

## **Green Paper**

### **Strategic Academic Planning - Research and Intellectual Outputs Team**

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“A University is a place ... whither students come from every quarter for every kind of knowledge; ... a place for the communication and circulation of thought, by means of personal intercourse. ... It is the place to which a thousand schools make contributions; in which the intellect may safely range and speculate. It is a place where inquiry is pushed forward, ... discoveries verified and perfected, and ... error exposed, by the collision of mind with mind, and knowledge with knowledge.”<sup>1</sup>

At their core, universities have a “common relationship with knowledge” – they disseminate knowledge, they pursue knowledge, they push the boundaries of knowledge.<sup>2</sup>

Generating knowledge serves the public good and supports the health and wealth of local, national and international communities. New knowledge can and should be generated in institutions like the University of San Diego. In fact, it is imperative that universities such as USD - those committed to inclusion, diversity, the social good, ethical conduct and compassionate service - engage in the creation of new knowledge. New knowledge supports and amplifies our intent to service the social good.<sup>3</sup> As an engaged, contemporary Catholic institution, the University encourages creativity and discovery. With knowledge comes insight and with insight comes innovation needed to confront humanity’s urgent challenges.

New knowledge is derived from the creative, scholarly, or scientific works of an academic community. Institutional support for the generation of knowledge in all of its forms requires an appropriate infrastructure, agreed upon and shared understanding and commitment across university segments, reconsideration of policies and practices that impede the generation of knowledge, and continued engagement with creative, scholarly, or scientific communities and the new directions and questions of our respective fields.

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<sup>1</sup> Newman, J.H. (1852). Rise and Progress of Universities. Ch. 2. *The National Institute for Newman Studies*. <https://www.newmanreader.org/works/historical/volume3/universities/chapter2.html>

<sup>2</sup> Swain, H. (2011, Oct. 10). What are universities for? *The Guardian*. <https://www.theguardian.com/education/2011/oct/10/higher-education-purpose>

<sup>3</sup> In a recent study conducted by Dr. Spencer at USD, researchers investigated the question, how can educational spaces promote STEM learning and identity development of Latinx and Black youth? During this 2-year study, funded through the National Science Foundation, the research team learned that STEM institutions need to provide a “cultural home” for youth of color, where they can come as they are to the enterprise of STEM learning. Researchers gained nuanced and insightful information that is now shaping STEM educational practices in places beyond USD. Not only does this new knowledge allow USD to more fully support the educational aspirations of Black and Latinx youth, it will also assist STEM fields (and therefore all of us) to more fully benefit from the ideas and gifts that these young people have to offer.

## **Our Team / Our Process**

Members of our team come from across the university holding pre- and post-tenure faculty positions in Nursing, Ethnic Studies, Chemistry and Biochemistry, Business/Operations Management, Information Sciences/Digital Initiatives, Psychological Sciences, and STEM/Mathematics Education, and hail from a variety of graduate institutions from across the country. These perspectives and experiences provided robust cross-talk opportunities and allowed us to understand differences, challenges and constraints that were unique to our divisions and those that reflect larger university structures and practices. Our team engaged in multiple and targeted dialogues where we shared and listened to individual insights and challenges. Given our team's focus on Research and Intellectual Outputs, we conducted two database searches using search terms "university intellectual outputs" (peer reviewed literature) and "faculty scholarship support" (university websites and peer reviewed literature). We generated an annotated bibliography (results summarized herein). Finally, we brainstormed actionable items and generated a list of questions that represent our ongoing thinking on this matter.

## **"Key Take Aways"**

### **University Intellectual Outputs**

The peer reviewed literature defines knowledge as a "public good". "Universities should be understood as centers of intellectual output, taking into account that, in the academic context, it is research that generates knowledge. In a knowledge society, the creation of new knowledge is indispensable, and it is the university professor who is called to produce and revise it."<sup>4</sup>

Each research context has its own logic, and this affects the production of intellectual work. Different forms of intellectual output have effects on audience, impact, positioning, and available funding avenues. Evidence suggests that there is a "growing reliance on short-term, impact-assessed and project-based funding over core donations." While this means a decrease in the production of peer-reviewed publications, peer-reviewed publications often remain central for promotion. Research plans and production are dependent on available grants.<sup>5</sup>

Salary may be related to scholarly productivity. Higher starting salaries mean junior faculty do not need to seek income from other sources and may have more time to

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<sup>4</sup> Méndez, J. & Vera, L. (2015). Salaries, incentives and teaching intellectual production in the public university in Colombia. *Apuntes del Cenes*, 34(60), 95-130.

