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Fostering an Interdisciplinary Campus Community: Faculty Hiring Committee-Work as Successful Interdisciplinary Collaboration

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Abstract

In modern higher education, nurturing successful interdisciplinary collaboration is both an institutional priority and a grand organizational and cultural challenge. Recent scholarship describes the many and varied challenges inherent in the enactment of interdisciplinarity; it also explores how these challenges can be mitigated to spur successful interdisciplinary engagement. While much attention has been focused on interdisciplinary scholarship and pedagogy, might interdisciplinary service collaborations also play a role? This qualitative case study probes a particular type of interdisciplinary collaboration—a cross-disciplinary committee convened to hire interdisciplinary faculty members. Using interview and observational data to uncover the lived experiences of committee members across campus at one U.S.-based R1 institution, this study explores service-work as a potential site of positive experience and successful interdisciplinary collaboration. Illuminated by the Shared Cognitive-Emotional-Interactive (SCEI) platform for interdisciplinary research collaboration by Boix Mansilla et al. (2016), findings reveal myriad positive outcomes tied to faculty's service participation, probe the multifaceted reasons that faculty choose to participate, and explore how they experience this work. Analysis also uncovers limited cognitive yet significant emotional and interactive markers of and factors that facilitate a successful interdisciplinary collaborative process. Evidence of these markers and factors serves to "reframe" interdisciplinary service as an instance of successful interdisciplinary collaboration, a site of faculty learning and a context that fosters campus connections among faculty. In uncovering these benefits of interdisciplinary collaborative service, this work suggests ways in which it may serve as a missing link to build and strengthen an interdisciplinary campus community.

Keywords Interdisciplinary · Service · Collaboration · Faculty hiring

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Higher education leaders increasingly view interdisciplinarity as necessary to confront pressing and complex societal problems that reach beyond the scope of a single academic discipline (e.g., Leahey et al., 2019). Though little consensus exists on what interdisciplinarity, precisely, means (e.g., Lattuca, 2003), interdisciplinary work is generally framed as activity that integrates or synthesizes multiple disciplines and also brings "innovation, creativity, and reform" to the creation of knowledge (Holley, 2009, p. 12). As such, the cross-disciplinary and team science often expected to break new ground is increasingly targeted by influential funding agencies (Boix Mansilla et al., 2016; Council, 2014; Hall et al., 2018; National Academy of Sciences & Medicine & Medicine, 2005). Yet enacting interdisciplinarity, which requires universities to nurture collaborative partnerships that transcend longstanding conceptual and bureaucratic boundaries, can prove difficult. It can also be difficult for faculty, for whom expectations to reach outside disciplinary communities (Lattuca, 2002) can seem an added demand in an already over-burdened profession (e.g., Finkelstein et al., 2016; O'Meara & Bloomgarden, 2011).

Significant obstacles to faculty's interdisciplinary work in any domain of responsibility—teaching, research, service—can exacerbate this burden. Much academic work is departmentally centered (e.g., in-department service, teaching, student advising) and discipline-oriented (e.g., research and conference involvement in one's own field, journal reviewing and editing). Interdisciplinary work, which reaches outside one's home discipline, is conversely less understood, recognized and rewarded (e.g., Benson et al., 2016; Holley, 2009; Rhoten & Parker, 2004). Productive communication and collaboration across disciplines and organizational units is also complicated (e.g., Kaplan et al., 2017; Roper, 2021; Siemens et al., 2014). For this reason, faculty seeking to work with cross-disciplinary colleagues on interdisciplinary collaborative (IDC) work face even higher burdens. Growing scholarship has thus sought to uncover how universities and faculty collaborators can mitigate these burdens (e.g., Benson et al., 2016; Boix Mansilla et al., 2016; Klein & Falk-Krzesinski, 2017). Clearly, nurturing successful IDC in modern higher education is both a priority and a challenge.

Much scholarship examining successful IDC and cross-disciplinary communication focuses on research IDCs, the practice of which sits close to the heart of institutional aims to innovate and garner competitive funding (e.g., Barringer et al., 2020). Interdisciplinary and collaborative teaching also receives empirical attention, as understanding has grown about its unique practice (e.g., Lindvig et al., 2019) and role in developing students' critical thinking and real-world application of knowledge (e.g., Weinberg & Harding, 2004). Like IDC research and teaching, service can also bring faculty outside their disciplinary and departmental homes through cross-campus committee-work, student advising, general curriculum development and more. Yet this type of service, both interdisciplinary and collaborative in nature, is rarely explored as a site of fruitful professional development and learning, as a scholarly endeavor or as a means of connecting participants to institutions' many and varied missions. In fact, IDC service is rarely framed as interdisciplinary collaboration at all. How might conceptualizing IDC service as such, and exploring it more deeply, help illuminate this important organizational practice and uncover its role in realizing institutions' broader interdisciplinary goals?

This study seeks to address this question by investigating faculty's interdisciplinary service—in particular their membership on a cross-disciplinary committee convened to hire interdisciplinary faculty members—as a site of IDC and an opportunity to foster an interdisciplinary campus community. To do so, this qualitative case study addresses three research questions: First, how do faculty perceive and experience interdisciplinary service work? Addressing this question sheds light on an oft-neglected aspect of academic work and explores how faculty contextualize interdisciplinary service within broader professional roles and responsibilities. Second, how does this work shape faculty's perception and pursuit of interdisciplinary activities and collaborations? Addressing this question begins to probe the potential connections between interdisciplinary service participation and other interdisciplinary activities, connecting the two and seeking to elevate service as a potential site of fruitful IDC. Last, how does IDC "success" manifest in interdisciplinary committee work? To address this question, we apply to our data a framework that specifies observable aspects of IDC engagement indicating "success" (i.e., "markers") and facilitating it (i.e., "factors") within participants' experiences of an interdisciplinary *research* collaboration (Boix Mansilla et al., 2016). In seeking similar success markers and factors in the experiences of faculty involved in a *service* IDC, we probe whether and how service may be "reframed" as a productive form of interdisciplinary collaboration—one that can stand together with IDC research and teaching as an important means to many and important institutional aims.

