

Report of the Faculty Task Force on Research

Prepared for the President and Provost
Lehigh University
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Ambitious and accomplished faculty have raised the quality and impact of research at Lehigh in recent years. We are eager to extend these advances, but recognize that in addition to these individual and collective efforts, Lehigh's culture and environment must change if we are to realize our aspirations. The Faculty Task Force on Research¹, convened in spring 2016, offers five recommendations to address this need for institutional change:

- 1. Restructure and focus faculty time to support research**
- 2. Enhance support for interdisciplinary and public-facing research**
- 3. Commit to taking risks and developing resources for research initiatives**
- 4. Expand faculty development, mentoring, and leadership**
- 5. Develop research initiatives collaboratively**

Background: Charge and Process

In winter 2015, the president and provost asked the vice president and associate provost for research and graduate studies to convene a task force to consider our goals for the character, quality and competitiveness of research at Lehigh and recommend actions to support accomplishment of those goals. This charge to the faculty task force follows President Simon's affirmation that "Lehigh commits itself to further excelling as a research university."

We undertook our work as a process of group inquiry. Task force members contributed their varied perspectives and experiences to identify shared values, describe aspects of Lehigh's research environment that either foster or complicate the realization of such values, and specify ways that this environment might be transformed to enhance the quality and impact of research at Lehigh. By design, the process involved no *a priori* assumptions regarding definitions of success, limiting factors, or necessary actions. In each stage of the process, the task force treated the materials that its members generated as data from which findings could be discerned. The process revealed a notable congruence across the group both with regard to what we value – indeed, familiar Lehigh values revealed themselves – and with regard to necessary steps.

Character, quality, competitiveness, and culture

The reputation of every great research university rests on the quality and visibility of its faculty research. Striving to *further excel* captures our ambitions to expand the quality and impact of Lehigh research nationally and internationally. For many years Lehigh's public statements subordinated research to teaching: "the scholarly inquiry and research of Lehigh faculty and students," our former mission statement proposed, "add value to instruction on our campus." This relationship no longer characterizes the accomplishments and ambitions of Lehigh faculty who are, and strive to be, research leaders in their fields. Neither does it characterize the role of research in shaping every aspect of education at Lehigh, where a faculty of active and engaged scholars lead a community of inquiry that embraces graduate and undergraduate students. We do not view our recommendations as raising the profile of research at the expense of teaching;

¹ See Appendix 1 for task force membership.

on the contrary, the research environment is a critical element of a comprehensive Lehigh education.

Lehigh faculty engage in high-quality research that aspires to high visibility. Such research, both individual and collective, takes on big questions that impact and involve not only our colleagues within the academy, but also a variety of stakeholders beyond it: from South Side neighbors and local institutions to global companies and communities. Only through research of this character and quality, and through taking attendant risks, can we expect to distinguish ourselves nationally and globally, to attract and retain the colleagues and students with whom we seek to work, to capture the imaginations and contribute to the missions of those who support our research and with whom we collaborate, and to earn recognition that raises the standing of the university.

Lehigh research merits a culture of vibrant intellectualism marked by **individual distinction, interdisciplinarity, collaboration (within and beyond Lehigh), collegiality, and intellectual freedom**. This culture can thrive only under material conditions that create focused time and tools for research, in which excellence is rewarded and collective efforts can grow to scale and prominence according to their merit. Faculty, staff, and university leadership all have roles and responsibilities in establishing and maintaining these material conditions.

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Report of the Faculty Task Force on Research Recommendations

We have identified five areas of the Lehigh research environment that must be cultivated for Lehigh faculty and students to realize their ambitious research goals:

1. RESTRUCTURE AND FOCUS FACULTY TIME TO SUPPORT RESEARCH

Members of the faculty must be able to dedicate focused time for research endeavors, and to focus on aspects of the process for which they are uniquely qualified. We should

increase flexibility in allocation of time, enabling members of the faculty to organize their responsibilities in ways that enable them to be maximally productive. We should

- ◆ enable faculty to more flexibly meet their commitments to teaching, research, and service, by considering allocations of effort (such as 40/40/20) on a multi-year basis instead of on a yearly basis to enable extended periods of research concentration.
- ◆ review whether teaching assignments for faculty should be adjusted depending on the scale of their research programs.
- ◆ encourage innovative ways to foster interdisciplinary research such as group- or team-based sabbatical leaves or other research-intensive periods.
- ◆ consider ways to better enable faculty to extend their teaching efforts through student assistants, e.g., by allowing advanced undergraduate students in departments without graduate programs to serve as TAs.

