pod NETWORK To Improve the ACADEMY
A Journal of Educational Development

Designing for impact: The center for teaching and learning as a cultivator of a faculty learner-leader praxis

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Abstract

Centers for teaching and learning (CTLs) address external and internal factors that influence teaching and learning. To accomplish this, often without additional resources, CTLs need an efficient and effective solution. By combining evidence-based practices in faculty development and a distillation of effective practices at three different institutions, the authors developed a sustainable, generative, learner-leader model for CTLs and others in faculty development to employ. The model emerged from an analysis of the authors' collective and independent professional experiences, is grounded in a community of practice framework, and innovatively addresses the need for faculty leadership development. The authors describe the components of the learner-leader praxis and illustrate in narrative examples. By employing a learner-leader model, CTLs and others in faculty development can efficiently and effectively transform teaching and reach greater numbers of faculty.

Keywords: faculty development, community of practice, faculty learning community, faculty leaders

Centers for teaching and learning (CTLs) in U.S. higher education institutions address internal and external factors that influence teaching

https://doi.org/10.3998/tia.2491

and learning. They serve as anchoring partners when faculty groups and individual faculty want to address new needs and opportunities or to explore new pedagogy or curricular ideas. For example, as a generation of scholars are retiring and a new wave of academics are moving through the ranks (Absher, 2009; Munday et al., 2019), institutions are looking for faculty who address equity, social justice, wellness, and holistic learning (Fraser & Hunt, 2011). CTLs support faculty who seek to play a leading role in creating social change. Beyond individual faculty, CTLs can help address institutions' needs for technological support, graduate student development, and research collaborations (Austin & Sorcinelli, 2013; Bishop & Keehn, 2015; Cook & Kaplan, 2011; Sorcinelli et al., 2006) and engage in campus partnerships with libraries and student affairs (Patterson, 2019; Schroeder, 2011). Studies on CTLs have concluded that they are critical contributors to the development of student learning through a variety of academic and faculty collaborations (Lieberman & Guskin, 2003; Schroeder, 2011; Sorcinelli et al., 2006).

CTLs help shape a common institutional perspective for teaching and learning. By aligning the CTL's strategic plan with the institution's and using the plan to inform professional development programming (e.g., training, instructor awards), the CTL influences faculty and can change culture as faculty participate. A CTL's strategic focus on identifying and changing underlying faculty and teaching assistant beliefs regarding teaching and learning has great impact (Giersch et al., 2015). To influence these underlying beliefs, CTLs offer collaborative, sustained (e.g., multiple sessions) programming, particularly learning communities and semester- or year-long interactive sessions.

CTLs also support faculty with interdisciplinary education (Lieberman & Guskin, 2003; Sorcinelli, 2007), which is the integration of disciplinary concepts, practices, ways of knowing, and analytical methods from two or more disciplines. We draw attention to interdisciplinary work because effective cross-discipline collaborations require faculty to learn from one another, lead during the collaboration, and ideally model for colleagues and students how cross-disciplinary work can

be successful. In this way, interdisciplinary work serves as a better approach to problems and as an emancipatory framework because when individuals are situated in one discipline, they may lose regular contact with other disciplines and begin to fall into an echo chamber of mindsets. CTLs can play a pivotal role in discipline boundary spanning.

Additional factors outside higher education institutions cannot be ignored, such as new societal and workplace needs, accreditation changes, new research on human learning, and events such as a global pandemic. Faculty serve as a linchpin in ensuring that institutions pivot in a positive direction when addressing these factors. We advocate that CTLs are well positioned to support faculty when these factors force change because CTLs have proliferated over the last 15 years, making them more accessible, and they have demonstrated their ability to move beyond their traditional role of supporting individual teachers to supporting institution-wide efforts.

CTLs accomplish the work described above by employing a variety of methods (e.g., consultations, workshops). In this article, we have reconceived the goals of the common partnership between educational developers (and others such as assessment professionals) and faculty to include what we call a *learner-leader model* that draws from research on CTLs, organizational development, and learning sciences. We propose that CTLs and others involved with faculty development engage in activities that support faculty learning and leading. In this learner-leader model, CTLs and faculty intentionally interact, often in collaborative communities, to progress on the shared goals of learning and leading. CTLs historically have focused on faculty learning; we believe that what sets our model apart is the attention to also developing faculty as leaders.