In sum, this study provides a sense of how faculty become involved in interdisciplinary service activity and how they perceive its benefits and challenges; what, if any, impact faculty's participation has on their future interdisciplinary plans; and how interdisciplinary service may enhance overall campus IDC. This work thus provides new insight on the critical and timely topic of successful IDC in higher education and provides tangible suggestions for administrative and faculty leaders seeking both to motivate and facilitate faculty's interdisciplinary service and to foster a broader interdisciplinary campus community.

Literature Review

Significant scholarship explores barriers to faculty's interdisciplinary engagement including disciplinary culture, academic and organizational structure and professional incentives (e.g., Antony & Taylor, 2001; Camic, 1995; Holley, 2009; Klein & Falk-Krzesinski, 2017; Roper, 2021). Related work also explores the myriad organizational adaptations that institutions take to mitigate these barriers including building infrastructure, creating novel academic units and undertaking innovative faculty hiring (e.g., Geiger, 1990; Harris & Holley, 2008; Pryor & Barringer, 2022; Sá, 2008b). Representing a key source of socialization and organization that establishes scholars' institutional and academic "homes," the disciplines foundationally shape academic norms and beliefs (e.g., Biglan, 1973), knowledge categories (e.g., Gumport & Snydman, 2002) and disciplinary communities (Lattuca, 2002, 2003). They also influence departmental cultures and contexts (e.g., Austin, 1996; Camic, 1995; Chun & Evans, 2015; Kezar, 2013; Lee, 2007; Volkwein & Carbone, 1994), as well as spur resource

competition among units via responsibility center management (e.g., Jaquette et al., 2018; Strauss & Curry, 2002; Whalen, 1991) and other competitive funding models (e.g., Pryor, 2020; Rosinger et al., 2016; Volk et al., 2001). Relatedly, the disciplines bound academic leadership hierarchies (e.g., Hammond, 2004; Pryor & Barringer, 2022) and, of course, guide tenure and promotion processes (e.g., Holley, 2009; Price & Cotten, 2006; Tierney & Bensimon, 1996).

Disciplines and departments together construct many barriers to interdisciplinary engagement. Such barriers include the questionable value of interdisciplinary work, which is often seen as lacking "the autonomy, stability, and definitiveness" of disciplinary activity (Holley, 2009, p. 21) and is thus under-recognized (e.g., Benson et al., 2016). Other barriers include lower rates of competitive grant funding (Bromham et al., 2016), lower productivity (Leahey et al., 2017), and the challenge of scientific communication across the disciplines (e.g., Liggett & Corcoran, 2020; Schummer, 2008; Thompson, 2009; Wear, 1999; Winowiecki et al., 2011). Organizational infrastructure also physically isolates disciplines in separate departments and buildings (e.g., Harris & Holley, 2008; Holley, 2009; Pryor & Steinberg, 2023) and often circumscribes resources (e.g., Whalen, 1991). Thus, interdisciplinary work often requires more time and effort than its mono-disciplinary counterpart (e.g., Heberlein, 1988).

Though interdisciplinary engagements may seem to occur by mere happenstance (e.g., Lattuca, 2002), institutions have begun attempts to systematically mitigate barriers to interdisciplinarity. Novel faculty hiring processes, including interdisciplinary cluster hiring, are common (Foley, 2008; Pfirman et al., 2011)—though they can have unclear impacts (e.g., Bloom et al., 2020a). Attempts are made to adapt tenure processes (Benson et al., 2016; Sanberg et al., 2014), though much scholarship merely recommends *how* (e.g., Klein & Falk-Krzesinski, 2017; Pfirman et al., 2011) rather than what the effects of such attempts are. Interdisciplinary spaces are expanding (e.g., Harris & Holley, 2008; Pryor & Steinberg, 2023; Trani, 2014). Interdisciplinary research centers continue to proliferate (e.g., Geiger, 1990; Jacobs, 2014; Leahey et al., 2019; Sá & Oleksiyenko, 2011). Interdisciplinary degree programs and fields are instituted across fields (e.g., Brint et al., 2009; Klein & Newell, 1997; Pryor, 2020; Pryor & Barringer, 2022). And seed funding has proved increasingly popular (e.g., Davies & Devlin, 2010; Sá, 2008a). Though in toto these strategies have yielded mixed impacts on interdisciplinary engagement and output (e.g., Bloom et al., 2020b; Curran et al., 2020; Leahey & Barringer, 2020), they nevertheless showcase institutions' active work in decreasing barriers and facilitate interdisciplinarity. Many of these institutional efforts rely on faculty service.

