Summary Notes & Q+A
Academic Meeting #2: Interdisciplinarity
Wednesday, Feb 27, 2019

Discussants: Judy Stepan-Norris, Vice Provost for Academic Planning; Dan Stokols, Pramod Khargonekar, Diane O-Dowd, George Striedter, Frances Leslie, Michael Dennin (in absentia)

Judy Stepan-Norris – Intro – How does interdisciplinarity fit into Pillar 1 of the Strategic Plan
• Administration has developed new interdisciplinary hiring programs
• Create appropriate programs/structures to facilitate interdisciplinarity:
  o Develop opportunities to address societal challenges
  o Build a donor-funded interdisciplinary building
  o Develop structural/administrative support
    ▪ TA issues are being considered by the APG taskforce to look for possible solutions
  o Promote Team Science
    ▪ Office of Research has assembled the Team Science Accelerator Lab to help faculty develop collaborative projects/write grants
    ▪ Celebration/Workshop of Interdisciplinary Research will be held in Fall 2019
  o Help faculty deliver interdisciplinary courses
  o Develop new academic personnel review pathways

Dan Stokols – Team Science Acceleration Lab (TSAL) – Advancing Cross-Disciplinary Team Science
• Develop campus-wide definition of interdisciplinarity
• TSAL developing:
  o an eco system that will maximize cross disciplinary integration and innovation while minimizing the costs incurred through scientific and translational collaboration
  o toolkit to assist faculty in writing an effective research statement for review, promotion and tenure cases so that interdisciplinary work is presented accurately and weighted appropriately
  o policy on how to distribute indirect costs and credit sharing of inter-school grants
  o workshops and training to strengthen team-level capacities for effective transdisciplinary collaboration and grant application making (federal agencies and private foundations are shifting money/funding to support cross disciplinary projects/teams
  o developing a toolkit to help guide reflective research statements/collaborative contributions list to show participation within the project for academic review
  o seed grants to help groups develop interdisciplinary proposals
Questions/Topics

**Question:** Project Based Learning – how can this student-centered pedagogy infiltrate the university structures?
**MD** - We are having increased success with faculty learning communities, which is a great way to share pedagogical approaches. I would encourage faculty that already have experience in this area to reach out to Andrea Aebersold (Director of Faculty Pedagogical Development for DTEI). This would be a great way to start this process.

**Question:** How can we create a structure at the university that supports and encourages interdisciplinary/collaborative student opportunities that will also provide course credit?
**MD** - The reality is that we actually have a significant number of these courses. Part of the issue is individual School/Department culture. I continually come across myths about how resources flow that create artificial barriers to these types of courses. Yet budget credit for the student FTE in a course is attached to the home department of the FACULTY teaching the course. One potential real barrier is how we account for co-teaching, and that discussion is being started at the Associate Dean level and the Provost Cabinet – but suggestions and thoughts are certainly welcome in this area. Also, if people have experienced particular barriers that would be helpful to hear about.

**Question:** How can better relationships be developed between the Schools of Humanities and Social Science so students have interdisciplinarity incorporated into curricula and approaches to pedagogy?
**MD** - There are reasonable structures for interdisciplinary courses at the undergrad level but this question seems to be about faculty relationships.

**Question:** How can the campus facilitate conversations between faculty without preexisting disciplinary overlap/help connect around problems that would benefit from multi-disciplinary examination?
**PK** – Facilitate campus-wide conversations between faculty through events, TSAL members are available for consultation. OR supports ORUs and Campus Centers, all information is on the website, if you have an area of interest find the ORU or Center that is appropriate and make contact. If you have trouble contact VCR Khargonekar, he will assist and make introductions if needed.

**Question:** What interdisciplinary research areas does the administration support? What are they focused on and willing to invest in? Will faculty be given the opportunity to provide input into areas of focus they find important/worthy to decision makers?
**PK** – The campus supports and encourages ALL research across the university. Internal resources of the university are limited but OR does have some funding for seed grants to help jump-start projects that should attract external opportunities once developed. All applications
are peer-reviewed and priority is given to those projects that present a pathway to potentially receive external funding. The goal of OR is to grow all research on campus.

**Question:** Interdisciplinary projects are often administered through units (rather than traditional departments); departments need to account for the productivity of their faculty; the two objectives compete with each other; how can we reconcile?

**PK** - The Team Science group created a system that gives credit to all co-PI’s on the grant and each dean has access to that. The indirect costs are more difficult, we are in conversations with the Provost and Budget Office to try and identify solutions. This should not deter faculty from participating, when a group comes together is expands the possibilities and options for the future. If faculty are running into problems, please reach out to Pramod for guidance so he can assist as best as he can.

**Question:** Must interdisciplinary be framed as problem solving which infers immediate solutions are needed? Often the outcomes from interdisciplinary value are long term.

**PK** – This depends on the project and the funder. For example, NIH and DoD fund long term projects where other funders may be looking for immediate solutions (the CDC may be an example). The problem being addressed and the situation will determine if we are problem solving or working on a longer term outcome but both can be interdisciplinary.

**DO** – To not be disadvantaged at review, faculty working on long-term projects should be able to identify intermediate artifacts/progress; develop a statement/plan to show the momentum of the project as it grown. This will help the reviewers gain an understanding of the work being done and associated accomplishments and thus enable them to make better informed evaluations.