Learner-Leader Model

Our learner-leader model is both a praxis and a framework. As a framework, it informs the CTL's goals and programming. It promotes

a holistic and humane approach to faculty development that is deeply informed by factors such as the global and national climates (i.e., urgent problems) plus institutional policies and practices (e.g., sustainable structures). The model has learner and leader components (see Figure 1) with components that work in mutually beneficial ways. The darker petals are the leader components, and the lighter petals are the learner components. Although each component is mutually supportive, we explain the two areas separately to showcase their distinct qualities.

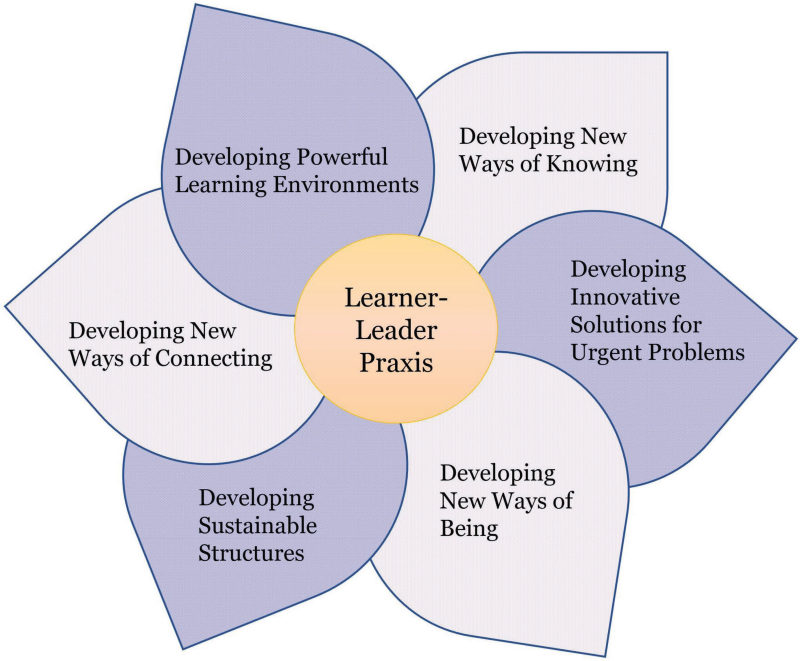

Figure 1. The Six Components in the Learner-Leader Praxis

Note. After several iterations, we selected the flower image to illustrate that the learner-leader praxis is not linear, and the components do not operate in isolation. The six components are interconnected as petals of the flower, signifying faculty development growth. The darker petals are the leader components, and the lighter petals are the learner components.

Learner Components

The learner components focus on the development of new ways of knowing, ways of being, and ways of connecting for faculty.

Developing New Ways of Knowing

The learner-leader praxis involves developing new ways of knowing by changing underlying beliefs and building mindsets of agility and openness. This transformation in thinking can be stimulated by internal and external forces. Internal forces can include an inner drive to see students succeed in their courses or an unshakable commitment to being a lifelong learner. External forces include extenuating circumstances such as technological, structural, or cultural changes. In these cases, faculty may not intend to take on new ways of knowing but are pushed by external conditions to modify their practices and strategies. Because practices emerge from how we conceptualize things, changes in practices require changing underlying beliefs and assumptions. CTLs can support this process by collaborating with faculty learners-leaders in sustained work via communities of practice (CoPs) to reconceptualize teaching and learning and develop mindsets of openness and agility.

Developing New Ways of Being

A learner-leader praxis involves developing new ways of being. Examples of new ways of being include building habits of regularly questioning assumptions, reflecting, and iterating. These habits help faculty set the groundwork for developing innovative practices that can make an impact in their classrooms and beyond. New ways of being also play a crucial role in nurturing development of *new ways of knowing* and *new ways of connecting*. Similar to *new ways of knowing*, internal and external forces can stimulate a change in ways of being. CTLs play a crucial role in structuring, incentivizing, and modeling this work.