Literature on service, a "misunderstood, ill-defined, and often unrewarded" domain of faculty work (Ward, 2010, p. 59), examines its place in the academy as well as its role in faculty's professional experience, satisfaction and success (e.g., Hanasono et al., 2019; Kasten, 1984; O'Meara, 2002; Porter, 2007; Price & Cotten, 2006; Ward, 2003). Service efforts can be broad and complex, representing both disciplinary (e.g., journal review, dissertation advising) and institutional (e.g., serving on university-wide administrative committees) engagements. Yet literature on faculty service often focuses narrowly on *how much* service faculty are doing, *should* do or *should not* do (e.g., Price & Cotten, 2006; Tierney, 1997), with less attention to how service may

contribute to faculty's scholarship and/or learning (e.g., Lattuca, 2002; Neumann, 2009; Neumann et al., 2002; O'Meara, 2002). Though O'Meara and others (e.g., Austin & Pilat, 1990; Neumann, 2009; Wulff & Austin, 2004) have attempted to elevate service as a key site of scholarship and scholarly activity, an enduring lack of scholarship about how faculty and higher education organizations conceptualize service begs further exploration.

Though service critically enables higher education to function (Brew et al., 2018; Harris, 2018), it is often devalued in relation to research and teaching. Related to this devaluation, undue service burdens are commonly placed on faculty who are women, those who are racially and ethnically minoritized, and those who are both (Docka-Filipek & Stone, 2021; Domingo et al., 2022; Guarino & Borden, 2017; Hanasono et al., 2019; O'Meara, 2002; O'Meara et al., 2017; Pyke, 2011; Reid, 2021), a process Padilla (1994) terms "cultural taxation." The devaluation of service and those who perform it creates a mutually reinforcing system by which both service itself and service-providers suffer: "As long as most service activities are being practiced by marginalized faculty, those activities will remain marginalized in academe" (Antonio et al., 2000, p. 388).

Service and interdisciplinarity both represent an "ask" or "demand" with significant downsides for faculty. Service in an interdisciplinary context may thus uniquely struggle to garner and facilitate effective faculty participation. Additionally, much research on interdisciplinarity as well as service neglects the fact that both activities can foster "learning that […] is relational, mediated, transformative, and situated" (Lattuca, 2002, p. 734)—and authentically significant to academic work. How, then, might universities reframe interdisciplinary service collaborations and draw upon them to promote a truly interdisciplinary campus community?

Conceptual Framework

Recent empirical work seeks to illuminate how collaborative teams undertake scientific research, sometimes called the "science of team science" (see Hall et al., 2018 for a succinct overview). This growing scholarship has explored various characteristics of scientific research teams such as descriptive factors (e.g., team size, racial/ethnic and gender makeup, academic rank), team formation characteristics (e.g., physical proximity, social ties), aspects of team functioning (e.g., motivations, behaviors, cognitive qualities) and more to probe numerous outcomes (see Hall et al., 2018, Table 1 on p. 540 for a summary of studies on team science).

Related work on IDC, specifically, has explored psycho-social inputs that contribute to effective team research (e.g., Boix Mansilla et al., 2016; Kaplan et al., 2017; Roper, 2021; Siemens et al., 2014). One framework arising from this scholarship is the Shared Cognitive-Emotional-Interactional (SCEI) platform for IDC in scientific research proffered by Boix Mansilla et al. (2016). Echoing Hall et al.'s (2018) avowal that "empirical evidence for effective TS [team science] practices and policies is sorely needed" (p. 533), Boix Mansilla et al. state that "understanding what defines successful IDCs and how participants achieve it has become imperative" in the current context (2016, p. 572).

To probe what typifies interdisciplinary research collaboration "success," Boix-Mansilla's research team synthesized demographic, publication, observational, survey and interview data from nine ongoing IDC research teams (2016). In questionnaires and interviews, participants in each research team were asked "to describe their experience of collaboration, their objectives, how they defined a successful interdisciplinary collaboration, and what they believed affected their group in achieving such success" (Boix Mansilla et al., 2016, p. 582). The resulting data led Boix-Mansilla's team to conceptualize successful IDC as built upon a "shared platform" evincing three dimensions: cognitive, emotional, and interactional. Within each dimension, the SCEI platform specifies "markers" that "signal interdisciplinary success" and "factors" that "facilitate such success" (Boix Mansilla et al., 2016, p. 474). In this way, IDC success is defined by evidence of these participant-generated markers and facilitating factors. Table 1 summarizes the markers and factors specified by the SCEI platform.

In this study we explore the extension of the SCEI platform, which specifies key aspects of successful interdisciplinary *research* collaborations, to an interdisciplinary *service* collaboration—namely, faculty committee-members from across campus (i.e., an interdisciplinary group) working together to hire interdisciplinary colleagues. The process of applying the platform to our data reveals the extent to which interdisciplinary *service* collaboration evinces similar success markers and

Table 1 *Summary of Success Markers and Factors in Shared Cognitive-Emotional-Interactional (SCEI) Platform*[4]

Markers of success	Factors that facilitate success
Primarily cognitive	
Cross-disciplinary exchange	Relevant cognitive qualities
Generativity beyond program	Clear collective mission
Shared intellectual tools	Productive problem framing
Excellent and relevant expertise	Shared intellectual tools
Knowledge advancement	Iterative knowledge construction
	Search for interdisciplinary integration
Primarily emotional	
Collective excitement Joy in collaborating	Positive feelings about project members and self (e.g., trust, respect, admiration, and recognition)
Primarily interactive	
Group deliberation and learning competency	Climate of conviviality
Meaningful relationships	Social-interactive qualities of participants
	Effective leadership
	Meaningful personal relationships
	Group identity
	Complementary team roles
	Socializing outside meetings
	Group working styles and routines

[4] This table represents a summary and synthesis of Tables 2 and 3 in Boix Mansilla et al. (2016)

relies on similar facilitation factors as interdisciplinary *research* collaboration. In utilizing the SCEI platform this way, we evaluate its applicability to a different type of IDC endeavor. We explore whether and how such a systematic comparison of IDC research to service success helps frame interdisciplinary service as a site of fruitful professional development and learning, as a scholarly endeavor and as a means of achieving higher education institutions' broader interdisciplinary missions. This exploration also yields practical implications for leaders of and participants in interdisciplinary service collaborations seeking to identify and facilitate success and use it to spur an interdisciplinary campus community.

