



DESIGN THINKING IN THE EEIDSP

CONFERENCE SERIES

APLU × INTENTIONAL FUTURES



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WHAT WE WANTED

The **Association of Public and Land-grant Universities (APLU)** wanted to gather the STEM higher education community to imagine new futures in implementation and research on creating and supporting an inclusive and diverse STEM professoriate. Ideally, they wanted to develop a community-built agenda on how to move forward in tackling complex, systemic issues which have prevented progress despite 30 years of cumulative and compelling research. To that end, APLU invited a diverse group of leaders, scholars and change agents to participate in the **2021 Envisioning & Enacting an Inclusive & Diverse STEM Professoriate (EEIDSP) Conference Series**.

These convenings occurred in March, June and September 2021 following the journey of an aspiring faculty member's stages of employment in STEM higher education:

MARCH 4, 2021: *Aligning the Recruitment and Hiring of Diverse STEM Faculty;*

JUNE 3, 2021: *Equitable STEM Faculty Evaluation & Reviews of Research;*

SEPTEMBER 16, 2021: *Inclusive Leadership to Support Diverse & Inclusive STEM Faculty.*

Recognizing the long history of recommendations that lacked a systemic approach, APLU used design thinking to elicit a different way of thinking of the STEM ecosystem and identify the interconnectedness of challenges and solutions. To accomplish this, APLU partnered with **Intentional Futures (iF)**, a strategy and design consulting firm in Seattle, to set up the convenings to foster new types of dialogue across the conference.

WHAT WE DID

APLU led the EEIDSP Conference Series, three half-day virtual convenings, to catalyze a series of discussions in the STEM higher education community to understand what would be needed to address systemic barriers, structures and cultures that prevented broader participation and diversity among the STEM professoriate. These convenings engaged stakeholders in a series of “think tanks”, utilized design-thinking and visual-thinking to generate new approaches for systemic change, and centered the perspectives and expertise of Black, Latinx, Native, and other under-represented groups (URG) faculty through steering committee composition, intentional invitations to leaders for participation, and design-thinking strategies. Ideally, as attendees participated across multiple sessions, they would be exposed to each other more often and build community.

APLU created a set of norms that ran across each convening in order to foster trust and participation, and create a safe space for co-creation:

1. **Honor the gifts of others’ truth, especially Black, Indigenous, and People of Color (BIPOC) participants;**
2. **Center creativity, generativity, and possibility rather than constraint, challenge and critique.**

Before each session, iF and APLU partnered to understand the goals for each session, design activities that would increase interactivity and participation, and structure conversations to lead to new idea generation. For each session, iF created a MURAL board to support the goals of each session and serve as a resource for future planning. Images of these boards can be seen in their respective sessions below.

Participants were sent pre-work before each session to familiarize themselves with the MURAL tool and for APLU to have a sense of the participants’ background. Each session ended in a self-evaluation activity called “*I like, I wish, What if?*” where participants were able to reflect on the day’s work and provide feedback about their experience in the session. Comments from this closing activity informed changes to subsequent convenings.

SESSION ONE

Aligning the Recruitment and Hiring of Diverse STEM Faculty

For the first session, the focus was placed on the recruitment and hiring phases that faculty must navigate to enter the STEM professoriate. One of the key goals was to provide insight into the multitude of experiences that different individuals have throughout this process, and build empathy for scholars with different backgrounds, strengths, and experiences. This exercise was intended to provide a foundation to facilitate greater, more holistic understanding when considering solutions. It was important to encourage participants to start thinking through context and history when considering potential solutions they’d recommend.

3. SHARE-OUT AND GALLERY WALK

To encourage sharing and learning from each other, small groups were asked to share some highlights from their discussion with the entire group. There was also time available for participants to look at the work other small groups did to come to their conclusions. This was intended to encourage both individual and collective learning.

