

**Report on Transdisciplinary Research at NIU**  
Prepared by the Transdisciplinary Task Force\*

The Transdisciplinary Task Force (list of members in Appendix A) was charged with reviewing the barriers to research at NIU and provide recommendations for how to support transdisciplinary research at NIU (working definitions can be found in Appendix B). The following includes an analysis of the barriers to research as well as a set of recommendations to help address the research impediments and facilitate transdisciplinary (TD), interdisciplinary (ID), and multidisciplinary (MD) research.

**Methodology**

The committee conducted formal interviews with a wide variety of individuals in leadership positions from across campus including department chairs, chairs of department personnel committees, and Center directors and individuals holding joint appointments. We also engaged in informal interviews and conversations with colleagues to identify potential barriers. Finally, we explored methods used at other universities, including schools from the Mid-American Conference (MAC), engaged in transdisciplinary research. We also reviewed the University Report of Centers, which included best practices around facilitating transdisciplinary research.

**Findings**

Below are the barriers to transdisciplinary research at NIU, organized by category. We have also included recommendations for how to address and eliminate these barriers.

Structural Barriers	Details	Scope of Control
T&P Bylaws & Policies	<ol style="list-style-type: none"> <li>1. Seamless flow of scholarship research is not supported by current and historical structures of department level bylaws</li> <li>2. Some departments – very specific about journals must publish in, others more subjective (sometimes those outside lists do not count). In some cases, might be detrimental to do this type of research if outside the journals (depends on departments)</li> <li>3. Inconsistent application of HR policies (e.g., MOUs regarding appointment, family leave). <u>Fundamental disjoint between increasing research capacity and teaching when it comes to hiring/staffing/leaves.</u></li> </ol>	College, Department
Lack of standardization of MOUs for Joint hires/appointments.	<ol style="list-style-type: none"> <li>1. Dictate for the structure of T&amp;P committees are not universal – can affect how much weight the different departments/centers have in tenure vote</li> <li>2. Politics around fitting TD research scholars in structural silos, and how it plays out with tenure votes.</li> <li>3. Department level – faculty engaging in ID/MD/TD (or attempting) – yet metrics for tenure grounded in dept; not changed to support this type of research</li> <li>4. Policies do not support all appointments</li> <li>5. Difficulties with FSRs, misalignment between tenure home and centers (or multiple departments across colleges), and MOU uniqueness raises issues of: What are their charges? Who supports</li> </ol>	College, Department

	<p>them? Where do they “belong”? Allegiance? Who do joint appointments turn to when there are problems with chairs/directors over MOU’s? Is it a Dean? Is it the Vice Provost of Faculty Affairs?</p> <ol style="list-style-type: none"> <li>Hiring process for joint hires present challenges as well – to find a home department if hires are TD/MD – and if they end up in another department, hiring department may not have a say in the MOU.</li> <li>Lack of collaboration on the frontend of hiring creates some of these issues</li> <li>Misalignment: department level determination of appropriate research. Teaching responsibilities, lack of coordination between departments and centers (e.g., course loads, number of preps).</li> </ol>	
Ownership of Resources (e.g., lab space & equipment)	<ol style="list-style-type: none"> <li>Limited access to resources not owned</li> <li>Space – lack of structures/incentives to share for this type of research</li> <li>Equipment – usually assigned to specific dept.</li> <li>Lack of core facilities shared across campus.</li> </ol>	College or Department
Lack of Equity in Service Load	<ol style="list-style-type: none"> <li>BIPOC and Women doing disproportionate service work.</li> <li>Service workload is uneven across colleges.</li> </ol>	All levels

Resource Barriers	Details	Scope of Control
Funding	<ol style="list-style-type: none"> <li>Resource poor environment, it’s unclear where we could get capital to do this sort of work</li> <li>Lack of funding to support general for research, other than some travel money for conferences</li> <li>Years of hearing ‘no’ has led faculty to stop asking, impacting research productivity</li> </ol>	University, College
Research Assistants	<ol style="list-style-type: none"> <li>Lack of support related to money</li> <li>Lack of access to skilled students to do some of the work, especially for those without a graduate or PhD program</li> <li>Lack of transdisciplinary PhD programs.</li> </ol>	College
Time & Workload	<ol style="list-style-type: none"> <li>TD research takes additional time, to gestate ideas, to cross silos, to develop trust in/relationships and build teams with co-authors, both on and off campus and/or time to develop projects VS. the pressure to produce for tenure and/or promotion</li> <li>Workload/Time: uneven playing field in terms of workload. Some colleges pushing for increased workload from TT faculty, others looking to help faculty reduced course load to do research.</li> <li>No options for release time for research.</li> <li>Tensions between research &amp; teaching. Much more emphasis on teaching, difficult to assess where research fits in. Lack of consistent interpretation and understanding of this across campus.</li> </ol>	College