Developing New Ways of Connecting

Learner-leaders develop new ways of connecting. CTLs can organize and facilitate learning and communities to create spaces for faculty to share teaching practices, gain peer support, and collaborate. These communities provide accountability for faculty members to continually improve their teaching practices. Communities are most effective when they have shared efforts, goals, and a generative synthesis of multiple disciplinary perspectives and practices. For example, interdisciplinary work disrupts the status quo, silos, and business-as-usual mentality, causing faculty members to think, learn, and act outside the confines of their discipline as they co-construct new knowledge. In other words, in a learner-leader praxis, multidisciplinary teams can work together in interdisciplinary ways that go beyond the "sum of the parts" and produce new practices, understandings, and solutions.

Leader Components

For the learner-leader model to have an impact, the learner aspects are interdependent with the leader aspects. To be clear, the model asks CTLs to reinforce faculty learning to explicitly encourage faculty leadership in the areas of developing learning environments, innovative solutions, and sustainable structures.

Developing Powerful Learning Environments

In the learner-leader praxis, faculty lead in the collaborative development of powerful learning environments in their courses and across multiple courses, programs, departments, and beyond. As faculty try new teaching approaches and implement curriculum changes, CTLs can intentionally support these faculty to become (informal) curriculum leaders who are aware of and share what contributes to a powerful learning environment for their students with colleagues in and out of their program in formal and informal venues.

Developing Innovative Solutions for Urgent Problems

Learner-leaders are change agents who collaboratively identify, understand, and seek to address urgent problems in their disciplines, in academic contexts, and beyond. Some examples of current urgent issues include lack of scientific and critical thinking, environmental problems, societal divisions, inequities, and injustices. CTLs support and collaborate with faculty in developing equity-mindedness that calls attention to societal, institutional, and classroom patterns that create inequitable outcomes for students. CTLs can help faculty identify ways to use their classroom and programs as sites for social change. For example, institutional data may show that racially minoritized students more often than racially dominant students leave STEM majors. Learner-leaders use such information to lead an implementation of evidence-based practices that promote inclusivity of racially minoritized students. Engaging in reflective practices or participating in a CoP might inspire faculty to lead an institutional-level change effort. Take, for example, faculty learning during the COVID-19 pandemic that led faculty to recognize student needs and issues with remote instruction. Many faculty members successfully led efforts to institute a pass/fail option to account for the extraordinary circumstances impacting student learning during the pandemic.

Developing Sustainable Structures

Learner-leaders play a critical role in developing sustainable structures for continual improvement of teaching and learning in institutions of higher education. These structures are designed for scale such that ultimately most or all faculty members in the institution are involved in improvement of teaching and learning, not just those faculty who might seek the assistance of a CTL. This approach requires a collective shift in consciousness because these sustainable structures require the CTL and faculty partnership to go beyond the traditional one-to-one (e.g., consultation) or one-to-many (e.g., workshop) approaches and

instead develop many-to-many approaches such as CoPs led by faculty that allow for multiple levels of entry and engagement. The work of developing sustainable and scalable structures can only be accomplished through collaborative efforts between faculty and CTLs and with faculty willing to be community leaders.

Putting the Learner-Leader Praxis Into Practice

CTLs traditionally operate in one-to-one or one-to-many modalities. In the one-to-one modality, CTLs provide support to individual faculty members through individual consultations and resources. In the one-to-many modality, CTLs provide opportunities to groups of faculty members through workshops, webinars, and resources. Although these modalities will continue to be an important part of CTLs, our learner-leader praxis advocates for a many-to-many modality. Furthermore, we advocate for CTLs to explicitly attend to supporting faculty as informal and formal leaders in curriculum development and innovative teaching.