organize university operations more purposefully around the research mission, ensuring that its infrastructure – childcare, building hours, transportation – operates throughout the year rather than on an undergraduate semester schedule. We should

- ◆ improve transportation among the disparate areas of the Lehigh campus complex.
- ◆ seek to improve transportation options, especially for airport access, for faculty and student travel to professional meetings and for visitors to campus.
- ◆ significantly expand childcare services to enable full faculty participation in academic activities.

improve comprehensive pre- and post-award support, with emphasis on reduction of faculty time spent on administrative functions. We should

- ◆ simplify creation and management of grant budgets.
- ◆ automate completion of forms and similar grant application materials.
- ◆ simplify purchasing and payment processes such as OneCard.

provide assistance with grant writing and assembly, especially for large and complex proposals.

2. ENHANCE SUPPORT FOR INTERDISCIPLINARY AND PUBLIC-FACING² RESEARCH

The success of two recent clusters, Africana Studies and Integrated Networks for Electricity, as well as other examples of cross-college and cross-department collaborations, provide examples of formation of effective teams to enable potential world-class efforts grow to scale. In order to fully thrive, work of this kind requires specific support. We should

invest in physical spaces to drive the university research mission. For example,

- ♦ university capital investments and fund-raising should include cutting-edge research facilities and innovation spaces.

create and adapt physical spaces to support interdisciplinary research. We should

- ♦ renew physical facilities to support adjacency of units with shared interests and collaborative opportunities.
- ♦ create shared workspaces that support co-location and co-residency around major research themes, designed for agility to support programs as they evolve.
- ♦ develop research spaces both on- and off-campus, as appropriate, according to the research settings (e.g., schools, community) and collaborators involved.

review the process by which faculty lines are allocated. For example,

- ♦ the expansion of research activities and achievements should impact the allocation of new faculty lines

support development of faculty as public scholars. The conduct of public-facing work brings opportunities to engage the lay public and practitioners into our work, enhancing our visibility and transforming the work itself. We should

- ♦ vigorously promote public-facing work.
- ♦ reward public-facing work in annual performance reviews and in personnel reviews, including tenure and promotion (see below).
- ♦ support faculty travel not only to deliver papers at conferences, but also for participation in larger conferences/congresses that can contribute to establishing a global presence for Lehigh faculty and students in emergent areas.

review tenure and promotion guidelines to foster varied forms of research and dissemination. Faculty and college leadership should revisit guidelines to assure that, along with research that has traditionally been rewarded, we reward the varied forms of research and dissemination that faculty more widely embrace.

provide administrative support to develop synergistic relationships with external partners, from local institutions to global corporations and organizations leading to international collaborations and exposure.

enhance the ability of faculty to direct their research toward practice, by enhancing technology transfer and related resources.

² We use *public facing* to denote research that responds to the needs of, or that partners with, communities beyond the academy, whether professional communities of practice or lay communities.

3. COMMIT TO TAKING RISKS AND DEVELOPING RESOURCES FOR RESEARCH INITIATIVES

Research programs that follow established trends are unlikely to earn prominence in academic circles or be viewed as uniquely valuable within or beyond the academy. Astute risk-taking must be encouraged and rewarded. Individuals and groups must be able to access resources so that ideas can be developed to the point where others appreciate their worth. We should

encourage risk-taking. For example,

- ◆ In a culture that expects research of the character and quality to which we aspire, annual reviews should ask “What risks did you take this year?”
- ◆ Survey faculty on the risks they plan to take in their research and the steps (whether resource-related or effort-related) that would facilitate such efforts

enable individuals and teams to get their work past the highest-risk stages and bring those that succeed to scale and prominence. For instance, we should

- ◆ further develop the existing suite of research investment programs.
- ◆ support collaborations with Advancement in developing gift opportunities for efforts of potential prominence.

strive to extend existing mechanisms of support for pre-tenure faculty to all research-active faculty regardless of rank. Research careers now often involve significant shifts in direction and repurposing of capabilities. We should attend to the needs of ambitious tenured faculty for uncovering opportunities and accessing needed investments. For example, we should

- ◆ enhance mentoring (see below).
- ◆ make “re-startup” packages available at the associate and full professor level.
- ◆ ensure flexibility in effort allocation (see above).

invest significantly in recruiting and supporting research-focused grad students. The departmental and individual investigator model for graduate student support currently provides incomplete support for students’ personal and professional development. We should

- ◆ guarantee graduate research associates full grant funding for the periods necessary for diligent students to complete their degree programs.
- ◆ develop funding models and fundraising opportunities for recruiting and retaining graduate students
- ◆ increase the number of graduate fellowships as well as number of fellowships available, whether associated with prominent research programs or as elements of endowments for faculty positions.