<sup>5</sup> Frixione, E., Ruiz-Zamarripa, L., & Hernández, G. (2016). Assessing individual intellectual output in scientific research: Mexico's national system for evaluating scholars performance in the humanities and the behavioral sciences. *PLoS one*, 11(5), e0155732.

dedicate to research. Being part of a research group also increases productivity. Overall, however, salary is not expected to increase research and intellectual output over time.<sup>6</sup>

Producers of intellectual work have a societal obligation to communicate their work to society.<sup>7</sup> Perpetual global (not national) access to knowledge should be prioritized by institutions, and libraries are key to developing long-term preservation infrastructures, such as institutional repositories. The entire university community should be aware of, support and contribute to such effort.<sup>8</sup>

### **Faculty Scholarship Support**

Specific examples of institutional support practices for faculty scholarship at a variety of small, medium and large private and public universities across the U.S. include:

1. Faculty Research Grants
  - a. Support for a range of research expenses, including travel
2. Faculty Summer Research Stipends
  - a. Support for untenured faculty members
3. New Faculty Research Awards
  - a. Support for new faculty in their first three years of service to the institution
4. Guaranteed Research Semesters for Assistant Professors
  - a. No or reduced teaching for a semester to support research
5. Senior Faculty Fellowships
  - a. No or reduced teaching for a semester to support research; targeted to the humanities and fields for which there are few programs of external support
6. Faculty Development Fund
  - a. Support to enhance teaching or contribute to development of scholarly or creative project)
7. Sabbatical Leave Grants
  - a. Funds, beyond salary, to support scholarship during sabbatical leave (e.g., to fund equipment, supplies, other costs of research, travel expenses, etc.)
8. Book Development Grant
9. Reassigned Time for Major Projects
  - a. Course credits
  - b. Research development “blocks of time”

<sup>6</sup> Méndez, J. & Vera, L. (2015). Salaries, incentives and teaching intellectual production in the public university in Colombia. *Apuntes del Cenes*, 34(60), 95-130.

<sup>7</sup> Shaffiei Z.A., Hamidi S.R., Haron H., Halim A.I.A. (2013) Knowledge Preservation Framework for University's Intellectual Output. In: Zaman H.B., Robinson P., Olivier P., Shih T.K., Velastin S. (eds) *Advances in Visual Informatics. IVIC 2013. Lecture Notes in Computer Science*, vol 8237. Springer, Cham. [https://doi.org/10.1007/978-3-319-02958-0\\_60](https://doi.org/10.1007/978-3-319-02958-0_60)

<sup>8</sup> Smit, A. (2016). You Can't Preserve What You Don't Have—Or Can You? Libraries as Infrastructure for Perpetual Access to Intellectual Output. [Plenary Session]. Proceedings of the Charleston Library Conference. <http://dx.doi.org/10.5703/1288284316479>.

10. Student Research Assistantships
11. Conference Travel
12. Targeted Support for Key Projects,
  - a. Support for projects in or about specific countries/regions (e.g., Asia/Pacific Rim, the Southwest U.S., etc.)
  - b. Named grants and fellowships targeting topics such as social justice, religion, and natural science
13. Individualized Plans
  - a. Scheduled annual individual discussions between department chairs/directors and pre-tenure faculty to devise ways that departments, schools, and the college can support faculty research (these have been particularly important for assessing the long-term impact of COVID-19); the discussion is documented and reported to the associate dean to ensure implementation so that faculty research is supported over the long term.
14. Presidential Scholarship Program
  - a. Honor and support for best teacher-scholars
15. Redesign of the research administrative team to include a vice-provost for research
16. Increased flexibility in teaching schedule (e.g., faculty may opt for increased teaching responsibilities in one term in order to have corresponding lower teaching responsibilities in a later term)
17. Communication
  - a. Support for research also includes: communicating the value of faculty research to stakeholders, increasing interaction between faculty and research-focused centers and institutes in the region, and post-award support that encourages the completion of research projects.