Many-to-Many: Cultivating Communities

A form of a many-to-many modality is building CoPs. Lave and Wenger (1991) first described *communities of practice* as a foundational concept in their social learning theory: they posited learning as a process of participating in communities (versus learning as individual internalization). Over several decades, the concept of CoPs evolved (see Li et al., 2009). In 2002, Wenger et al. defined CoPs as "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (p. 4). The group's joint enterprise, mutual engagement, and shared repertoire (Wenger, 1998) create community coherence; these three were found to be the most common characteristics in a review of studies in online/blended learning research that used the CoP framework (Smith et al., 2017). Given the widespread influence of

Wenger's CoP, other examples that support a CoP framework (in addition to the studies in the Smith et al. review) are readily available (e.g., Haythornthwaite et al., 2007). In a later work, Wenger-Trayner et al. (2014) stated that "along with networks, projects, conversations, and relationship building, communities of practice are ways for conveners to forge new learning partnerships, create new capabilities, and enable new identities in the landscape" (p. 97). Wenger-Trayner et al. built on Wenger's 1998 idea of a landscape: "For professional occupations . . . the social body of knowledge is not a single community of practice . . . the 'body of knowledge' of a profession is best understood as a 'landscape of practice' consisting of a complex system of communities of practice and the boundaries between them" (p. 13).

CoPs are a primary mechanism in our learner-leader model. We believe that building and nurturing CoPs in which community members collaborate and support one another are also sustainable and generative. Through such communities, CTLs can support more faculty members and have a powerful, long-lasting impact. Because structure and organizational support are necessary (Kezar & Gehrke, 2017), CTLs are needed for long-term sustainability of faculty CoPs. This many-to-many modality opens possibilities for organic growth that would be otherwise unimaginable.

A robust body of literature on CoPs (Bannister, 2015; Donaldson, 2020) suggests three key principles:

- Community ownership results from shared goals, evolving focus, and organic growth of a sustainable community: CTLs include CoP design features that promote community autonomy (Andreatos, 2009; Lee-Kelley & Turner, 2017).
- Collective problem-solving (Novakovich et al., 2017) and collaborative construction of meaning (Lee-Kelley & Turner, 2017): CTLs develop structures and strategies through which community members work together. Collaborative efforts can be particularly powerful when they "envision and embody a new paradigm of practice" (Kezar et al., 2018, p. 853).

- Multiple levels of engagement: CTLs design CoPs for organic growth by fostering different levels of engagement, including "a small core group, a larger group of active members, and often an even larger group of peripheral members" (Eberle et al., 2014, p. 218) that allows faculty who would otherwise never engage with CTL opportunities to participate. All levels are equally important, and the design should reflect acceptance and encouragement of engagement at all levels (Kezar et al., 2017; Wenger et al., 2002).

We also mention faculty learning communities (FLCs) because they have also been used and studied in higher education. FLCs are based on CoP concepts, particularly that social networks are an aspect of social learning (Wenger et al., 2011). Cox (2004) described FLCs as multidisciplinary groups of faculty who meet regularly to engage in structured work to "create connections for isolated teachers, establish networks for those pursuing pedagogical issues, meet early-career faculty expectations for community, foster multidisciplinary curricula, and begin to bring community to higher education" (p. 1). FLCs are effective: they can decrease faculty members' resistance to incorporating educational innovations in their teaching and build faculty commitment to institutionalizing these innovations (Furco & Moely, 2012).

CoPs can facilitate a change in faculty conceptualizations of learning, which is often required for adoption of innovative practices. They allow CTLs and others in faculty development to expand their reach and place ownership and co-construction of knowledge in the hands of faculty, which is more likely to be sustainable and generative in the long run. Thus, we advocate that CTLs include CoPs to advance a learner-leader model.

Cultivating Leaders

To do CoPs well and to support faculty and the campus, CTLs necessarily need to cultivate innovative forms of faculty leadership.

Historically, faculty leadership has inspired innovative teaching, advances in knowledge, and changes in campus politics. While faculty leaders include those in formal positions (e.g., department heads, president of the faculty governance body), we also include informal leadership roles. Informal faculty leaders include those whom others look to for vision, guidance, insight, or inspiration. Bolman and Gallos (2011) connected the academic leadership to the institutional system perspective by illustrating the value and synergy that comes when faculty serve the larger goals of institution and society. One example is when faculty forge mission-centric alliances, which occurred during the COVID-19 pandemic because of the forced and unplanned pivot to remote teaching and learning for those who were in-person.