Data and Methods

To provide a foundational understanding of faculty's interdisciplinary service engagement and its representativeness as a site of IDC, this case study draws on interviews with and observations of faculty participating in a novel interdisciplinary faculty hiring committee at a U.S. research-intensive university with rare interdisciplinary service opportunities.

Case Selection and Data Collection

Recently City College (CC)[1], a private East Coast Research I institution, embarked on a significant interdisciplinary science initiative by creating Interdisciplinary Institute (IDI), a new cross-college academic unit. The mission of IDI, to encourage interdisciplinary collaboration campus-wide on pressing global issues, was reflected in its position within the academic structure: not housed within but existing apart from any one college and reporting directly to the Provost. Funded largely by internal endowment and in its second year of operation, IDI's director was tasked with convening a cross-disciplinary search committee to recruit, evaluate and hire an inaugural cohort of senior interdisciplinary faculty (up to four positions in the natural and social sciences). Invited committee-members—all current, tenure-track or tenured CC faculty members—were identified by the IDI director in consultation with academic department chairs, deans of colleges, research administrators and the Provost. The director made a particular effort to recruit members from departments in which hires might be potentially based and to represent a breadth of disciplines spanning the applied and natural sciences, professions and humanities. While a number of invited participants were known to the director as good institutional citizens and/or promoters of interdisciplinary work, others were selected by department chairs and had only a baseline of knowledge of or engagement with interdisciplinarity and/or IDI. In this way, a committee diverse in disciplinary home as well as orientation toward interdisciplinarity and IDI was meant to assess how an "interdisciplinary" faculty candidate might operate effectively across the CC campus.

[1] Institution and all participant names are pseudonyms; to further blind identities, all participants are referenced with gender-neutral names and they/them pronouns.

The resulting service engagement, an interdisciplinary hiring committee embedded in the City College context, represents the case under study here. A single case study proved appropriate for examining an extensive interdisciplinary service engagement in a real-life context (Yin, 2017). All of the thirteen faculty who participated in the hiring committee were invited for study participation; 11 of 13 members, along with the committee chair/IDI Director, agreed to participate and represent the total sample of 12 participants (see Table 2).

Study data collection consisted of three components: (a) a pre-involvement interview, (b) a post-involvement interview, and (c) committee meeting observations. The total data corpus for this study comprised 21 total interviews (11 pre and 10 post[2]) and 10 meeting observations[3].

Interview protocols were developed around the specific aims of the study. Pre-participation interviews focused on faculty's preexisting involvement in and per-

Table 2 *Select Attributes of ID Hiring Committee Members*

Attribute	Count
Gender[4]	
Female	4
Male	8
Tenure status	
Tenured	10
Tenure-track	2
Years at City College	
3 or less	4
3–7	5
7+	3
Broad academic discipline[5]	
Applied science	4
Basic science	1
Humanities	2
Professions	3
Social science	2
Prior hiring committees served on[6]	
4 or fewer	3
5–8	3
9 or more	4

[2] The committee chair did not participate in interviews, and one committee member was unavailable for a follow-up interview.

[3] Meetings were not recorded but observed in-person or virtually via Zoom; all interviewees and the committee chair's comments were included in meeting notes. Any remarks from committee members who chose not to participate in the study were redacted from meeting notes prior to analysis.

[4] To ensure confidentiality of limited women participants, all pseudonyms and pronouns are female-gendered.

[5] Categories are designed to aid participant blinding; humanities and professions includes fields such as philosophy and nursing, applied and basic science includes biology and computer science, and social science includes fields such as political science.

[6] One participant did not respond to this survey item.

Table 3 *Service-Relevant Success Markers and Factors in Shared Cognitive-Emotional-Interactional (SCEI) Platform*

Markers of success	Factors that facilitate success
Primarily cognitive	
Cross-disciplinary exchange	Relevant cognitive qualities
Generativity beyond program	Clear collective mission
Shared intellectual tools	Productive problem framing
Excellent and relevant expertise	Shared intellectual tools
Knowledge advancement	Iterative knowledge construction
	Search for interdisciplinary integration
Primarily emotional	
Collective excitement Joy in collaborating	Positive feelings about project members and self (e.g., trust, respect, admiration, and recognition)
Primarily interactive	
Group deliberation and learning competency	Climate of conviviality
Meaningful relationships	Social-interactive qualities of participants
	Effective leadership
	Meaningful personal relationships
	Group identity
	Complementary team roles
	Socializing outside meetings
	Group working styles and routines

spectives on interdisciplinary activities (e.g., "What does interdisciplinarity mean to you?", "How much of your work would you describe as interdisciplinary?"), as well as their perceptions of and expectations around committee involvement (e.g., "What challenges do you think might arise?"). Post-participation interviews assessed members' perspectives on their involvement (e.g., "What went well in the committee's work together?") and their future plans for interdisciplinary work (e.g., "Did you gain any skills or connections that will foster future interdisciplinary work?"). Committee meeting notes supplemented interview data and served to record all meeting topics including co-creating the initial role description, evaluation and hiring tools and processes; discussing candidate criteria; and evaluating candidates.

