



Building an Interdisciplinary Community of Emerging Scholars Amid the COVID-19 Pandemic

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Abstract: With increasing funding for synergistic research and educational solutions informed by multiple disciplines (e.g., learning sciences, computer science), there is a need to build the field's interdisciplinary capacity and nurture the next generation of researchers. In this poster, we share our approach to creating a community of emerging scholars inspired by the concept of *landscapes of practice* and based on a design thinking process. We discuss our approach's key design features, affordances, and challenges.

Introduction

The conference theme, "International Collaboration toward Educational Innovation for All," calls our attention to the importance of international and interdisciplinary collaboration. Indeed, a growing international consensus argues that complex scientific and societal challenges of the 21st century necessitate interdisciplinary ventures, which, in turn, require students and early career researchers to develop new skills and competencies for interdisciplinary approaches (e.g., International Society of the Learning Sciences, 2019; Science Europe, 2018). To have a robust next generation of our society, we need to pay more attention to the learning needs of emerging scholars.

Although challenges of interdisciplinary research work and careers have been well documented even before the COVID-19 era (e.g., Science Europe), the global pandemic created significant additional burdens and barriers especially for the next generation of researchers. In a recent report, Levine and colleagues (2021) identified multiple critical impacts of the COVID-19 pandemic on the early career educational scholars and doctoral students, including the diminished sense of connections and community-belonging with other scholars and absence of networking and professional development opportunities. The authors also reported the emerging scholars' concerns about limited support offered by their home institutions. Hence, there is a need for holistic and purposeful support systems that extend beyond single institutions and address the unique professional needs of interdisciplinary emerging scholars in educational research.

In this poster, we describe our process for creating a community of emerging scholars in the interdisciplinary field of learning and computer sciences. We envisioned this community drawing on the concept of *landscapes of practice* (Wenger-Trayner & Wenger-Trayner, 2015) and used the design thinking process (Stanford d.school, 2010) to distill the following features to guide our community-building work:

- Foreground diversity, equity, and inclusion (DEI)
- Center activities identified as needed by the members of the community
- Identify and implement activity feedback loops to ensure continuous improvement.

Design

Knowledge and identities of interdisciplinary scholars in today's global, interconnected society are shaped by their participation in various communities of practice comprising complex and dynamic landscapes of practice (Wenger-Trayner & Wenger-Trayner, 2015). Each community of practice has its own histories, traditions, and values and influences landscapes of practice and scholars' journeys through them differently. Hence, it is important to understand both how best to support interdisciplinary scholars and how that support might need to change over time. To this aim, the design thinking process with its five stages (i.e., empathize, define, ideate, prototype, and test; Stanford d.school, 2010) was particularly well suited for our task of community creation. It enabled us to understand and empathize with the needs of the emerging scholars, bring clarity to our vision for the community and define its features, generate ideas for possible solutions and prototype, test, and, importantly, iterate the ways of engagement with and support of the community members.

Creating the community with DEI at its core

We launched our emerging scholars' community in January 2021 through calls for participation via the organization's newsletter, website, direct outreach letters to the minority-serving institutions (MSI), and by asking previously funded PIs in the field to encourage their students and postdocs to join. We also emphasized and invited



inclusion of scholars with disabilities (e.g., deaf scholars) and ensured appropriate support (e.g., American Sign Language interpretation) was available to them when needed. Although we initially conceptualized the community as primarily supporting researchers in the United States, we found that our community was fulfilling the needs of international emerging scholars. Currently, ten months after launch, our community has 123 members from four continents and ten countries.

Implementing need-based activities with feedback loops

After launching the community, we investigated emerging scholars' needs through conversations in our meetings, informal conversations, and a survey. At the time of the survey, our community had 80 members, and 32 responded to the survey. The majority of the respondents were graduate students, postdoctoral researchers, and faculty members. We found that our members needed more opportunities for networking and mentoring with established scholars as well as professional development opportunities (e.g., a session on grant proposal development). In response to the identified needs, we created the following three types of activities: a quarterly small group mentoring series with established scholars, professional development sessions, and affinity groups based on the common research interests of the participants.

To enable timely and meaningful iteration of the existing activities and the creation of new ones, we designed them to include feedback loops (e.g., a participants' survey after each mentoring session). Feedback loops integrate the three key features necessary for continuous improvement in education—Frequency, depth, and system contextualization (Park et al., 2013). These features help us respond to the feedback quickly and at the appropriate level. For example, a participant's feedback after one of the first mentoring sessions led to a change for future sessions and the implementation of a shared document for mentors and session participants to discuss potential topics and exchange contact information before the session. In our poster, we will provide additional details about the praxis of our group and its transformational effects.

Affordances, challenges, and next steps

As indicated by participants' feedback and continued attendance, our small-group mentoring sessions have been effective in providing valuable networking and learning experiences for the emerging scholars. For example, a recent participant reflected on his learning: "I especially loved the discussion on adaptive learning, how different people interpret adaptivity differently and what meaningful adaptivity should include." Although all of our organization-led activities were well-attended and received positive feedback (e.g., mentoring series), getting emerging scholars to assume responsibility for organizing and leading activities (e.g., affinity groups) has been challenging and represents an important next milestone for our community. Additionally, reaching and inviting in new scholars, those at MSIs, and those who do not have advisors and peers engaged in interdisciplinary work remains of paramount significance for our community, organization, and the field.

References

International Society of the Learning Sciences. (2019). ICLS 2020: Interdisciplinarity in the learning sciences. <https://www.isls.org/news/icls-2020-interdisciplinarity-early-career-workshop/>

Levine, F. J., Nasir, N. S., Rios-Aguilar, C., Gildersleeve, R. E., Rosich, K. J., Bang, M., Bell, N. E., & Holsapple, M. A. (2021). *Voices from the field: The impact of COVID-19 on early career scholars and doctoral students* [Focus group study report]. American Educational Research Association; Spencer Foundation. <https://doi.org/10.3102/aera20211>

Park S., Hironaka S., Carver P., & Nordstrum L. (2013). Continuous improvement in education. Carnegie Foundation on Advancement in Education.

Science Europe. (2018). Symposium report: Interdisciplinarity. DOI: 10.5281/zenodo.4925711

Stanford d.school. (2010). An introduction to design thinking: Process guide. Hasso Plattner Institute of Design. <https://www.alnap.org/help-library/an-introduction-to-design-thinking-process-guide>

Wenger-Trayner E., & Wenger-Trayner B. (2015). Learning in a landscape of practice: A framework. In E. Wenger-Trayner, M. Fenton-O'Creevy, S. Hutchinson, C. Kubiak, & B. Wenger-Trayner (Eds.), *Learning in landscapes of practice: Boundaries, identity, and knowledgeability in practice-based learning* (pp. 13-29). Routledge.

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