DeZure et al. (2014) pointed out that faculty leadership remains instrumental to the implementation of campus policies and initiatives and innovation in teaching. Faculty can leverage discretionary spaces to lead the enactment of university policies and practices. Within the faculty member's sphere of influence (the classroom), they can make critical choices that address systemic forms of oppression or ignore them. Their influence occurs through their teaching and curriculum. Faculty need support on how to hone this high-level of influence to lead in creating equity (Kezar & Lester, 2009), and we believe CTLs are well positioned to assist.

Examples of the Learner-Leader Praxis

The model emerged from an analysis of our collective and independent professional experiences, and it is grounded in a CoP framework and innovatively addresses the need for faculty leadership development. We provide brief examples to showcase how three campuses implemented a learner-leader praxis in different settings and with different goals. Although the six learner-leader components are mutually beneficial and do not operate in isolation, we have selected three of the components to highlight in each example (Table 1).

Table 1. Learner-Leader Components Highlighted in Each Example

	Component					
Example	**New ways of knowing**	**New ways of being**	**New ways of connecting**	**Powerful learning environments**	**Innovative solutions for urgent problems**	**Sustainable structures**
Anti-Black racism course	X				X	X
Assessment leadership institute for faculty	X			X	X	
Community for scholarship of teaching and learning	X	X				X
Interdisciplinary programming		X	X		X	
Program re(design)		X	X	X		
Future faculty program			X	X		X

Anti-Black Racism Course. For 13 years, I, Truth, worked as a student affairs practitioner, advocating for underrepresented students at predominantly White institutions of higher education, and now I am a full-time doctoral student in Educational Leadership at the University of Connecticut. I worked with the CTL to implement a campus-wide anti-Black racism course created in response to student activism related to the murder of George Floyd. Through this experience, I witnessed how the CTL was uniquely positioned to bring faculty members together across disciplines to successfully launch an online course accessible to students, faculty, and staff—a new model for educating the campus on issues of oppression, racialized violence, identity, and social justice. Thus, the CTL generated the momentum for faculty to develop innovative solutions for the urgent problems of anti-Black racism in the greater society and institutional racism present at the university. This course provided a sustained 9-week curriculum with an infrastructure, accountability, and rigor with the intention of making a long-term impact.

Throughout the collective implementation process of this course, it became apparent that faculty would need to develop new ways of knowing. This paradigm shift is characterized by faculty engaging in challenges that disrupt their underlying beliefs. When this process is met with curiosity and interest, it can lead to an open mindset necessary for allowing a new worldview to emerge that is conducive to solving intractable problems. The development of this skill was evident when the CTL and its 17-member faculty team discovered that the success of this initiative depended on their ability to build trust with the senior administration. That meant that the faculty team had to let go of the underlying belief that the senior administration was unsupportive and replace it with a new belief that collaboration was the key to ensuring that the course would have an institutional impact. Furthermore, the CTL played a morale-building role by ensuring that faculty concerns were heard. Sustainable structures were developed because the CTL was in constant contact with the president and provost to ensure clear communication, allowing for synergy between bottom-up (students and faculty of color) and top-down (senior administrators and CTL) efforts.

Additionally, CTL played an instrumental role in eliciting faculty leadership through the process of developing and executing this course. One powerful outcome was that this course allowed faculty to reach students outside of their school/college. The course enrolled over 2,000 students, staff, and faculty in Fall 2020, which created a rare opportunity for the teaching team to have a profound impact through their scholarship and teaching. This widespread impact was a powerful reminder that faculty are not just scholars; they are influencers and a part of a systemic educational effort to expose the campus community to experiences that can transform worldviews, including their own.

Assessment Leadership Institute for Faculty. I, Monica, work at the University of Hawai'i at Mānoa, a very high research-intensive university. In 2013, my colleague and I began offering a multi-day learning assessment leadership institute for faculty. From the lens of the learner-leader framework, our institute goals were for faculty to

gain new ways of knowing related to learning assessment and to be equipped to lead their colleagues in the development of powerful learning environments and innovative solutions for urgent problems associated with student learning achievement.