Data Analysis

The lead researcher completed three rounds of qualitative analytic coding to respond to research questions. First-round open coding vis-à-vis "topic" or "descriptive" coding (Saldaña, 2015) served to break data down into large, general topics based loosely on the first two research questions. For RQ1, on perceptions and experiences of interdisciplinary service, the entire data corpus was coded; topic codes arising from this process included *positive perceptions of interdisciplinarity*, *challenges of interdisciplinary engagement* and *interdisciplinary teaching* (RQ1). For RQ2, on impacts of interdisciplinary service participation, post-participation interviews exclusively were coded; topic codes arising from this process included *future plans with committee-*

member collaborators and *changing perceptions of interdisciplinarity* (RQ2). Second-round axial coding was then used to group codes into larger categories (Merriam & Tisdell, 2015) using the constant comparative method (Glaser & Strauss, 1967; Lincoln & Guba, 1985). A third and final round of theoretical coding, guided by the conceptual framework and incorporating the holistic data corpus with a particular focus on observational data, responded to RQ3, on markers and factors of successful IDC. Markers and factors (outlined in Table 1) were used as *a priori* theoretical codes to identify instances emerging from the data.

Limitations

This study evinces multiple limitations. The first concerns researcher positionality. Both researchers were closely involved with and invested in the design, implementation and outcome of the hiring committee's work. As a researcher studying faculty engagement in interdisciplinarity (lead author) and a senior scholar and interdisciplinary campus leader (co-author), the researchers had little conceptual or practical distance from the subject matter of this work. Additionally, the co-author held a highly visible and influential position on campus (i.e., IDI director) and within the committee (i.e., chair).

For research design and analysis, then, we first acknowledge a bias toward valuing interdisciplinary work and wanting to promote positive aspects of interdisciplinary service participation. To mitigate this bias, we made overt efforts to ask interview questions that allowed for both positive and negative responses (e.g., about potential benefits *and* challenges) and included sentiment in the coding schema. Second, and more generally, we acknowledge the complex power dynamics between researchers and participants, particularly when one of the researchers held a prominent position on campus and, in this particular case, at least two study participants were pre-tenure. In our context, however, both pre-tenure scholars were highly regarded and had been on campus longer than IDI's director—one had even participated in the director's hiring. The IDI director also held no tangible authority over these participants' career trajectory and did not conduct any of the interviews. Despite these facts, as well as our efforts to mitigate these dynamics, we still acknowledge this power differential as a limitation of this work.

Other limitations stem from the study scope as well as the application of theory in data analysis. Related to scope, using interview data to elucidate faculty's interdisciplinary work and future plans relies on self-report rather than external measures such as longitudinal publication count, for example. This reliance limits our findings to faculty's *stated and/or planned*, rather than *actual*, level of interdisciplinary engagement as an outcome related to interdisciplinary service participation. Relatedly, the attrition of one post-involvement participant means we lacked access to important follow-up data. Related to the application of the SCEI platform in data analysis, we acknowledge that our approach was somewhat deductive—beginning from the theory and attempting to find evidence of its specified markers and factors within our data. As our findings uncovered more and less evidence for specific collaborative success markers and factors, as well as other dimensions of IDC unaccounted for in

the theory (see Discussion), we acknowledge the choice to code in this way as a limiting factor in our analysis.

Despite these limitations, we believe this study offers unique insight into multiple neglected and important higher education issues: how faculty view interdisciplinarity, how they choose to participate in interdisciplinary service work, how they navigate challenges in interdisciplinary faculty hiring, and how such work may benefit its participants.

Findings

Faculty in this study perceived their interdisciplinary service experience as relatively novel and ripe with possibility; they also experienced the work as challenging and time-intensive but also worthwhile. Committee members also realized multiple benefits (though also some downsides) to their participation and, in multiple cases, planned to increase their interdisciplinary engagement in ways specifically related to their service participation. Last, participants evinced many of the markers of and factors that facilitate successful IDC, suggesting a strong connection between service and research collaboration in drawing upon and fostering skills to support interdisciplinarity.

Perceptions and Experiences of Interdisciplinary Service Work

Though a number of committee members had worked at City College (CC) for 7+years, a majority noted this as one of their only—and most intensive—interdisciplinary service engagements. Interdisciplinarity itself wasn't new to CC; it had in fact recently permeated the common curriculum. Basic science professor Morgan, for example, had "co-taught twice with an English lit professor" in a first-year course; they considered the experience "actually a really neat way to break down those [disciplinary] walls." Still, many faculty found committee participation to be quite novel and emblematic of CC's relatively "siloed" academic culture. Many were thus eager to meet colleagues from other disciplines.

Motivations for IDC Service: Campus Connections

Many committee members did not know each other previously, leading humanities professor Lee to ask in a meeting that members "say each other's names" before discussing a candidate. Applied science professor Adrian had sat on one cross-campus governance body but generally found that CC lacked "university-wide faculty meetings," which to them represented "a problem" that made it difficult to meet colleagues. Social science professor Devon echoed this sentiment, describing CC as "so departmentally decentralized and divided; most of the resources and the power honestly are in the departments." Because of this, many faculty avowed inadequate opportunities to meet colleagues. Applied science professor Taylor opined, "We have a lot of different people who think about climate change from tons of angles across CC. And yet we hardly ever see each other, talk to each other, know each other."

