educators and mentors we can help our PhD students appreciate how their research training and academic development is relevant beyond their specific discipline or field by enabling them to explore the broader context of their work and reflect on transferring their ideas, skill, etc. to non-academic sectors. (SGS has produced reports on this topic based on consultations with students, which are referenced in the final section of this document).

The graduate coordinator retreat brought together graduate program leaders from across campus to explore how our two university-wide PhD requirements: the comprehensive examination and the thesis, might serve as a means for our students to explore, for example, their discipline and their research/scholarship in a broader context. For instance, a comprehensive exam could include a component requiring the student to consider the implications and significance of their proposed work or of the current trends in their discipline on public policy, service delivery, quality of life, sustainability, or some other area/sector beyond the particular focus of study. With respect to the thesis, a chapter could be targeted for publication in a venue that would place their research in the public sphere, a lay summary could be included for dissemination to the community about the value of the work completed.

The ideas above and many others emerged from the discussions about the structure, format, and elements of the comprehensive exam and the thesis; they are summarized in this report. The purpose of this report is to stimulate discussion and action as appropriate about the comprehensive exam and PhD thesis requirements to ensure they not only enable assessment of academic and research achievement but also aid in students’ learning experience to prepare them and position them to apply their research and scholarship skills beyond the academy.

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2 Includes field exams and candidacy exams
Comprehensive Examinations

At a the Graduate Leadership Summit, Queen’s graduate students and Associate Deans with Graduate responsibilities from across disciplines called on departments to reevaluate the structure of the comprehensive exam with the objective of promoting desired skills and knowledge in mind.

The current regulation for the comprehensive examination is non-prescriptive in terms of structure and is intended to “assess students' knowledge of their fields and scholarly qualifications for the degree” (School of Graduate Studies: Graduate Calendar).

Programs have flexibility to develop their comprehensive examination in accordance with their described learning outcomes and, perhaps unsurprisingly, there is considerable variation in terms of exam components, process, and timing of the comprehensive exam across programs. There is also a general perception among students that they are not conducive to strengthening the skills or knowledge-base needed to engage in their research nor do they aid in the development of practical or applied skills and understanding in broader (non-academic) contexts. Furthermore, if not well integrated with program requirements and student goals, the time spent preparing for and undertaking the exam can adversely impact progress to degree completion.

How might comprehensives be re-envisioned and re-structured to better serve their academic purpose and facilitate insight or develop capacities that could benefit students beyond their academic goals?

The above question was considered by graduate coordinators who were asked to think creatively and brainstorm about the structure, format and elements of the comprehensive exam to meet the academic standard as well as address the needs/goals of students. A summary of the round-table discussion as they relate to principles, process, and structure of the comprehensive exam is provided.

**Principles**

Participants felt it was important to identify overarching principles as a framework for the discussion. It should be noted that consensus was not sought and indeed there were differences of opinion; however, in general, participants agreed that principles were essential to inform the discussion.

Comprehensive exams...

- should be a learning/preparatory experience, not a barrier, and serve to develop foundational knowledge and prepare for the next steps in their program.

Survey of Comprehensive Examination at Queen’s University, School of Graduate Studies, March 2016
should provide students with the opportunity to begin to explore a specific research topic.
should be designed to test the breadth of knowledge in the discipline, not only the depth.

**Process**

There was general agreement that the timing of the exam is important and that it must be enforced. To be most effective/useful, the exam should be completed early in the PhD program to enable the student to progress and build on the learning/experience of the comprehensive. Several tables noted that consultation with students about their goals, potential career paths, and interests should take place, which would enable consideration of these elements in the exam structure as well as to ensure appropriate membership of the examination committee (e.g. include a member from a particular employment sector). This would be particularly important in assessing “non-traditional” outputs of comprehensive exams.

**Structure**

The focus of the discussions was on rethinking the structure of the comprehensive exam such that it has both academic value and alignment with student goals. The top recommendations were determined from the priorities identified by each table and are those that were supported by one third or more of all participants. They are presented in order (i.e. from highest percentage of support to lowest, percentage support is provided in brackets):

1. The exam could allow for the inclusion of different components (flexible format) that would result in outputs relevant to academic/industry/public service/education perspectives that consider the student’s goals/interests (78%).
2. The model of the comprehensive exam should be tailored to the discipline, diversity is important (56%).
3. The proposal component should be modeled on large research grant proposals in terms of length (short) and content (significance of research, impact) (39%)
4. Consistency across units it important – the SGS could provide a ‘types of content’ menu of 3 or 4 structures. A mechanism to ensure fairness and standards across structures, examination committees would be required in the department (e.g. rubrics, demonstrated competencies/skills, etc...) (33%).