Faculty typically entered the institute viewing learning assessment as gatekeeping, grading, and an individually based activity. To change these understandings and build openness to a new way of knowing, we created an interactive curriculum focused on degree-program learning assessment (why, what, and how) and the student benefits of a program-level approach (vs. course level). We sought to develop a new foundation for their beliefs about assessment: as collaborative tools, program-level guides, and low stakes. Our goals were supported by external forces: participants felt the pull of mandates by the institution and accrediting organizations to use assessment in new ways and to report assessment results. In other words, the initial impetus for attending our institute for many faculty was often because of external accountability requirements.

Because there are two of us in the Assessment and Curriculum Support Center and over 200 academic degree programs, we rely on faculty to lead their colleagues in developing powerful learning environments and developing innovative solutions for urgent problems that reflect the mindset that assessment is collaborative and for program-level decision-making. To prepare them for this leadership role, we directly taught and practiced group facilitation skills via role play, modeling, and scenarios.

Participants designed a project plan based on an urgent teaching/learning/assessment need(s) that they implement after the institute: they lead that collaborative project in their program. A typical project may include the participant leading their colleagues in assignment design workshops in which faculty collaboratively revise assignments and course content to align with outcomes and evaluation criteria. As a result of these projects, faculty have collectively changed the learning environments using evidence-based practices to solve a pressing need.

Faculty often experience challenges during their project implementation (post-institute), including answering colleagues' questions about assessment as a collaborative activity to guide program decisions. Thus, we build on the CoP that started during the institute by continuing to meet for up to a year following. In these meetings, cultural differences across disciplinary fields and nuances of the context raise interesting questions regarding beliefs about learning assessment and the applicability of evidence-based teaching practices in particular contexts. The group's continued learning during these meetings assists them in leading the implementation of innovative solutions.

Community for Scholarship of Teaching and Learning. In 2019, I, Jonan, joined the team in the Center for Teaching Excellence at Texas A&M University with the mandate of helping faculty conduct Scholarship of Teaching and Learning (SoTL) research. We started from the assumption that this endeavor would develop new ways of knowing, new ways of being, and sustainable structures by building a CoP. The Innovation and Design for Exploration and Analysis in Teaching Excellence (IDEATE) includes faculty who meet regularly to investigate literature from the learning sciences and to collaboratively conduct research on the learning activities in their courses. During the first six months I facilitated work in which the initial 11 "core" members of the CoP met biweekly to co-construct guiding documents including a philosophy statement and a set of values and goals. We focused on questioning our assumptions about teaching and learning.

All research projects in the community are collaborative and use design-based research methodology that involves grounding the design of a learning activity in learning theory, implementing that learning activity in multiple courses in different disciplines, collecting and analyzing data, and using the findings to make improvements to the learning activity over multiple iterations. They disseminate their research findings through academic conferences and journals.

Community building was used to create structures that allow for various levels of engagement, including legitimate peripheral participation. After community identity development by the initial core

members, they started inviting peers. A few new members remained peripherally engaged by occasionally attending community meetings but conducted no research. Others moved rapidly from the periphery to the core where they initiated new collaborative research and led further CoP identity development. Due to my desire that all members have high levels of visible engagement, I often remind myself to trust the legitimacy of peripheral participation.

To facilitate mindsets of agility and openness to change we facilitated a design thinking workshop. Since then, the community has used design thinking for creative problem-solving on the designs of their learning activities, and members have integrated design thinking into their courses. The literature in the learning sciences suggests that reflective habits are important, but critical reflection is an area in which development is needed among faculty (Hora & Smolarek, 2018). Community meetings include reflective discussion, and in their research projects, they write reflective memos that are included as data for analysis. Furthermore, iteration is a defining characteristic in the research projects and the co-constructed values. For instance, after two new members introduced the value of empathy, equity, and inclusion, this became the focus of several SoTL research projects. An emphasis on tangible outputs translated into the members translating their SoTL research project findings into conference papers and journal articles that position them as leaders through knowledge sharing with other communities.

Interdisciplinary Programming. We, Debra and Clinton, share our thoughts and experiences on the need for interdisciplinary collaboration. Clinton is an instructional consultant leading projects on interdisciplinary programming. A lead investigator on an interdisciplinary graduate-level National Science Foundation proposal asked us to assist with curriculum design. The project involved a team of faculty from multiple science and engineering departments, Debra, and Clinton. Ways of being expanded as the team shared and learned about one another's disciplines and how they might come together synergistically.