The novelty of this service IDC meant that multiple committee members were inclined to serve for the chance to meet extra-departmental colleagues for professional and personal connections. Professions professor Kris hoped that they might "become known to others across schools, [which] opens the door to other opportunities." Chatter during one committee meeting included basic introductory questions as colleagues asked one another about hometowns, schools and other affiliations. Committee members were also motivated due to the involvement of high-visibility, high-status and high-interest IDI, which "CC really needs," said social scientist professor Lindsey. They hoped to reap "benefits and the opportunities for this kind of relationship between IDI and our department sort of moving forward, and also potential opportunities for our graduate students." Applied scientist professor Taylor concurred, saying, "IDI just seems intriguing to me. To just start getting a little more tied in there, I think will be neat." Together, these statements evinced faculty's political and strategic motivations to participate in this service opportunity, which provided the opportunity for faculty to become bridge-builders between IDI—and other departments—and their home departments. Delivered with warmth and taken in tandem with colleagues' similar comments, such statements also evinced a sense of *collective excitement*, an emotional marker of IDC success.

Facets of IDC Service Experience

During and after participation, significant facets of the service experience included the amount of time involved, varying committee roles, and appreciation for leadership. Among a few participants, the time demand was too onerous to yield a positive experience (discussed further below); others espoused more nuanced views. For social science professor Lindsey, the high amount of "time and energy and thought" both drew on and helped build "a lot of buy-in." The process over its duration thus evinced *group deliberation and learning competency*, an interactive marker of IDC success, as when during one meeting the group extensively discussed potential home departments for a tricky interdisciplinary applicant. Applied science professor Adrian allowed that "obviously it takes time, but I don't feel like this took time away from my research" and felt that even junior faculty "should always do things like this" because of the opportunity to meet senior colleagues.

As the group deliberated and evaluated candidates across the disciplinary spectrum, *complementary team roles* (an interactive factor in IDC success) emerged. Humanities professor Cary felt they had represented an "interested person" and non-expert; after acknowledging their excitement about a candidate outside their field during a meeting, applied science professor Taylor noted: "But I don't know the first thing about atmospheric physics!" Basic science professor Morgan "brought the perspective of: how will that individual faculty function as an interdisciplinary scientist?" Professions professor Elliot aimed to "foster the collegial parts of the process" as a "lay evaluator." In many cases, faculty looked to the committee chair for *effective leadership*, an interactive factor in IDC success, and found it. Social science professor Lindsey stated that they had "learned […] how to try to be a better leader" from IDI's director, while professions professor Kris described them as "an outstanding leader. […] I think the committee had deep respect for her and the goal, [their]

vision—they shared [their] vision definitely more and more so." Even Landry, whose experience hadn't been wholly positive, appreciated how "well-organized" the process was. In this way, *effective leadership* connected to a *clear collective mission*, a cognitive factor of IDC success, defined by the committee as finding not only excellent interdisciplinary scholars but also those who could work uniquely together and within the CC context. Agreement in purpose was evinced in multiple instances by goal-setting during meetings and in follow-up interviews.

Challenges in IDC Service Experiences

Across positive and less-than perspectives, committee members had anticipated and unanticipated experiences. Professions professor Cameron, for example, unexpectedly found themselves "questioning" the value of interdisciplinarity they had initially espoused: "I started to actually wonder […] maybe you just don't need it." They went on, "It's almost like, 'Well, it's just kind of science. […] I don't know that it needs a big fanfare." Cameron was also disappointed, as were multiple other members, by bureaucratic challenges that arose in balancing the preferences of departments with those of IDI. In the case of a candidate without a clear departmental home, frustration was palpable throughout the group during a tense committee meeting. Reflecting later, applied science professor Landry said ruefully, "the irony is that even though it's meant to be interdisciplinary," the lack of a feasible host department scuttled had scuttled the candidate's chance. In another instance where the committee's deliberations clashed with departments', social science professor Lindsey noted during a meeting: "I'm not happy about this at all." Reflecting later, they felt "a little less enthusiastic" than initially about CC's interdisciplinary climate. They were "very disappointed in the outcome" of their own department's failure to advance two candidates that the committee had green-lighted.

The perspectives and experiences of committee members thus revealed multiple motivations for participating in this interdisciplinary service work, including the opportunity to meet colleagues and become further engrained with IDI. Faculty also highlighted the anticipated challenges and key facets of their participation, which led to outcomes both expected and unexpected. Throughout these occurrences, evidence of myriad markers of and factors that facilitate interdisciplinary success arose. Focusing on faculty's post-participation perspectives revealed greater nuance in how this interdisciplinary service participation affected their vantage on interdisciplinarity at CC and their plans for the future.

Effects of IDC Service Participation

Prior to their committee work, faculty had varying levels of interdisciplinary engagement. Pre-participation, a majority of committee members engaged in a significant amount of interdisciplinarity (e.g., research, teaching and service), though the group evinced a broad range. Applied science professor Taylor, for example, did only "a little," though they were located in a somewhat interdisciplinary department. Since recently gaining tenure, they hoped to do more. Humanities professor Cary similarly allowed that "most of the articles that I'm publishing in, and the books that I'm writ-

ing and things, are directed toward scholars in my field." On the opposite end of the spectrum, professions professor Kris and applied science professor Adrian referred to "all" their work as interdisciplinary. "Based on my own definition," avowed Kris, all their work was interdisciplinary "because it crosses into something, a knowledge domain that I don't have." Social science professor Lindsey felt similarly, noting that "all of my research to some extent is interdisciplinary." As most participants were involved in interdisciplinary work, albeit not with each other, they brought to the committee some *shared intellectual tools*, a cognitive marker of IDC success, to foresee potential challenges and approach the interdisciplinary endeavor from a place of experience.