There was general agreement that the “output” of the comprehensive exam should be relevant to the student. For example, a review of the current state of the discipline or the student’s research project could also incorporate an industry, community, or public service perspective, or be incorporated into a course syllabus. Essentially, the structure of the comprehensive exam should allow for some degree of flexibility while ensuring equivalency in workload and academic rigour across multiple formats.

Other ideas that groups submitted about elements or components that could form part of a comprehensive exam have been categorized into themes. They are listed in no particular order.
**Communication** (includes approaches that would provide the student with opportunities to translate/disseminate knowledge to different audiences)

- Design a website to showcase the student’s proposed research or research plan
- Deliver an elevator pitch to market the proposed research (rationale, approach and significance to discipline and beyond)
- Plan and deliver a lecture to an undergraduate class on the proposed research (or current trends in the discipline, why the discipline matters, etc. ...)
- Engage in outreach programs – a public/community presentation to a generalist audience about an aspect of the student’s discipline or their proposed research
- Write a blog post about research

**Career preparedness**

- A paper or presentation on how PhD study in the discipline and/or the student’s proposed research specifically provides preparation for particular (and specified) non-academic career paths
- Consider career paths in the preparation of the research proposal. For example, describing how the skills/knowledge they will acquire could equip them for a non-academic career in ..., or the relevance of the proposed research to specific non-academic sectors that could lead to a career in ____________
- Incorporate experiential learning/internship as a component of the exam.

Components of the comprehensive exam that promote the exploration of careers outside the academy will provide opportunities for the student to consider the impact of their discipline and proposed research beyond their discipline or field and develop an understanding of how their knowledge and skills can translate beyond the academy. The notion of introducing an internship requirement or option as part of the comprehensive exam was suggested, though this was not supported by other participants.

Overall, participants could see the merit in providing students with opportunities to develop communication skills and to enhance their understanding of the relationship of their discipline and research to particular non-academic sectors through the comprehensive exam providing that it does not compromise the importance of building foundational knowledge and meeting academic objectives. Integrating and aligning the components such that they serve the academic purpose and develop capacities that may benefit students beyond academic goals is achievable and may well add value to the comprehensive examination process.

**The PhD Thesis**

The thesis is a major requirement of the PhD degree which reflects a coherent account of a unified research project that must be original and include a critical review of previous work related to the subject and a concluding summation of the contribution made in the thesis to scholarship in the chosen field ([General thesis regulations in Graduate Calendar](#)). Without being constrained by the way the thesis ‘has always been structured’ or by perceptions of what is or is not possible in terms of existing policy regarding format, participants were asked to consider what models or format might a thesis take?
recognizing that graduates go on multiple career trajectories, there must be room for non-traditional elements that are, for example, relevant to mobilizing the research or increasing public awareness (e.g. market analysis, business plan for start-up,...).  

What other models and formats should be considered given the import of broad-based dissemination; the need to understand research contributions and impact beyond the field/discipline of study, and that research is not in all areas of study an independent venture (in terms of student involvement rather than supervisor-student)?

Before addressing the above question in groups, participants were invited to identify overarching principles for the thesis in a plenary session. The principles are listed below in no particular order; it should be noted that these are, for the most part, the ideas of individuals and that consensus was not sought.

**Principles**

The thesis...

- reflects a scholarly approach to a subject and demonstrates thorough knowledge of it.
- is a coherent account of a unified research project with interconnectedness of components or elements.
- demonstrates originality of thought
- demonstrates originality of method and the ability to develop an independent research program (creativity, innovation)
- includes content suitable for publications in high quality journals
- contributes to the discipline and addresses important problems
- should be made publicly available
- should demonstrate rigour of analysis (appropriate for the discipline)
- should demonstrated the ability to conceive and manage a large research project from start/finish

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"A thesis could include a practical or applied element, such as a chapter focusing on a related project conducted with a community partner”

Comment from the Graduate Leadership Summit, Oct. 2015

There has been much discussion nationally and internationally about the need for the thesis format to be more nimble and fluid. It’s critical that PhD students are trained as researchers and scholars and narrowing their academic skills would be a failure in education; however,
**Process**

The process of writing a thesis is commonly viewed as an isolating experience. Beyond the input and mentorship of the supervisor and supervisory committee, very little (if any) engagement about direction, content, approach, etc... takes place with others. Two recommendations were proposed that relate to generating opportunities for broader discussion of the thesis research. The first is to involve stakeholders from the community, organizations, agencies or corporations. Recognizing that the consumers of research and the impact of research often extend beyond the academy, input and perspectives from interested parties could be valuable at many stages of research - from identifying the research question and focus, to the approach, to the value of the knowledge created. Further, an individual from outside the academy could be invited to serve on supervisory or advisory committees or on a thesis examination committee. These strategies could add value in terms of knowledge dissemination and getting the research into the public’s eye; this idea was strongly supported by 68% of participants.