4. EXPAND FACULTY DEVELOPMENT, MENTORING, AND LEADERSHIP

Success at our level of aspiration and in a highly competitive environment requires development of skill sets beyond individuals' capabilities as scholars in their core disciplines. Modern research careers involve shifts in direction, parallel engagement in multiple projects, and roles in multidisciplinary teams. So that faculty can live up to the potential and ambitions with which they arrived at Lehigh and for us to live up to our collective ambitions, we should

enhance mentoring processes. University faculty must formalize the mentoring processes and college leadership must reward mentoring as an important faculty activity. The mentoring processes should be enhanced for junior faculty and extended to include faculty at later stages of their careers.

integrate new faculty into ongoing endeavors. New faculty members should be actively involved in *university-wide* research endeavors and themes. Cluster hiring, which has included intensive multi-departmental engagement in hiring and fostered research relationships that can grow as new faculty get started, provides experience to be replicated and extended.

develop and recruit research leaders. Whether involving themes that bind together individuals' bodies of work and help to attract visibility and resources, or team conduct of research, faculty leaders who convene, facilitate, and provide public and professional voices play critical roles. Faculty development and recruiting processes must attend to the need for leadership. Those who step up to leadership roles need to be fully supported and rewarded. We should actively recruit research leaders to Lehigh.

reward extraordinary accomplishment. Senior leadership and college leadership must create a system that rewards extraordinary accomplishments in research in all its forms, which the current merit system cannot.

5. DEVELOP RESEARCH INITIATIVES COLLABORATIVELY

Research initiatives flourish when all stakeholders are invested in their success. We must devise collaborative processes for faculty and university leadership to develop major research initiatives. Means need to be developed to ensure that all university stakeholders understand and experience the role of research in the university's integrated mission. We should

develop processes for conceiving and launching major research initiatives.

Aspects of recent experiences in cluster hiring and invitations to collective ideation should be extended. Such processes should include administrative and logistic support to encourage faculty to initiate or participate in such efforts.

build stronger relationships between Advancement and growing research initiatives.

Mechanisms for collaboration in developing major research themes will help faculty groups define what these initiatives offer to non-academic stakeholders and will benefit fundraising efforts by providing a richer set of opportunities for potential donors.

engage alumni more extensively in faculty research. The majority of Lehigh alumni connect with the university through an undergraduate experience that was more traditional than what we currently offer through immersion in a research-intensive environment. Graduate alumni are insufficiently engaged. The whole university community should be awakened to the importance of research in shaping Lehigh's identity, defining the student experience, and meeting our obligations to society. We should

- ◆ embed Lehigh's research themes more heavily in alumni outreach and fund-raising efforts.
- ◆ continue and expand vigorous efforts to market/communicate faculty research efforts and to publicize Lehigh faculty who represent our work to the academy and to the public.

APPENDIX 1: TASK FORCE ROSTER

After conferring with the provost and the deans of the colleges, a task force was assembled by the vice president and associate provost for research and graduate studies (VPR). The VPR drew members from a wide variety of disciplinary backgrounds including junior, mid-career, and senior faculty, all accomplished or rising scholars devoted to doing exemplary work, and sound and generous thinkers. Members of the task force brought to the group both experiences of success and honestly held concerns.

Saladin Ambar, Associate Professor, Department of Political Science

Bryan Berger, Associate Professor, Department of Chemical Engineering

Paul Brockman, Professor, Department of Finance

Scott Paul Gordon (Chair), Professor, Department of English

Susan Kart, Assistant Professor, Department of Art | Architecture | Design and Africana Studies

Himanshu Jain, Professor, Department of Material Science and Engineering

Dawn Keetley, Associate Professor, Department of English

Lee Kern, Professor, Department of Education and Human Services

Shaline Kishore, Associate Professor, Department of Electrical and Computer Engineering

Dominic Packer, Associate Professor, Department of Psychology

Joshua Pepper, Assistant Professor, Department of Physics

Richard Sause, Professor, Department of Civil and Environmental Engineering

Susan Woodhouse, Associate Professor, Department of Education and Human Services

Alan Snyder (ex officio), Vice President and Associate Provost for Research and Graduate Studies