4. BRAINSTORMING

After a short break, participants returned to their small groups to brainstorm around potential solutions previously identified across the recruitment and hiring process. Using the “How Might We”(7) method to ideate, participants considered the opportunities through the lens of *departments*, *institutions* and *organizations*. At the end of the brainstorm, participants were asked to look through their work and **identify ideas (8)** which could be: A *first step*, A *stretch goal*, and A *necessary risk*. This push to consider ideas in terms of both who would be carrying them out and what they would represent was intended to push participants to consider who they would need to buy in to solutions and how they might unfold, striking a balance between ideation and practical implementation. Small groups then identified 3 *Key Takeaways* to share with the entire group.

ACTIVITY 3: NARROWING IN, MAKING IT PERSONAL

In this activity, you'll focus on the key opportunities generated in the previous activity, and decide on how you might address them through the lens of departments, institutions and national organizations.

- Spend 10 minutes individually brainstorming using the "How Might We" method to idea improvements to the recruitment & hiring process (might address Opportunities generated above)
- Spend 20 minutes discussing ideas together across Departments, institutions and national organizations
- Spend 15 minutes to place at least 3 ideas in each of the Key Thought cells (A first step, A stretch goal, and A Necessary Risk)
- Spend 15 minutes sharing out select 3 Key Takeaways from groups, and hearing from others.

7 How might departments, institutions, and national organizations enact improvements in ways that build the capacity of people, processes, and systems?

Departments	Institutions	National Organizations

8 Using the ideas above, place at least 1 idea in each of the Key Takeaway boxes. Which ideas seem like a good first step? Which ideas seem like a worthy stretch goal? What ideas are necessary risks for true change?

First step	Stretch Goal	Necessary risk

If time permits, try to place 3 ideas in each cell to represent key insights for Departments, Institutions and National Organizations respectively.

Workspaces: 3x3 grid of yellow boxes

Workspaces: 3x3 grid of cyan boxes

Workspaces: 3x3 grid of purple boxes

SESSION TWO

Equitable STEM Faculty Evaluation & Reviews of Research

In the second session, participants were asked to consider how STEM faculty are evaluated. The session began by setting the stage with a review of the theory of racialized organizations, and placing the evaluative processes within context to show how racialized organizations impact faculty evaluations. The day started with talks by Damani White-Lewis and Victor Ray to ensure that participants had a common language and framework for examining organizational practices, policies and structures that prevent equitable evaluations.

After providing an overview of the theory of racialized organizations, participants were given the opportunity to apply their knowledge and work together to support common understanding. A set of probing questions were presented for folks to consider as they moved throughout the rest of the day:

1. What constrains or diminishes agency?

In what ways are faculty free to make choices about their responsibilities, use of time, and how to show up as a professional? How do consequences (collegiate, evaluative) differ for particular groups (BIPOC, women, LGBT+) based on the choices they make?

2. What resources are distributed unequally?

How are resources (such as salary, funds, lab space, graduate student support) distributed (evenly/unevenly)? In what ways do workload assignments take into account different institutional resources supporting individuals or groups (both present support and previous support)?

3. Where is whiteness valued as a credential?

In what ways are activities, funding sources, publication outlets, and educational background that are coded as “neutral” (or White) considered more valuable than those highly aligned with particular identities? (Are degrees from HBCUs considered inferior to degrees from Ivy League institutions?)

4. Where is decoupling racialized?

How are commitments to DEI surface level, while no activity or ways of operating change? How are individuals who experience discrimination in assignment of workload heard or protected, or have their harms redressed?

With these questions in mind, participants were asked to fill in post-its on racialized organizational patterns they've seen at their institution, or to type in questions around certain concepts. Participants were also given the opportunity to share their input privately in the Zoom chat to an APLU facilitator. At the end of this activity, the facilitator reviewed the post-its to pull out interesting concepts, encourage folks to share any comments they made, or if they observed any similar patterns at their organization.

After a short break, participants returned and were split into three groups, corresponding to different topics within the **evaluation terrain (1)** they indicated interest in during the sign-up process. These topics included *Research*, *Service*, and *Teaching*. Each group was asked to review common *Activities* (types of scholarly production evaluated), *Methods* (evaluation touchpoints) and *Metrics* (measures of evaluation) within faculty workload areas, and add missing elements or nuance to a partially pre-filled list. This allowed participants to co-create and clarify each aspect of the evaluation terrain.