**Question:** How can we build new space on campus that is focused on promoting interdisciplinary interactions? Shared hotel lab space focusing on team science?

**PK** – The new Interdisciplinary Science and Engineering building will have 91,000 sf in lab space, 30,000 sf of office space, and 20,000 sf in colloquia/seminar/collaborative meeting space. It has been designed to encourage and support collaboration.

**Question:** Effect of ‘high-risk’ interdisciplinary projects relating to the impact on tenure particularly for young faculty; How does interdisciplinarity fit with the strategic plan? Does the plan address ways to create support for these projects?

**DO** – The Strategic Plan encourages interdisciplinary projects, UCI has implemented new hiring programs, formed the Team Science Accelerator Lab (TSAL), UCI Engage offered workshops to help faculty deliver interdisciplinary/engaged courses and the academic personnel review pathways are under development. The importance of the faculty member’s contribution to a large project takes more effort when completing a reflective self-statement so the reviewers can understand the work and the contribution to the wider project. You need to create a context from which the evaluation can be extracted. Begin with a clear self-advocacy statement describing what you are doing that can be externally validated by publications or others work.
**Question:** How does CAP evaluate individual contributions to interdisciplinarity? How can we institutionalize policies and guidelines that give equal credit to interdisciplinary work for tenure and promotion?

**GS** - When the research/creative activities were performed as part of a collaborative team, it is important to spell out the candidate’s specific contributions to the collaborations. This can be done in the research statement or in the review profile (AP-10), where the candidate’s contributions can be described in a sentence or two after each listed publication (or other form of output). For publications, it is generally useful to note whether the candidate is corresponding author, and whether some authors are the candidate’s mentees. Similarly, the nature of collaborative grants should be described, including the candidate’s role in proposal preparation, grant administration (e.g., what fraction of the funds is coming to the candidate’s unit?), research contributions, and so forth. For promotions to tenure, candidates should indicate how their research/creative contributions have become independent of their previous mentors. That said, candidates need not shy away from collaborations with other faculty. The campus, including CAP, recognizes that such collaborations can be very productive or even essential in some fields. The difficulty when evaluating is in determining the individuals impact to the project so it is important to spell out your contribution, provide the information that describes your value – you can provide letters from your team that evaluate your participation and/or how your contributions move the project forward. Be descriptive, accurate and informative. If there are a number of authors in a publication explain why you are ranked where you are so the evaluators aren’t guessing.

**Question:** Research relies on students. For interdisciplinary research students are needed from other departments but the admission process makes it difficult – how can we make the admissions process easier?

**FL** – The admissions process is tied to the academic program and its requirements. One way that programs can do this is to create a formal academic Emphasis that encourages students from other programs to interact with their faculty. Creating an Emphasis requires 3 courses for the students to take. Students from any part of campus can take that emphasis and you are then exposing your department to the wider student community. Alternatively, the faculty can create a new interdisciplinary graduate program. We have several examples of successful IDPs on our campus. The interdisciplinary programs report to the Graduate Dean, rather than the School, the faculty form an executive committee that oversees the program; the problem is that these programs currently cannot receive TA-ships so they are financially disadvantages.

**Question:** In the Humanities there is a trend that interdisciplinary research projects often produce non-tradional research projects which then presents a challenge for tenure and promotions. Is CAP creating a set of evaluation for this type of research? Or will the onus of the responsibility continue to land on the faculty?

**GS** – Faculty members should take every opportunity to help CAP figure this out and understand it. CAP wants as much information as possible to make an educated assessment. CAP is trying but they struggle to identify important, meaningful, well-done products so the more information the faculty and dean can share the better.
**DO** – it is to the faculty members benefit to provide as much info as possible but the Department letter is extremely important because they can more credibly evaluate the project and impact by the faculty member. Readers evaluating these cases do their best but if it is out of their field they look to the packet to explain, highlight and emphasize the novel concepts and level of scholarship.

**Question:** When a center is sunсетted, is there any process/system or office to assist with the process so that the connections/relationships/outreach programs that have been developed don’t get lost? What about the equipment tied to the center, where does that go and how is that processed managed?

**PK** – a lot depends on the faculty involved and what they want to do next. If there is discussion to bridge the future vision and revision then the Office of Research (OR) would be the appropriate place to start. There must be a clear target with well-defined plans and goals with consideration focused on the future goals and funding opportunities. Regarding the established connections and relationships, a discussion with chairs/deans could be useful and also OR would be supportive to consider options for retaining these outreach programs/contacts.

**Question:** relating to the 10 big ideas by NSF – Faculty are very steeped in their research silo’s, what is the best way to facilitate discussions with disciplined academics to get them to shift to an interdisciplinary discussion? How do I get faculty to move toward an interdisciplinary discussion?

**PK** – it depends on the individuals, basically, however, the Office of Research may have some funds available to assist with a workshop to facilitate a discussion if there is sufficient evidence. **What tools is OR offering to help facilitate this discussion?** The TSAL can assist with the planning and facilitation of these types of workshops to run strategies/exercises that will prompt for idea generation to help capitalize on the knowledge in the room or around a general topic.