	<ol style="list-style-type: none"> <li>5. Uneven burden of committee work (given size of departments)</li> <li>6. Student/Faculty ratio, with a decrease or elimination of support (e.g., TAs &amp; GAs)</li> <li>7. Many Chairs/Deans generally view teaching as more critical than research, leaving little room for research productivity.</li> <li>8. Faculty discouraged by Chairs/Deans from taking research leaves (or taking leave in specific years) because they are deemed “too critical” to teaching loads. In some cases, sabbaticals were delayed due to department resource constraints or pressure was exerted to only take semester-long sabbatical. Many faculty preparing for sabbatical are not granted full year leaves (by chairs or Deans) because they “can’t afford for them to take a full year because of teaching responsibilities.”</li> <li>9. Increase in administrative meetings which many times are not necessary for information dissemination.</li> </ol>	
Grant Writing Capabilities	<ol style="list-style-type: none"> <li>1. Lack of experience/expertise in developing interdisciplinary grants</li> <li>2. Lack of support for grant writing (in general) and for TD research in particular</li> <li>3. Unclear what resources are available to faculty to help find funding opportunities. Some colleges better than others at finding funding streams and/or assisting with grant searches</li> </ol>	University, College

Cultural Barriers	Details	Scope of Control
MOUs – Joint Appts.	<ol style="list-style-type: none"> <li>1. Intent is to support this type of research – but the perception is that when faculty lines go out, there is a feeling that you are only get a part of a person yet docked with regards to staffing classes.</li> </ol>	College
Evaluation of TD Research & Outlets	<ol style="list-style-type: none"> <li>1. Some senior faculty claim a “lack of expertise” to evaluate current research &amp; scholarly work (e.g., for joint appts or unique positions) thus implying more junior faculty should not pursue it.</li> <li>2. Evaluating TD equitably can be challenging</li> <li>3. Discipline biases (e.g., Journal biases)</li> </ol>	Department
Status Quo Bias	<ol style="list-style-type: none"> <li>1. Status quo bias toward siloed research (particularly from senior faculty)</li> <li>2. Resistance to change – with regards to policies &amp; bylaws</li> <li>3. Resistant to change with regards to FSRs/policies</li> <li>4. Messages to Assistant professors: want to but told no. We found 3 cases from our research this semester—certainly more occurs campus wide</li> <li>5. Difficult to quantify and reward this type of research</li> </ol>	Department, College

Gender, Race, Ethnicity Bias & Disparity	<ol style="list-style-type: none"> <li>1. Overload put on Women and BIPOC faculty to ensure diversity, particularly vis-à-vis service</li> <li>2. Biased policies &amp; culture and environment within colleges</li> <li>3. Bias among students</li> <li>4. Inconsistent and problematic application of HR policies (e.g., maternity leave). See <a href="#">Family Leave Act as reference.</a></li> </ol>	All levels
Siloed Nature of Organization	<ol style="list-style-type: none"> <li>1. Lack of connection/crossover among faculty.</li> <li>2. Barriers between departments and colleges are high, resulting in a lack of intermural collaboration.</li> </ol>	University
Disciplinary	<ol style="list-style-type: none"> <li>1. Perceptions that a TD focus would reduce the development as an expert in a particular field</li> <li>2. Could be detrimental for external reviews (for promotion to full)</li> </ol>	Department & College
Lack of Incentives	<ol style="list-style-type: none"> <li>1. Due to both cultural and structural barriers, there are few incentives for junior faculty, especially to engage in ID/MD/TD research</li> </ol>	All Levels

## Recommendations

Below are a set of recommendations to facilitate collaborate research, including transdisciplinary work. We have categorized them in terms of short-, medium-, and long-term, primarily based on the timing of the steps necessary to reduce the critical constraints for this type of research. ***We strongly recommend that short-term recommendations be addressed first prior to moving forward with the other recommendations.***

### Short-term Recommendations

#### **A. Review the application of NIU Policies & Procedures**

- a) Description: The Provost should initiate a review of the application of NIU policies and procedures to ensure they are applied consistently and are in line with the union contract and NIU mission, vision, and values.
- b) Rationale: Our research uncovered stories of inconsistent application of policies
- c) Responsibility: Provost, Faculty Senate, College Council

#### **B. Review and audit of the T&P Policies and Procedures**

- a) Description: The Provost should ask Deans to initiate a review across campus of how T&P documents hinder Transdisciplinary (as well as multi and inter disciplinary) research. Considerations should be given to how departments might support the strengths of different faculty (e.g., teaching vs research), and how the policies and procedures value the differential types of contributions from various faculty provided to the University.
- b) Rationale: Through our interviews and focus groups, it has become clear that one of the major barriers to TD research happens at the department level and is codified in bylaws/T&P documents. If the University wants to promote not just TD research, but research that is new, novel, and impactful, the first barrier to eliminate is the most local, which resides within T&P documents. It should also be noted that supporting an encouraging this type of research without making these changes will disproportionately disadvantage and stifle Junior Faculty given the current cultural and structural barriers.
- c) Responsibility: Provost, Faculty Senate, College Council

### **C. Standardize and centralize current Joint Appointments**

- a) Description: The Provost centralize the current joint appointments, including standardizing the process, designating a central home for each one, and streamlining the reporting and communication channels. One recommendation would be to designate a central location under the VP of Academic Affairs. In the long-term, the central location might be a center (see below).
- b) Rationale: Our research uncovered the confusion, inefficiency, and uncertainty experienced by a joint appointment. Areas of particular concern included: having two bosses and lack of certainty about which was the critical decision maker; multiple and confusing channels of communication; uncertainty around reporting channels; lack of coordination and collaboration across department/center leadership which leads to inconsistent practices around teaching loads/preps; lack of incentives with two “homes” (because one ultimately has a majority of the vote so alignment is there). A central home would remedy these issues by having a single method of communication, consistent expectations, clarification about the roles & responsibilities of novel appointments (e.g., research professors shared with science labs)
- c) Responsibility: Provost and Deans

### **D. Provide critical Resources: Time and Funding**

- a) Description: As faculty need additional access to resources (e.g., money and space), RIPS, along with the help of the Provost and the Deans, should review their policies with regards to grants, course release time, external & internal funding, in order to provide the necessary resources to conduct TD research.
- b) Rationale: Time is the single greatest barrier to TD research because TD research, by working across disciplines/campus/silos requires time to develop relationships, methodologies, and questions. It also requires a higher level of “startup” costs. Given that departments have had to slash non-tenure track instructional budgets, there is a barrier to release time for this sort of work. Moreover, the resource poor environment makes it more difficult to engage in this research due to a lack of internal funding which would then allow for application for external funding.
- c) Resources that are aligned with clear responsibilities, which might vary between junior or senior, to support truly motivated faculty
- d) Responsibility: RIPS, Provost, Deans.

### **E. Review the policies with regards to grant funding and use of space**

- a) Description: The sponsored programs administration (SPA) should review their policies around how funding is reported out and how departments are getting credit. Additionally, SPA should review their policies and procedures around access to lab space is.
- b) Rationale: There are concerns with regards to the inconsistent applications of grant reporting and crediting back to the departments and Centers, as well as the flow of funding and access to lab space. There is a lack of transparency which causes confusion and uncertainty. This is even more complicated when there are multiple PIs and/or PIs with joint appointments on the grant.
- c) Responsibility: Office of Sponsored Projects, RIPS, Deans

## **Medium Term**

### **A. Review Capacity and Expectations around Research and Teaching.**

- a) Description: To develop policies and practices (included hiring) which support a consistent and achievable balance of research and teaching expectations and capacity.
- b) Rationale: There is a fundamental disjoint between increasing research capacity and teaching when it comes to hiring/staffing/leaves. We found multiple stories where faculty preparing for sabbatical are told by chairs or Deans that they “can’t afford for them to take a full year because of teaching responsibilities.” While chairs and deans have never outright told faculty they CAN’T take the full

year, the pressure at that point to only take a semester has been exerted. Similarly, whenever departments think about hiring, they're thinking about filling teaching/curricular gaps, not research areas they want to expand in. This was true prior to the Rauner budget crises and impacts of COVID. However, significant cuts to non-Tenure track faculty in the past 5 years, often leads to departments, IF given the chance to hire, thinking purely in teaching terms.

c) Responsibility: Provost, RIPS

**B. For future hiring, consider cluster hires (over joint appointments)**

a) Description: To support TD research around a specific theme (e.g., climate change, STEM, or AI), the provost should consider cluster hiring.

b) Rationale: Cluster hiring, where individuals are housed in a single department but are hired specifically around a theme or area, would eliminate some of the complications of joint hires (e.g., having two tenure homes, a higher service) which are detrimental to TD research.

**C. Structural changes to enhance cross-campus communication and collaboration**

a) Description: Faculty need an academic Tinder-like platform (only half-joking), which could be created among the current faculty to facilitate dialogue and encourage ID/MD/TD communication and collaborations. While we are not yet out of the pandemic, we are at least in a place where some faculty could connect physically, or have a hybrid meet ups which would support this work.

b) Rationale: Currently there is no structural support or ability (beyond organic or happenstance meetings) to connect like-minded faculty around research interests. Mechanisms to support deliberate connection and communication is necessary for TD/MD/ID research.

c) Responsibility: RIPS, Deans

**D. Providing additional resources and opportunities for faculty: Faculty Development**

**Opportunities (optional)**webinar: TD teaching and learning

a) Description: Additional resources, such as opportunities for professional development, may be provided to support faculty interests in the areas of TD/MD/ID research. Given the time and resource constraints which already exists for faculty, this should be OPTIONAL for faculty.

b) Rationale: As stated before, this type of research takes time to understand research from outside one's field as well as the process necessary for conducting this type of research (e.g., integrating cross-disciplinary concepts and models to develop novel theories and frameworks). Additional resources may provide support for faculty interested in pursuing TD/MD/ID research.

**Long-term: Center for Transdisciplinary Research**

Recommendation: Select one or two faculty to explore and lead the efforts on launching a center. Below are some options that we have discussed, based on experience and best practices. More research is needed to determine which model, or a hybrid of the two, would be most effective in the NIU environment.

A. **Interdisciplinary homes for faculty.** Similar to many of our current Centers but includes homes for joint faculty. Should include joint appointment policy, clear interdisciplinary emphasis and expectations for service and teaching, and clear description of the merit and P&T review process. Might include a PhD degree and programming with Interdisciplinary Studies. Similar models at: Ball State and Berkeley. Would be responsible for managing the ID/MD/TD communication and collaboration across campus.

- B. **Center for Wicked Problems.** Focus on certain wicked topics at any given time (e.g., Climate Change, AI). Focus would shift based on interest and relevance of topics to faculty. Open to anyone across campus to collaborate, develop and deliver TD priorities (similar to University of Washington model). Would be responsible for managing the ID/MD/TD communication and collaboration across campus.
- C. **Center as a Consortium.** Similar to the CREATE center currently at NIU. Funded by endowment from foundation.

**Appendix A: Transdisciplinary Task Force (2021)**  
Listed in alphabetical order

**Co-Chairs**

Christine Mooney, COB (Management)  
Simon Weffer, CLAS (Sociology) & Latino Studies (Joint Appointment)

**Members**

Pratool Bharti, Assistant Professor, CLAS (Comp Science)  
Barrie Bode, CLAS (Biology)  
Shondra Clay, Assistant Professor, IHP  
Gibson Cima, Assistant Professor, CVPA (Theater)  
Courtney Gallaher, Geography and Women & Gender Studies (Joint Appointment)  
Joe Insley, CVPA and Argonne National Laboratory, Research Professor (Joint Appointment)  
Mitch Irwin, CLAS (Anthropology)  
Jenn Jacobs, Associate Professor, CEDU (KNPE)  
Yanghee Kim, Professor, CEDU  
Colin Kuehl, Assistant Professor, CLAS (Political Science) and ESE (Joint Appointment)  
Kevin Martin, Associate Professor, CEET and ESE (Joint Appointment)  
Jeffrey Omari, Assistant Professor, CLAW  
Matt Pickard, Associate Professor, COB (Accounting)  
Sahar Vahabzadeh, Assistant Professor, CEET



## Appendix B: Definitions and Explanations of Transdisciplinary Research

[Rosenfield \(1992\)](#) characterizes transdisciplinary as involving researchers from different disciplines constructing an overarching model that includes but transcends their individual disciplines. Transdisciplinary Research is defined as research efforts conducted by investigators from different disciplines working jointly to create new conceptual, theoretical, methodological, and translational innovations that integrate and move beyond discipline-specific approaches (Harvard School of Public Health). This type of research is problem-centered, where the common problem is the key driver of the research explorations (Leavy: *Essentials of Transdisciplinary Research: Using Problem-Centered Methodologies*)

In Rosenfield's typology, transdisciplinary supersedes multidisciplinary, in which researchers from separate disciplines work on the same problem independently with the intention of later combining their findings. Transdisciplinary is also a step further than interdisciplinarity, in which scholars from different disciplines contribute their distinct perspectives to shared work on a common problem.

Based on a critical review from the United Nations Sustainable Development Goals, “Transdisciplinary work moves beyond the bridging of divides within academia to engaging directly with the production and use of knowledge outside of the academy.” This approach focuses on societal impact as the central aim of the research. In addition, solutions emerging from the research may put into action with collaboration between the groups involved (Klein 2004). “Integration of multiple disciplines implies an active commitment to inclusion and public service, and that is critical to give meaning and relevance to [the field]” (Gill, 2007).