In addition to these mechanisms, we noted varied application processes with some mechanisms being administered through the department or school, while others are administered by faculty committees or a research department. Application and reporting requirements vary. Many institutions make support broadly available for projects that range from traditional hypothesis driven research to translation and application of research in practice, as well as creative works in disciplines such as the humanities and arts.

Selected literature on promoting faculty scholarship among clinician educators (e.g., professors of practice) revealed that faculty that participate in a range of support and development activities, including skill seminars, coaching, peer-mentoring, cohort

meetings, and a writing retreat report increased confidence and ability to apply research skills – all at a modest cost to the institution.<sup>9</sup>

### **Research and Intellectual Output Team Recommendations**

Informed by our dialogues and our review of evidence, we developed the following recommendations, the purpose of which are to support and augment the research productivity and the intellectual and creative output of pre- and post-tenure faculty at USD.

#### **1. Clarify language on scholarship and intellectual outputs.**

Clarity of language regarding what is meant by scholarship, intellectual output and research across the campus and at all levels of administration and faculty is needed. This clarity can be achieved through targeted dialogues across units. The goal of the discussions should not be to force all units to engage in the same kinds or intellectual work or research, but to have broad understanding of what these terms actually mean for each unit. We believe that one way to arrive at clarity is to begin to define what these terms are not.

#### **2. Address “sacred cows” that stymie faculty research and scholarly output.**

There are a number of practices (often historic in nature) that obstruct faculty research and scholarly output at USD. We note that despite faculty desire to engage in research, faculty research grant monies go unused each year. Why? Processes across departments, programs, units and the institution stand in the way of faculty accessing and utilizing these grants. For example, “sacred cows” needing reconsideration include:

- a. Requirements that all program core courses be taught only by tenure-line faculty, which then limit their ability to benefit from a course release;
- b. Dissertation committee membership requirements such as who can serve and how many must serve, resulting in the burden of committee membership being born by a small group of faculty, who then have decreased time to devote to own research and scholarship;
- c. Requirements for publication in specific journals and requiring publishing in certain journals as a prerequisite for promotion and tenure. This practice disadvantages innovation, invites bias and discrimination in the promotion and tenure process, and fails to acknowledge structural bias and discrimination inherent in a number of disciplines and journal publication practices.

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<sup>9</sup> Reader S, Fornari A, Simon S, Townsend J. Promoting Faculty Scholarship - An evaluation of a program for busy clinician-educators. *Can Med Educ J*. 2015;6(1): e43-e60.

- d. Department specific processes, practices and “rules” (often opaque) for distributing course releases, sabbaticals, or other funds or supports needed to promote faculty productivity, which often disadvantage junior faculty and/or faculty from under-represented groups. There should be clear and transparent guidelines that are consistent across departments within units.
3. **Implement an annual *State of University Research Symposium*.** This annual symposium, separate and distinct from a symposium that showcases faculty research (#6), would be an opportunity for the USD community to update itself on the status of university-based research across the country. Further, the symposium would be an opportunity for the community to learn about any new research standards, learn best practices for supporting faculty research at similar universities, identify resources and tips for obtaining external research-based grant funds, discuss evolving ethical considerations in research, and dialogue with research-active members of the community. Administrators, sponsored projects teams, and active researchers from peer and aspirational universities could be invited to present and dialogue with the USD community. A potential title for the annual meeting could be, “Supporting the University as Knowledge Producer.”
  4. **Join/build research consortiums across our region.** Collaboration and partnership are essential to building a successful research enterprise. USD faculty could benefit greatly from participation in research communities beyond our own. Faculty should be encouraged to join research consortiums and to build consortiums where they do not exist. Consortiums build social networks, give new insights and generate new collaborations.
  5. **Facilitate connections with industry.** USD should continue to build and maintain connections with industry partners, to include research sponsorships, research collaborations, faculty-industry sabbaticals and/or faculty development and training.
  6. **Hold an annual *USD Faculty Research Conference*.** Separate and distinct from Research Week, the current model for annual research dissemination on campus which emphasizes student research and faculty-student research, this would be an opportunity for faculty across USD to present their intellectual outputs to their peer community in particular and learn about the research and scholarship of their colleagues across the institution. This event should have opportunities for both within and across division presentations and should include a variety of presentation formats (i.e., roundtables, panels, posters, and visual and performing arts displays). The conference can assist with breaking down silos while showcasing the different

kinds of research going on at USD. Beyond the benefit to faculty, the event would allow USD students to learn about their professors' research agendas.