Project faculty started biweekly meetings as a CoP (developing new ways of connecting). Our questioning of assumptions and curriculum design iteration began (developing new ways of being). We familiarized ourselves with the interdisciplinary literature. If we were going to teach students about interdisciplinarity, we needed to understand it ourselves. Having authentic conversations on the literature allowed the team to have a better grasp of interdisciplinarity. Assigned questions spawned reflection prior to and following the meetings. A map of the proposed curriculum was created with gaps to be filled as we learned tools for developing an interdisciplinary program.

As the meetings progressed, we mapped the program, and we could see further expansion of new ways of connecting as the team had discussions that previously had not occurred among the faculty. These continued throughout the fall CoP meetings. For example, How were terms within their disciplines defined, and how were they different from one another? How did they prepare the students for the interdisciplinary experience? The contributing theories, concepts, and methods were clearly defined for each discipline and then mapped. Discussion occurred on how the separate disciplines would contribute to new courses needed to support students' interdisciplinary learning (innovative solutions). By the spring, discussions began on defining and assessing quality learning in an interdisciplinary or transdisciplinary context.

Recruitment of the students occurred and a learning community for the students began in the summer, where the students were exposed to the program goals, an ePortfolio requirement, the individual plan requirement, and community expectations. The continued interaction and collaboration among learners are necessary components of interdisciplinarity (ways of connecting). The CoP continued to meet monthly throughout the remainder of the implementation, and six cohorts of students progressed through the curriculum with reflection incorporated and design improvements made each year.

New ways of connecting within the CoP continued to evolve. The faculty shared their research focus and discussed how they might

collaborate and work on other interdisciplinary projects of which many ensued. More than 60 publications have resulted from the work (innovative solutions). Multiple members of the team, including faculty, postdoctoral associates, and graduate students, have presented at numerous conferences and even been approached to share their successes of this interdisciplinary experience. CoP participants described the value of having CTL educational experts as part of the interdisciplinary team. This role is important to encourage an interdisciplinary dialogue, development, and culture among faculty. Faculty demonstrated expertise as leaders in their discipline and as learners in their interdisciplinary work resulting in professional presentations, publications, and committee service (innovative solutions).

Program (Re)Design. As the CTL director at a large university, I, Debra, see part of my responsibility as developing a shared vision. I spent 15 plus years in industry prior to graduate work in interdisciplinary engineering with research focused on deep versus surface learning. Our program (re)design (PRD) process is an opportunity for faculty to transform outdated programs into more innovative and current programs. PRD is a long-term sustainable program in which faculty participate in a community and develop new ways of connecting. The PRD process is faculty led and includes a student advisor(s) and a CTL instructional consultant. In this example, the program is the Ecosystem Science and Management (ESSM) department (see Fowler et al., 2016). I served as CTL instructional consultant and co-facilitated with a faculty member.

The first steps include describing a vision of the ideal student learning environment, defining the current disciplinary perspective, and completing a readiness for change survey. These steps start faculty on a path toward learning new ways of being. The PRD process is evidence based: the evidence included internal data from current faculty, teaching assistants, and students on their perspectives and external data from potential employers, alumni, faculty from peer institutions, and the peer programs' curricula and learning outcomes.

With the evidence in mind, the team wrote new program-level learning outcomes. Because faculty often work at the course level, this step was difficult. We asked them to be open to seeing their courses in relation to (new) program outcomes. Next, we created competency rubrics and a curriculum map. The team's discussion was very rich as the faculty learned what one another teach and why, which was quite eye opening because these types of discussions are rare. Faculty questioned their assumptions of what students were learning and reflected on how their courses contribute to program outcomes (new ways of being).

The next step involved incorporating course-/experience-level details such as student prior knowledge, teaching methods, incorporating reflection, and designing for inclusivity (developing powerful learning environments). Developing an assessment plan was the final step. This sounds like a great deal of work, and the faculty members had decisions to make, but we offered many tools and handouts. The team discussions were wonderful learning opportunities as the faculty had the teaching and learning expert beside them if they had questions. We discussed learning and learning theory and offered sessions on teaching practices that the faculty wanted to learn more about.