1

Research Terrain Map

Welcome! You've indicated an interest in the Research terrain of faculty evaluation. In the next 10 minutes, please add in any missing elements or nuance in the post-its below. We will spend 5 minutes afterwards for Q&A before breaking into small groups.

<p>Activities</p> <ul style="list-style-type: none"> - Conference papers - Journal articles - Textbook Authorship - Grant proposals for research - Funding buy-outs - Industry partnerships - Patents, tech transfer, and/or startups - Science communication - Citizen science - Engaged/community-based scholarship - Scholarship of Teaching and Learning 	<p>Methods</p> <ul style="list-style-type: none"> - Peer review of research publications - Peer review of grant proposals - CV review by internal committees - CV review by external reviewers - Peer review of faculty activity reports 	<p>Metrics</p> <ul style="list-style-type: none"> - Quantity of publications - Impact factor of journals - Citation metrics (e.g. h-index) - Size and prestige of grant funds - Number of grad students & postdocs trained / size of lab - Major awards (Nobel, Fields, NASEM, etc) - University Revenue for tech transfer/ startups
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Service Terrain Map

Welcome! You've indicated an interest in the Service terrain of faculty evaluation. In the next 10 minutes, please add in any missing elements or nuance in the post-its below. We will spend 5 minutes afterwards for Q&A before breaking into small groups.

<p>Activities</p> <ul style="list-style-type: none"> - Disciplinary/National Peer Review (e.g. journals, papers, posters, research grants) - Committees (e.g. conference, NASEM, OSTP, other blue ribbon committees) - DEI work in Discipline - Service/rotation in a federal agency - Science Communication - Senate role - Partial administrative appointments - Institutional committees (i.e. P&T, others) - Student organization advising 	<p>Methods</p> <ul style="list-style-type: none"> - Peer review of faculty activity reports - Peer review of P&T portfolio 	<p>Metrics</p> <ul style="list-style-type: none"> - Number of & prestige of service commitments
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Departmental

- Department chair
- Committees
- Admissions (graduate)
- Curriculum

Others

- Review of P&T packages

Teaching Terrain Map

Welcome! You've indicated an interest in the Teaching terrain of faculty evaluation. In the next 10 minutes, please add in any missing elements or nuance below. We will spend 5 minutes afterwards for Q&A before breaking into small groups.

<p>Activities</p> <ul style="list-style-type: none"> - Syllabus development/ Course preparation - Teaching portfolios - Classroom activity - Lab course activity - SOTL - Mentoring - Research supervision/ mentoring - Advising (Postdoctoral scholars, dissertation advisees, master's students, undergraduate students) 	<p>Methods</p> <ul style="list-style-type: none"> - Peer review of evaluation data - Peer observation - Student observation - Peer review of faculty reports 	<p>Metrics</p> <ul style="list-style-type: none"> - Student survey evaluations of teaching - Observation data - Course enrollment - GPA of students - DFWs - Number of students taught, advised, mentored - New course preps
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Next, participants were split into smaller groups to enable deeper discussion. They revisited the set of key **probing questions (2)**, and were asked to apply them to their given topic area in the evaluation terrain. Groups were asked to discuss and fill in post-its as they wrestled with the key concepts. Afterwards, small groups moved into a **“How Might We” (3)** brainstorm to generate solutions to barriers they had identified, and understand who within the system has influence that might be needed to implement changes. In this light, the key questions were then reframed to:

1. How might we enhance agency?

What changes need to happen for faculty to become freer to make choices about their responsibilities, use of time, and how to show up as professionals? How do we reduce the likelihood of consequences (collegial, evaluative) for particular groups (BIPOC, women, LGBT+) based on the choices they make?

2. How might we distribute resources fairly?

How can resources (such as salary, funds, lab space, graduate student support) be distributed more fairly? How can evaluations of productivity take into account differential institutional resources supporting individuals or groups (both present support and previous support)?

3. How might we decredential whiteness?

How can all activities, time/money investment, and educational background be considered valuable despite their coding as “neutral” (or White) or as highly aligned with particular identities? (How can we value degrees from HBCUs equally to Ivy League institutions?)