Positive Impacts of IDC Service

During and after their participation, the majority of committee members evinced enthusiasm about the benefits they had gained. *Joy in collaborating* (an emotional marker of IDC success) was often evident during committee meetings, as when humanities professor Lee exclaimed to a colleague, "You have totally made my day!" Reflecting on their experience, applied science professor Landry stated that they had "very concretely" gained something from their participation: "Because I got to meet with people from humanities and social sciences that I didn't know before." Professions professor Elliot had similarly gained "exposure to other expertise on the committee," something they felt "was definitely an area of personal gain and potential strategies for the future." Humanities professor Cary discussed their enjoyment in getting "to know people on a bit more personal level. And just that—I think that is actually important in interdisciplinary sort of relations." Statements like these, as well as repeat instances of laughter, interpersonal chatter and positive body language during meetings revealed *positive feelings about project members and self* (an emotional factor of IDC success) as well as the creation of *meaningful relationships* (an interactive marker and factor) and *climate of conviviality* (an interactive factor). Beyond interpersonal connections (which faculty tied to potential future academic collaborations, or which stood as useful in their own right), multiple committee members cited specific plans for future interdisciplinary engagement.

Among these committee members, future plans involved collaboration with current colleagues (i.e., not necessarily newly hired faculty), showing the cognitive success factor *generativity beyond program*. Humanities professor Lee "fully expect[ed] that I get some grants out of this," noting that "a scientist colleague [and co-member of the committee] has already reached out about maybe teaching a core class [together]." Humanities professor Cary cited a similar experience of being approached to team teach. Applied science professor Adrian imagined scenarios in which committee members might "com[e], not necessarily to me, but to someone in [my department]" for collaboration. In other cases, faculty intended to collaborate with the new hires, including applied science professor Taylor, whose department would work closely with two of them.

Adverse Impacts of IDC Service

Though minimal, this research did uncoversome potential adverse effects of interdisciplinary service participation. A few faculty noted that the experience emphasized the challenge of engaging in intensive interdisciplinary service work. Echoing the disappointment of social science professor Lindsey, mentioned previously, professions professor Elliot was upset by some a situation in which the committee had "los[t] a really strong candidate." Additionally, the work had taken an "incredible amount of time" and evinced "a lot of redundancy and waste in the process." Thought Elliot stated they would not serve on this type of committee again "in its current shape and form," they were glad to have participated. Applied science professor Landry felt similarly, stating that, ultimately, "I felt like I wasn't clear why I was there" and didn't have much positive to contribute. Of the 10 participants interviewed post-participation, however, Elliot and Landry were the only to expressly say they would not participate again. And they still, like the rest of their colleagues, gained a lot from the experience.

Despite (or because of) already-high levels of involvement in interdisciplinary and collaborative academic work, the majority of the committee found high value in this service participation. In building relationships and raising their cross-campus visibility through service, they also saw the promise of future interdisciplinary opportunities with committee members, new hires and the campus community beyond, evidencing many of the cognitive, emotional and interactive markers and factors associated with interdisciplinary collaborative success. And despite some limited adverse consequences of this work, the majority of committee members greatly valued their involvement.

Markers and Factors of Successful IDC Service

Another key aim of this research was to extend the SCEI platform of Boix Mansilla et al. (2016) from its original application (as a platform for analyzing interdisciplinary *research* collaboration) to our work with interdisciplinary *service* collaboration. In doing so we found that many key markers and factors, in particular those that were primarily emotional and interactional, translated smoothly from the research to the service context. As evidenced in interview and observational data described above, this finding suggests utility in this IDC framework for collaborative work beyond scientific research. A summary of our analytic work in applying the frame, Table 3 shows the totality of markers/factors that arose at least once (17/24 items) and overviews their prevalence in our data via "heat map" shading (i.e., darker shading indicates higher frequency).

Of the various markers of and factors that facilitate interdisciplinary collaborative success, the most frequent in our service-oriented data were emotional and interactive, with committee members evincing their *collective excitement* in serving and *joy in collaborating*, their *positive feelings about project members and self* and the *meaningful personal relationships* they built with their collaborators. Though more limited, cognitive markers were present, too, particularly *generativity beyond program* (as previously discussed) and a *clear collective mission.* Evident across both

interview and observational data, evidence of these IDC markers/factors point to predominantly emotional and interactive aspects of IDC that are common between the service context and the scholarly research context. That faculty's IDC for service in many ways *looks* like and *relies* on similar success factors as scholarly collaboration means that universities can use it to enhance and promote interdisciplinarity in similar ways to interdisciplinary scholarship. The outsized representation of emotional and interactive markers of success also suggests that IDC service can build faculty's sense of campus belonging.

Discussion

These findings suggest that faculty come to interdisciplinary service from a variety of backgrounds and for myriad reasons. As participants in the hiring committee for interdisciplinary faculty detailed here, faculty experienced their service in predominantly positive ways. Our analyses also suggest that successful *service* IDCs may draw upon many of the same markers of and factors that facilitate successful *research* IDCs. In uncovering significant emotional (e.g., *joy in collaborating*) and interactional (e.g., *climate of conviviality*), as well as limited cognitive (e.g., *future generativity*) markers and factors of IDC success, this work extends Boix-Mansilla et al.'s (2016) SCEI platform to service IDCs. This analysis thus elevates service as an important and scholarly aspect of faculty work and continuous learning (e.g., Austin & Pilat, 1990; Neumann, 2009; O'Meara, 2002; Wulff & Austin, 2004). Here we outline three key takeaways and describe implications for practice and scholarship.