Prior approval by an Institutional Review Board allowed the team to submit the updated curriculum to disciplinary conferences and journals (developing powerful learning environments). The opportunities for our faculty to become curriculum leaders via presentation and publication are critical for expanding the communities/networks.

Future Faculty Program. I, Ra'sheedah, coordinate our CTL's collaborative efforts toward the preparation of future faculty. Future faculty programs offer graduate students and postdoctoral research associates the opportunity to prepare for responsibilities and duties in higher education. Our CTL's Academy for Future Faculty (AFF), a future faculty preparation partnership program between our center and our university's Graduate and Professional School, is structured as a cohort-based community. Coming from different disciplinary backgrounds, the community members explore more diverse ways

of thinking about the duties and common challenges associated with faculty life than if their disciplinary backgrounds were the same (developing new ways of connecting). Meeting once or twice a week for 60 or 90 minutes, members engage in robust facilitated discussions characterized by clarifying and evaluative questions, expressions of personal opinions, stories, and evidence-sharing. Independent reflective writing assignments permit members to form intellectual and emotional connections with community discussion topics. The breadth and complexity of these connections among members support deep and transformative learning. The purposeful design of the AFF supports the development of future faculty as learners.

Community ownership (developing sustainable structures) supports members as leaders within the AFF. The AFF executive committee is composed of graduate students and postdoctoral research associates from disciplines across campus. Executive committee members hold one of three titles designating their roles within the community—co-director, leader, and team supports—that set them apart from general participants. The executive committee oversees all program aspects, including marketing, logistics, budget, and topics and themes of the community discussions. I, as the CTL representative, serve as consultant and advisor on areas such as evidence-based teaching practices, program organization and management, leadership, and workshop and critical discussion facilitation.

As a result of the incorporation of the principles of community ownership and sustainable structures, AFF members are both educated through the program's curriculum and positioned to avail themselves of opportunities to implement learning in diverse areas (developing powerful learning environments). The knowledge and application of these diverse areas are essential to community members' later engagement as leaders within diverse faculty roles. Such experience may also assist with any detrimental socialization of new faculty to believe that research and external activities are more important than

campus-based or internal leadership opportunities (Schuster & Finkelstein, 2006).

Prepared as learners and leaders, these future faculty may be better positioned to respond to acute events, workforce needs, and other internal and external pressures characteristic to institutional settings. Institutions are desirous of faculty whose prior experiences as learners and leaders allow them to skillfully grapple with complex issues beyond traditional aspects of teaching and learning within the institutional context. Developing scalable structures such as this AFF model is a viable framework supporting the creation of future faculty programs focusing on the development of the learner-leader praxis.

Conclusion

We acknowledge that the role of the educational developer, campus culture, and the size of the CTL, campus, and resources do matter, and when these pose obstacles, the developer's/CTL's project scale will likely decrease and timelines increase. Our examples are from different size institutions and availability of resources, including a two-person center, and they demonstrate what is possible. We have developed faculty learner-leaders through our roles as educational developers by drawing on the concepts in CoPs. The learner-leader praxis that we advocate uses a many-to-many modality to bring together staff, scholars, faculty, and/or students to create an organic community (new way of connecting), look at new ways of knowing as they learn from one another, and consider assumptions as they reflect and iterate together (new ways of being). The interdependencies of the six components in our model (see Figure 1) are non-linear and help faculty enter at different points and times, which helps reach faculty who otherwise may not participate in CTL activities. We wish our readers a bountiful harvest as they cultivate opportunities for faculty to blossom as learner-leaders at their campuses.

Biographies

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Jonan Phillip Donaldson is a learning scientist in the Center for Teaching Excellence at Texas A&M University. He has a PhD in Educational Leadership and Learning Technology from Drexel University. His current research uses and develops complex conceptual systems theory to investigate the relationship between conceptualizations of learning and practices in teaching and learning.

Truth Hunter is a doctoral student in the Department of Educational Leadership at the University Connecticut and has 14 years of experience as an educational advocate for historically underrepresented students in higher education. Her research focuses on equitable teaching and learning practices, intergroup dialogue, embodied pedagogy, and decolonial theory.

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