4. How might we couple values?

How do we strengthen the relationships between commitments to DEI and changes in activity or ways of operating? How do we increase protections offered individuals who experience discrimination? How do we reduce the incentive to protect bad actors?

Finally, small groups were asked to identify some key takeaways from their discussion, which were shared back to the entire group of participants to promote collective learning.

Group A

Instructions
Spend 5 minutes silently reflecting and filling in at least 1 post-it with examples or questions

Spend 40 minutes wrestling with the key concepts & questions of racialized organizations, identifying enablers and blockers of change.

Spend 35 minutes generating solutions to barriers identified that might catalyze positive change against racialized organizational patterns.

2

- What constrains or diminishes agency?
- Where are resources distributed unequally?
- Where is whiteness valued as a credential?
- Where is decoupling racialized?

3

- How might we enhance agency?
- How might we distribute resources fairly?
- How might we decredential whiteness?
- How might we couple values?

SESSION THREE

Inclusive Leadership to Support Diverse & Inclusive STEM Faculty

The final convening engaged institutional leaders in developing an equity-centered framework for institutional leadership, with a focus on how to lead institutional change for the more diverse and inclusive STEM faculty. The team saw this final session as crucial to integrate insights from the previous sessions. A driving question was, “Now that we’ve talked about the hiring and evaluation processes over the duration of a faculty’s career, how do we get the right kind of leadership paradigms and policies to institute these measures?” To enable this conversation, it was recognized that cultural change, such as deeply held assumptions, norms and beliefs around academia and STEM academia functions, would need to be challenged. Given that these cultures can’t be isolated to institutions and a given faculty member would experience these cultures at multiple, overlapping touch points, it was decided that the conversation would need to happen at the ecosystem level. This would allow for exploration of how these norms shape equity for faculty, particularly BIPOC and URG faculty.

After overviewing this, a set of *Cultural Assumptions/Norms* and a list of *Stakeholders in the Ecosystem* was introduced to serve as the foundation for the day’s activities:

Cultural Assumptions / Norms

- **Credentialing:** Because we need some way of filtering candidates (defined broadly – for jobs, for funding opportunities, for journal acceptance, etc) and assessing the quality of candidates, using institutional pedigree, lab pedigree, and research output are valid, effective, efficient, and fair ways to do so.
- **Narrow definition of valuable scholarship:** The discipline and the department are the best arbiters of what is valuable scholarship within their discipline.
- **Research currency:** Research success (both publishing and obtaining funding) are the most important currency as compared to teaching and service.
- **Idealized worker:** The idealized worker is singularly devoted to their work with no outside obligations (e.g. parental responsibilities), is brilliant at all times, expert in their discipline, infallible, self-sufficient in obtaining funding, prolific producer of scholarship and the next generation of researchers/scholars, and a pioneer in uncovering truth.
- **Meritocratic system:** The best, most impactful scholars will be rewarded and promoted based on their contributions to both university missions and scientific advancement.

Stakeholders in the Ecosystem

- **Institute of Higher Education (IHEs):** Trustees/Regents; President/Provost; Deans; Department chairs; Faculty; Students
- **Disciplinary societies:** Staff; Chairs; Members; Diversity Affinity Groups
- **Influencers:** State & federal legislatures; Non-profits; Accreditors; Rankings; Analytic companies; Think tanks; Public
- **Publishing:** Publishing; Journal editors & reviewers
- **Funders:** Peer reviewers; Private funders & program officers; Federal funders & program officers

WHAT WE FOUND

After each session, time was spent analyzing feedback from participants on their experience, both based on a survey and through the concluding activity of each session, “*I like, I wish, What if?*” The main findings from each session are detailed below. In general, there was a consistent appreciation for the balance of setting expectations and creating space for generative discussion, as well as the opportunity to network with peers. There was a wish for clarity around best practices, which was addressed in the later sessions by setting expectations around idea generation as opposed to reviewing existing standards. Special attention was paid to ensure that the activities generated were responsive to the feedback from each previous session, and tried to address any ideas or missing areas.