The second recommendation was to have monthly workshops where PhD students briefly present on their research progress and seek input, advice, feedback on their work. These collaborative and interdisciplinary workshops or thesis research groups provide a means for students to receive ongoing peer input and support on their work. In addition it would develop a culture where ideas and issues can be discussed and shared among students (47% of participants supported this recommendation).

**Structure**

The focus of the discussions was on the structure and elements that could form the thesis that would satisfy the academic degree requirement and also enable broader-based dissemination (i.e. beyond academe). The top recommendations derived from the priorities identified by each table and that were supported by one third or more of all participants are listed below in order (the percentage support is provided in brackets):

1. Include a chapter on how the research could be used in industry or other sector outside academia (63%)
2. Incorporate a different communication mode or visual representation (e.g. gigamap, carepath, logic model, YouTube video, report for general audience, etc) (58%)
3. Support a portfolio-style thesis that could include a compilation of activities that relate to the research project (e.g. internship or experiential learning project; an educational training manual; a policy document; an invited paper; etc) (47%)
4. Elements of the thesis could be prepared for different or multiple audiences as appropriate, such as a journal article, newspaper/magazine report, technical report, conference paper, professional/specialty newsletter, etc. (32%)

There were clearly disciplinary differences in terms of what might constitute a chapter of a thesis though it was evident that more flexibility would be desirable to position the research in a wider context than the academy or a specific discipline and also to provide opportunities for students to consider alternate
forms suited to a variety of outlets for dissemination. Several other ideas were put forward which are categorized into broad themes below.

**Knowledge translation**

The majority of the ideas were to provide opportunities for the research work to be disseminated to a variety of audiences and to spark wider interest in the research and its importance.

- Include a chapter that reflects on the need, relevance and significance of the research beyond the boundaries of the discipline; that extends the impact and/or application beyond the immediate field of study.
- Put together a three minute YouTube video summarizing your thesis
- Include a media release of the research
- Include a presentation of the research in a format relevant to key stakeholders such as a blog (with documented traffic)
- Include a chapter addressing the relevance of the research and its contribution to society (addressing the “so what?” question)

**Collaborative research**

Much research is conducted by teams of researchers or in collaboration with partners in and outside the academy. Students have expressed in many different forums their desire to work as part of a research group or think tank and that these efforts could form a part of their thesis. Suggestions put forward that address these issues are as follows:

- Where the input of several students has been integral to a component of the thesis research, a multi-authored chapter could be included. Each student’s role and individual contributions would need to be clearly delineated and deemed to be meritorious of co-authorship.
- Inclusion of a co-authored chapter with an industry, community, or agency partner

**General suggestions**

- Include a reflective component (if I were to start again...), provide an opportunity to discuss failures, offer advice to future students, lessons learned.
- If appropriate a business plan/proposal could form a chapter of the thesis

**Quick wins**

A few initiatives were identified by participants that could be implemented immediately to help in communicating the research to a broader audience or engaging stakeholders

- Inclusion of a lay summary and title
- Inclusion of relevance or potential impact statement
- Including a stakeholder as a member of a student advisory committee or as an additional examiner of a thesis
Next Steps

The ideas and recommendations summarized in this report serve as a useful basis for further discussion among graduate faculty and students in their academic units and subsequent action as appropriate. The comprehensive exam and the thesis are fundamental milestones toward the completion of the PhD degree and should provide valuable learning opportunities and formative experiences for our students thus positioning them for successful careers in and beyond the academy.

Based on this report and previous consultations with graduate students and graduate leaders, the School of Graduate Studies will:

- continue to consult on these issues with faculties and academic units,
- further examine models and structures of the PhD thesis at other institutions, and
- explore whether existing policies and regulations relevant to the comprehensive examination and thesis provide for the flexibility in structure/format that may be desired.

Departments and programs are encouraged to:

- review this report in conjunction with previous reports (see list below) that have explored the topic with graduate faculty, graduate students and leaders in graduate education,
- explore whether enabling flexibility in the structure of the comprehensive exam and/or thesis can contribute to a better alignment between academic and student goals, and
- consult with the SGS about your ideas and about incorporating changes to the comprehensive exam and/or thesis structure to ensure compliance with existing regulations and policies.

Other reports of interest

Reports based on recent consultations with graduate students, leaders and faculty that provide viewpoints, perspectives, and suggestions pertinent to the comprehensive examination and thesis are listed below:

- Queen’s University SSHRC-CAGS roundtable report: “Imagining Canada’s Future: Future Challenges”,
- Queen’s Leadership Summit report: