Pathways to Success

Preparing Graduate and Professional Students
for the Diverse Careers of Tomorrow

A Report on Professional Development and Career Preparation by the University of Pittsburgh's Council on Graduate Study Subcommittee on Graduate Student Affairs
(April 13, 2018)

Executive Summary

In fall 2017, the subcommittee was charged with making recommendations for enhancing the professional development of graduate and professional students across the University of Pittsburgh. The subcommittee embraces a capacious definition of professional development, considering all practices that help optimize students' preparation for high-impact, satisfying careers within and beyond the academy. The subcommittee considered national reports and best practices, surveyed the University's schools as well as non-academic units supporting professional development, and considered Grad SERU data. We explored the opportunities for university-level action, potential obstacles and challenges, as well as the risks of not acting ambitiously in this arena. The report concludes that the University, in partnership with its schools, programs, faculty, students, and other internal and external constituencies, has a vital role to play in addressing the culture, resources, policies, and programming around professional development. The report's recommendations are aligned with the Plan for Pitt and geared to enhance career outcomes for all graduate and professional students.

* * *

Introduction

Over the next decade, graduate and professional education in the United States will be significantly impacted by intellectual shifts in the disciplines as well as by changes in the demographic, technological, financial, and geo-political contexts of higher education. Future-oriented, holistic graduate education must encompass and continuously review not only cutting-edge disciplinary training but also students' professional development in versatile core competencies.

1. The subcommittee embraces insights from national and international studies that emphasize the imperative of enhanced professional development programming across intellectual domains. We welcome the opportunity to recommend student-centered, data-informed, and outcome-focused approaches to supporting students as they identify potential career paths and prepare for success in academia, government/public sector, business/industry, and the nonprofit world.

2. The subcommittee is cognizant of recent national studies and successful pilot programs that have highlighted recurring challenges for professional development and career diversity programming,

namely, defining and developing content, resourcing high-quality and sustainable programming, and building support from both faculty and students. Key insights and best practices include:

> Central University leadership is essential to motivate the creation of cutting-edge professional development programming, ensure adequate resources, and facilitate collaborations across and beyond the campus.

> Superior research training in R1 institutions and orienting students to diverse careers are mutually enhancing missions. Competencies that are key for successful professorial careers in the early 21st century map closely onto the competencies required for high-impact careers in other professional settings. A core competency approach to professional development programming should combine generic with domain-specific competencies.

> Academic departments and inter-departmental degree-granting programs should relate career preparation to the distinctive rationale and intellectual foci of their programs; normalize the conversation about diverse, high-impact careers; and validate multiple definitions of program and student success—from recruitment and admission to graduation and beyond.

> In many academic domains, recognizing professional development as a priority for all graduate students will entail a culture change among the professoriate as well as graduate students. For students who overestimate their prospects of securing a tenure-track position, the perceived benefit of preparing for diverse careers is minimal. Moreover, attempts to do so can introduce additional (perceived) risk if faculty interpret an interest in careers beyond the academy as a negative signal of students' academic commitment or confidence.

> Effective partnerships between academic and support units (writing centers, teaching centers, grant support offices, innovation institutes, institutional advancement, etc.) are essential to deliver core competency training.

> Alumni career path data is typically poorly tracked but is critical to engaging alumni as key stakeholders in effective professional development.

> Evidence about the effectiveness of professional development supports building buy-in from stakeholders, including faculty, students, senior administrators, alumni, and employers.

3. In the fall of 2017, the subcommittee administered a survey of professional development practices and resources across all schools. Associate deans and directors of graduate studies from eleven schools documented their professional development programming, including self-assessments and individual

development plans (IDPs), courses and workshops, immersives and experiential learning, alumni career tracking, and partnering with alumni (see Appendix 2; full survey responses available on request).

Reflecting the broad spectrum of intellectual domains and their respective cultures and definitions of program success, schools reported very considerable variations in practices and underlying resources. These ranged from very extensive professional development programs fully integrated with the academic curriculum, especially in the law and business schools, to modestly resourced, incipient, and often extra-curricular efforts in other areas.

Schools vary in the extent to which they have identified core competency and versatile skills content appropriate for their students; they also vary considerably in their capacity to deliver relevant content. Where schools do identify core competencies, significant cross-domain overlap emerges.

4. The subcommittee also reached out to central University units readily identified as providers of professional development offerings. The units and services captured in Appendix 3 appear to operate largely independently of each other. There is a degree of duplication, e.g., in the listing of resources and events. To the subcommittee's knowledge, there is no single portal for students to reliably access all relevant University resources and programming.

5. The Office of the Provost shared with the subcommittee a masked report based on selective questions from the professional development module of gradSERU 2017 (# of Pitt students = 3,401). The report shows significant variations across the fourteen schools, and between student populations (master's, professional, research), on all questions. Questions on which relatively smaller proportions of students across many schools reported feeling "well" to "extremely well" prepared by their programs included: advancing ideas and projects by taking risks and exploring different directions; adapting teaching techniques for different audiences or settings; aligning graduate studies, skills, and values with career opportunities; cultivating relationships with advisors and mentors; developing relationships with a wide range of people and organizations; engaging in difficult conversations.

Only very small percentages of students across schools felt that the following activities prepared them well to extremely well for their future careers:

	% of all students	% of professional students
Career-planning workshops in my program/college/school	2–17	5–16
Academic and professional development activities offered by college/school	3–25	9–21

Larger percentages of students felt prepared for their future careers by conversations with faculty and alumni:

	% of all students	% of professional students
Conversations with advisor or other faculty	44–69	73–92
Conversations with alumni of the program	26–67	43–96

There is a limit to what can be deduced from the available data for the purposes of this report. The findings tentatively support the importance of enhancing core competency development in areas such as creativity, risk management, career exploration, relationship building, collaboration, and other soft skills. The data suggest that students across many schools are not currently perceiving school-level professional development and career planning programming to be very effective in preparing them for future careers.

Greater insight might be gained from benchmarking reports comparing individual schools and programs to their counterparts in peer and aspirational peer institutions.

6. Students and their faculty mentors in many schools can face steep search costs for information about diverse career pathways. The level and frequency of professional development programming, the alignment of academic and professional development objectives, and the quality of data provided by programs about alumni career trajectories vary widely across and even within schools. Awareness of central resources is uneven, including visibility of the [Center for Doctoral and Postdoctoral Career Development](#) in non-health sciences domains. Schools without in-house career services note an urgent need for enhanced central support.

7. National organizations such as the [Council of Graduate Schools](#) urge U.S. universities to develop cutting-edge professional development programs in order to remain competitive globally. As the University of Pittsburgh's peer and aspirational peer institutions invest in enhancing professional development programming, the significant risks to the University of not acting ambitiously in this arena include adverse effects on recruitment and on program and student success. If we do not actively address the culture, resources, programming, and policies around professional development, it will likely become increasingly difficult to attract top-students to many of our graduate programs. We would further risk not maximizing opportunities to bolster our diversity mission, to increase retention and completion rates, and to deliver on broader strategic priorities. The recommendations that follow are aligned with the **Plan for Pitt** (2016–20), which calls on us to focus our efforts to be purposeful, coordinated, and collaborative, including to conduct research with societal impact; partner, both internally and with public

and private partners locally; strengthen the University community by strengthening life-long connections with our alumni; and strengthen the Pitt community's relations to the city and region.

Recommendations

The University has an important role to play in enhancing the professional development of graduate and professional students, especially by:

➢ creating a campus-wide culture that validates the graduate degree as a pathway to multiple careers and hence values the importance of professional development and career exploration for all students;

➢ coordinating existing, enhanced, and new programming, while also balancing cross-domain content with domain-specific needs;

➢ boosting infrastructure in high-priority areas and formulating policies and guidance to frame emerging practices; and

➢ negotiating interfaces with external constituencies.

We recommend that the University —

1. consider creating a **position supporting the Vice Provost for Graduate Studies** to provide strategic direction and leadership for developing, coordinating, implementing, and evaluating professional development programming;[1]

2. **make extant professional development resources more visible:**

    i. catalog resources and present a single calendar of events, searchable by core competencies and target audiences;

    ii. list online resources subscribed to by the University or freely accessible to all students (e.g., Versatile PhD and various IDP platforms);

3. **partner with schools and support units to:**

    i. coordinate core competency programming to optimally leverage the expertise and capacities of all areas; emphasize to students the dimensions of community-building, collaboration, and

---

[1] This model is increasingly being followed by leaders in professional and career development, including Chicago, Clemson, Duke, Emory, Princeton, Notre Dame, Oregon, UC Berkeley.

cross-disciplinary problem-solving; provide central marketing, registration, and feedback (sample content of versatile cross-domain competencies: writing, communication, collaboration, project management, leadership, ability to build relationships, negotiation, business skills, diversity and inclusion, soft skills, career development skills);

ii. identify technical and other training opportunities available on campus (e.g., those currently targeted at staff and faculty) that could be leveraged for professional development for professional and graduate students;

iii. incentivize and support the development of innovative, sustainable professional development programming at the school and unit levels;

iv. develop strategies to increase graduate faculty and student buy-in for enhanced professional development and foster a culture of faculty and peer leadership;

v. approach mentoring holistically and in multi-generational settings, as a core competency for graduate and professional students, and with postdocs possibly serving as mentors to graduate students;

vi. scale involvement of alumni as co-mentors and career consultants (informational interviews, resume review, immersives) and, potentially, on graduate committees, see also 5i;

vii. help students negotiate the employer interface (networking events; career fairs; enhance faculty engagement with non-profit, industry, government; see also 4–6);

viii. consider micro-credentialing programs in professional development. Identify schools that might wish to explore stackable micro-credentials more broadly within existing curricular structures;

ix. ensure that enhanced professional development does not increase the time to degree but instead catalyzes or accompanies the quest for efficiencies in graduate training;

4. establish **graduate career counselling** for domains without dedicated graduate career services, for instance by embedding graduate student career counsellors within Student Services, to enhance outcomes;

5. build robust systems to **track graduate alumni and their career trajectories longitudinally to:**

   i. **engage alumni as co-mentors** of current students (e.g., via platforms such as PeopleGrove or WISR in partnership with alumni relations and institutional advancement; considering joining the Council of Graduate Schools' Understanding PhD Career Pathways as a project affiliate);

ii. **use data on near-, mid-, and longer-term career outcomes to improve and reform degree programs**;

iii. create greater **transparency** by making post-graduate career outcome data publically available;[2]

6. establish policies and structures for creating and sustaining **intern/externships** across campus and employment sectors; build capacity to curate intra- and extra-mural internship opportunities; and consider advising and potentially training students seeking internships and other immersives;

7. develop **training and toolkits for graduate faculty** to support them in mentoring students with diverse career objectives (e.g., curricular reform to embed professional development content, co-mentoring with alumni, learning about non-academic sectors, supervising immersives);

8. design and coordinate **assessment** of professional development programming in relation to career outcomes;

9. attend to the relationship between the **diversity and inclusion mission** and the career diversity mission.

We hope that this report may help foster a broader campus dialogue on professional development and career preparation for our graduate and professional students and lead to future actions that will support their success.

Respectfully submitted by:

Yasasvi Cherukkuru	Vivian Curran	Mike Gunzenhauser	Holger Hoock (chair)
John Horn	Kenneth Jordan	Satish Iyengar	Kaitlin Powers
Sam Poloyac	Caitlin Sniezek	Chris Staten	Qing Ming Wang
	Martin Weiss	Travis Wisor	

---

[2] See also Statement by AAU Chief Academic Officers on Doctoral Education Data Transparency (Sept. 12, 2017).

Appendices

Appendix 1: References and Resources

Selective Literature

Allum, J. R., Kent, J. D. and McCarthy, M.T., *Understanding PhD Career Pathways for Program Improvement: A CGS Report* (2014)

Council of Graduate Schools, *Graduate Education 2030: Imagining the Future* (2017).

Council of Graduate Schools, *Professional Development: Shaping Effective Programs for STEM Graduate Students* (2017)

Council of Graduate Schools and Educational Testing Service, *The Path Forward: The Future of Graduate Education in the United States* (2010)

Council of Graduate Schools and Educational Testing Service, *Pathways Through Graduate School and Into Careers. Report from the Commission on Pathways Through Graduate School and Into Careers* (2012)

McCarthy, M. T./Council of Graduate Schools, *Promising Practices in Humanities PhD Professional Development* (2017)

Posselt, Julie R., *Inside Graduate Admissions: Merit, Diversity, and Faculty Gatekeeping* (2016)

Weisbuch, Robert and Leonard Cassuto, *Reforming Doctoral Education, 1990 to 2015, Recent Initiatives and Future Prospects. A Report Submitted to the Andrew W. Mellon Foundation* (2016)

Models and Resources

Selective Graduate Schools

UC Davis, Grad Pathways

150+ workshops, seminars, panel discussions p.a. for graduate students and postdocs. Graduate Studies partners with the Internship and Career Center, the Center for Educational Effectiveness, the University Writing Program, Counseling Services, the Graduate School of Management, and the Child Family Institute for Innovation and Entrepreneurship. Eight core competencies: success and socialization in your graduate program; writing and publishing; presentation skills; teaching and mentoring; leadership and management; scholarly integrity and professionalism; career exploration, job searching, and networking; wellness and life balance. Four tiers of programming for each competency: tier 1, introductory workshops; tier 2, in-depth classes and seminars; tier 3, individualized advising; tier 4, community building and activities, designed to break the isolation experienced by many graduate students, particularly underrepresented groups, and further enhance the retention of UC Davis graduate students. See also: Professors for the Future (PFTF) and Internship and Career Exploration Programs.

UChicagoGrad

UChicagoGRAD offers tools and resources to help graduate students explore career options, connect with professionals, and develop professional skills. Guidance for the application and interview processes is available from seven FTE career advisors, three FTE fellowship advisors, and the writing center.

Cornell University's Pathways to Success Program

Housed in their graduate school, this program includes collaborations among the Office of Inclusion and Professional Development, the Office of Graduate Student Life, CU-CIRTL, the Center for Teaching Excellence, the Office of Post-Doctoral Studies, and Career Services to offer seminars, networking opportunities, panel presentations, and workshops. Thematic focus areas: navigate academia, build your skills, create your plan, and prepare for your career. The core competency development model allows participants to track skills development and progress in communication, career development, leadership and management, teaching, responsible conduct of research, and personal development.

Rackham Graduate School, University of Michigan: Professional and Academic Development

Duke Graduate School: Professional Development

Other Resources

CGS Online Compendium: STEM professional development programs

CIMER – Center for the Improvement of Mentored Experiences in Research

Group on Women in Medicine and Science Toolkit

Modern Languages Association Toolkit

National Research Mentoring Network

NIH BEST Consortium

Appendix 2: **Survey of Professional Development Practices and Resources across Schools: [available on request]**

Appendix 3: **University of Pittsburgh Units Offering Professional Development Programming to Graduate and Professional Students (surveyed Fall 2017) [available on request]**

Requests can be made to graddean@pitt.edu