First, our findings join those of other scholars who challenge the notion that research on faculty service ought primarily to probe questions of quantity (i.e., how much?). Instead, we find that interdisciplinary collaborative service can prove a rich, qualitative source of faculty learning (e.g., Lattuca, 2002; Neumann, 2009; O'Meara, 2002). Evidence of predominantly emotional and interactional success markers, furthermore, suggests that interdisciplinary service IDCs may benefit individual faculty by increasing social ties (e.g., building meaningful relationships), standing as a site of joyful collaboration, and fostering a sense of group identity among collaborators from across campus. For this reason, we contend that such service collaborations may strengthen interdisciplinary campus communities and advance institutional goals related to interdisciplinarity. Such engagements may, in fact, represent a galvanizing force for interdisciplinarity, activating committee members as brokers between departments via the connective tissue of cross-disciplinary involvement. We therefore suggest that service of this kind ought to be incorporated as one of many proliferating institutional strategies (e.g., Harris, 2010; Harris & Holley, 2008; Sá, 2008a) deployed to increase interdisciplinary engagement.

Second, in applying the research-based SCEI platform framework to our data, we did find instances in which it did not fully capture the nuances of our service IDC. For example, we found limited evidence of cognitive markers and factors of IDC success relative to emotional and interactive. We did observe marked instances in which committee members evinced IDC *generativity beyond program* (e.g., making plans to co-teach in the future) and *knowledge advancement* (e.g., discussing how

reading candidates' work strengthened their knowledge about climate change), for example. Yet these data were significantly weaker (and less frequent) than the high rate of *all* emotional as well of *many* interactive markers and factors. This suggests that service IDCs, perhaps unsurprisingly, do not evince wholly similar cognitive markers to research IDCs. Further work is needed to explore how other cognitive markers not represented in the SCEI platform may arise within the interdisciplinary service context.

Last, we also found evidence of politics and power in our data—in committee members' motivations to use IDC service to strengthen or maintain their department's standing and influence, in multiple cases, or in the striking of multiple candidates from consideration due to complex power dynamics between home departments and the committee. Because the SCEI platform focuses primarily on group-level interactions within a research IDC, we were not able to contend fully with the broader political and organizational context of our service IDC. For these reasons, we suggest that future work on IDC "success" contend more fully with these ecological and organizational dimensions of faculty life and service.

Our work has multiple implications for practice and scholarship. For institutional leaders seeking to promote interdisciplinarity across campus, service participation—and work on interdisciplinary hiring committees, in particular—may prove a rich source of community-building, networking and sense of belonging for faculty across disciplines and rank. Such work may also enhance a burgeoning interdisciplinary campus community. By touting this aspect of service involvement to prospective participants, leaders can garner interest and participation. Providing a clear reward structure for such important work, too, can help. Tangibly, attempts to broaden participation will require a thoughtful balance between encouraging pre-tenure faculty to participate, ensuring that time and effort expectations are stated up front (and the process itself is not overly onerous), and rewarding this work. And in realizing the benefits of this work for the overall campus community, leaders may in fact aim to construct more in-depth interdisciplinary service opportunities, for example by creating new cross-college and university-wide committees and/or requiring mandatory, rotating participation for all faculty.

For administrators and faculty tasked with chairing interdisciplinary hiring committees this work suggests that, in addition to ensuring equity and mitigating bias in service asks (e.g., Liera, 2020; Liera & Ching, 2019; O'Meara et al., 2020), they can foster success by telegraphing a clear and collective vision for IDC service work. They can also manage the process well by, for example, ensuring that committee meetings are timely and structured, and that dynamics among interdisciplinary and departmental groups are uncovered and clarified. Additionally, by promoting the collegial aspects of this type of committee work—organizing time for committee-wide socializing and milestone celebration, incorporating various modes of socializing (e.g., dinner, coffee) into time-intensive campus visits by faculty, etc.—they can foster a successful faculty experience. And for faculty participants pondering interdisciplinary service participation, they should ask not only what they will give (e.g., time, effort) to IDC service, but also what they might get out of it. By considering potential downsides (e.g., time involvement) weighed against the potentially significant ben-

efits of participation, faculty can more wholly assess IDC service as an authentic scholarly activity.

For scholarship, this work suggests the promise in continuing to explore service generally, and interdisciplinary service specifically, as a key site of faculty's scholarly learning and development (e.g., Neumann, 2009). In addition to further exploring the SCEI platform and the potential intersection(s) between psycho-social and political frameworks of organizational and group collaboration, as previously mentioned, future scholarship can continue to probe service as scholarship (e.g., O'Meara, 2002). By utilizing rigorous and multifaceted empirical methodologies, such as those that have been illuminated interdisciplinary team science (e.g., Hall et al., 2018), this work can more closely examine the dynamics of interdisciplinary team service. How are faculty motivated to pursue IDC service? What incentives and benefits can they receive from this work and where, if anywhere, does it lead them? How can universities' IDC service activities—interdisciplinary faculty hiring, interdisciplinary curricula and academic program creation, etc.—be successful and also contribute to a richer, more collaborative and more cross-disciplinary campus community? Particularly for time intensive service such as hiring committee work, longitudinal research can draw on qualitative (e.g., interviews) and quantitative (e.g., faculty productivity data) methods to gauge myriad post-participation outcomes.

Overall, this study sought to explore the experiences of faculty who participated in interdisciplinary service at one institution, "reframing" this service collaboration as a site of successful IDC. In doing so, this study expands current conceptualizations of IDC to include academic service, which represents a common experience that has untapped potential to spur faculty's interdisciplinary engagement across campus. Relatedly, this work extends and reorients an existing framework—the SCEI platform of Boix Mansilla et al. (2016)—for successful IDC in research to service. Overall, this work elevates interdisciplinary service collaboration as a powerful experience for faculty participants—one that not only fosters significant cross-campus goodwill and joyful participation but also contributes, in multifaceted ways, toward fostering an inclusive institutional interdisciplinary community.

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