SESSION ONE

Aligning the Recruitment and Hiring of Diverse STEM Faculty

Most participants felt prepared to use both the MURAL tool and to address the topics discussed. They were happy with the ability to contribute ideas, and enjoyed the collaborative atmosphere created through the “think tank” structure. In particular, the small group structure was enjoyed and made conversations more approachable. There was a range of confidence in the design thinking approach’s ability to provide innovative recommendations.

Participants expressed the wish for best practices. This ran contrary to the goals of creating a generative space where folks worked through ideas together. There was also a desire for critical framing, which was interpreted as a need in future sessions to set up expectations of the day and for space for participants to connect it more directly to their own work (such as providing an opportunity to reflect on best practices). There was also a wish for greater focus on national organizations, and creating a clearer definition around what constitutes the “national level.” APLU decided to address the national discussion by setting the stage in the following sessions.

When responding to the “*What if?*” section, participants reiterated points made in the “*I like*” and “*I wish*” portions. A strong desire for best practices came through, as well as more emphasis on implementation and organizational change. There was also a desire for more national engagement, a desire to include candidates’ voices directly, and more engagement around a non-tenure faculty track. Finally, there was a wish from the Steering Committee for eased facilitation and a more simplified approach in future sessions. iF took this to heart in later sessions to embed as much guidance as possible into the MURAL board so that all participants, including the Steering Committee, could focus on the content and discussion of the day as opposed to stage management.

SESSION TWO

Equitable STEM Faculty Evaluation & Reviews of Research

One aspect of the convening that participants enjoyed included rich discussion within the small groups, which represented various institutions and roles. There was also an appreciation for the multiple methods provided to engage, the materials provided before the session and opening talks which set the stage for activities, and the extended time focusing on a topic. In particular, setting the stage with a series of short lectures was in response to feedback from the previous session, and seemed to strike a better balance of laying a solid foundation and challenging participants to actively applying lessons.

Participants expressed a desire to more fully tackle systems change, and to understand strategies that had been institutionalized, assessed and shown to be effective. There was also an interest in more time to engage with the speakers and each other for network building. There was also a recognition that the participants were already highly engaged in the topic, so the territory covered felt somewhat like familiar ground. To that end, there was a desire for more representatives from upper administration.

The “*What if*” section yielded a large diversity of responses. Some suggestions were more practical, such as starting with existing recommendations which could’ve been tested or evolved, or developing an action agenda that would target those with the capacity to execute items. Others were more imaginative, such as wondering if universities & departments could adopt a deliberately development approach to faculty work, wondering if the central model was not a business model or how higher education spaces could be more collaborative instead of competitive, and what if the higher education space took more risks. A final desire expressed was the need for more interaction between junior scholars & senior mentors / administrators to have more conversations like the one experienced in the session.

SESSION THREE

Inclusive Leadership to Support Diverse & Inclusive STEM Faculty

In this session, participants expressed appreciation for some familiar things. First, they liked the chance to hear and learn from the perspectives of others in the room. They also appreciated the small group discussions, and capacity to both think deeply with and work to articulate ideas with others in the convening. Finally, the ability to network and meet with new colleagues was recognized.

There was a wish to both become more skilled at facilitating conversations at participants’ home institutions and professional groups so that others could have the opportunity to learn and benefit from the generated insights. Similarly to previous events, more representation from senior leaders would’ve been ideal. Responses to the “*What if*” section were more imaginative. For example, some sample responses included “*What if higher education were truly equitable,*” and “*What if America’s university leaders were predominantly women and people of color?*” APLU recognizes the ability to facilitate these discussions as a great next step mentioned in both the second and third session, and plan to pursue this in future work.

ABOUT THE ORGANIZATIONS



Association of Public and Land-grant Universities (APLU) is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities in the U.S., Canada, and Mexico. With a membership of 244 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. Annually, member campuses enroll 5 million undergraduates and 1.3 million graduate students, award 1.3 million degrees, employ 1.3 million faculty and staff, and conduct \$49.2 billion in university-based research. <https://www.aplu.org/>



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