7. **Consider new models of faculty support.** Although USD presently provides for faculty research grants and faculty sabbaticals, USD should consider new models of faculty support, such as those noted above in the section on "Faculty Scholarship Support." Potential ideas include a pre-tenure sabbatical program and providing course release that acknowledges the differing demands of doctoral advising and/or undergraduate research advising, etc.
  
8. **Embrace progressive reform in the scholarly communication system.** As scholarly communication undergoes changes to promote more equitable and inclusive dissemination of knowledge, and the university seeks to connect knowledge produced by its faculty and students to impact the broader world, USD should engage and educate faculty on topics such as open access (OA), open data, and open educational resources (OER). The *State of University Research Symposium* (#3 above) is one ideal venue for this kind of dialogue and learning exchange. Other initiatives to address this recommendation include valuing open scholarship in tenure and promotion decisions, forming an OA Policy Committee to explore its adoption at other schools and how it would operate at USD, and promoting / incentivizing deposit of publisher-permitted research / scholarship in the institutional repository, [Digital USD](#).

### Ongoing Questions

The above noted recommendations represent only the beginning of our consideration of how USD should promote "Research and Intellectual Output" at USD. To aid in developing a robust, dynamic and forward-facing Academic Plan, we seek answers to the following questions:

1. How can USD facilitate a culture of intellectual curiosity and scholarly engagement among faculty throughout their careers?
  
2. How can USD promote equitable support for research across fields, especially for pre-tenure faculty?
  
3. What is the value of undergraduate research for our broader reputation? Does it enhance our reputation if we send undergraduate students to Ph.D. programs?

4. How can the campus better build on/benefit from the presence of graduate schools and graduate students? How can we connect graduate students with undergraduate students in similar fields? Research mentors, for example? Can we provide opportunities for Master's students to do research with faculty, be mentored by faculty, as they consider Ph.D. programs?
5. What is the role of Centers and Institutes for research productivity and intellectual curiosity? Can we expand the number of Centers and Institutes if they are valuable for scholarship? In that light, how can we increase the number and impact of visiting scholars – short term, semester, yearlong? Post-docs? Visiting faculty? Visiting Ph.D. students?
6. Should we, and if yes, how do we encourage faculty to pursue research topics that are tied to social justice, changemaking, etc.? How do we encourage research dissemination in ways that support an inclusive and equitable scholarly communication system?
7. How can we better articulate the value of research and scholarly activity at USD? (Benefits could include increased academic reputation, attracting the next generation of great faculty, improved rigor in the classroom, enhancement of undergraduate research, enhancement of vibrancy and enjoyment for faculty, etc.)
8. How do we better support graduate student research? Can we provide university-level support for doctoral students to apply for fellowships? Should we develop a university-wide dissertation presentation at the end of every year? How can we support doctoral students in applying for faculty positions? How can we help students who are interested in moving on to PHD programs? Can the office of UG research be reimaged as the Office of Student Research?
9. How do we support collaboration/interdisciplinary research (especially given that this is more favored than single discipline research in the extramural funding space )? Can we create a better search mechanism for faculty to seek out colleagues on campus across units by research interest, methods expertise, etc.?
10. How might we reimagine Research Week to showcase research across the institution? Could it be tied to internal funding opportunities and award recognition as well as a celebration of collaborative research efforts?

## **Concluding Thoughts**

New knowledge matters and it can be generated and produced right here at USD. New knowledge in ethnomusicology, in nursing, in chemistry and cognition, in economics and industrial engineering and in business. That knowledge will take a variety of forms and we embrace this diversity. It is our obligation as an institution of higher learning to produce new and important knowledge and likewise to provide the infrastructure that supports its production.