Building a Successful Communication Center at a STEM Institution through Multidisciplinary Leadership, Programming, and Strategic Partnerships

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In their most recent survey of communication centers, LeFebvre et al. (2017) expressed concern that "few, if any, communication centers have attempted to meet wider institutional impacts beyond serving the introductory course" (p. 441) and suggested that this lack of broader institutional presence may lead to the decline of communication centers writ large. While originally tied to introductory public speaking courses (Turner & Sheckels, 2015a; Von Till, 2012), communication centers have much to offer higher education institutions on a wider scale and, if successful, they can contribute to an institutional culture of communication that spans disciplines.

In the same year that LeFebvre et al. published their survey, our university's College of Arts and Sciences identified strategic priorities and initiatives for the college. Among these priorities was communication: administrators and faculty across the many disciplines of the college agreed that communication is vital to student success in both classroom and industry contexts, noting that "since the 21st-century workplace constantly changes due to advances in technology, a strong foundation in communication skills allows for adaptation in those ever-changing environments" ("Strategic," 2017). Out of this college-wide priority emerged an idea for a communication center that would serve the needs of students at a private, STEM-focused institution serving approximately 22,000 students across the globe in a predominantly online format. The communication center would help prepare students to communicate effectively in a variety of contexts.

In March 2019, the authors were tasked with building the communication center with three areas of focus: student support, support for faculty, and communication research production. The authors represent distinct fields of communication. Rister has a background in communication and social science research, as well as nonprofit leadership experience. Velez brings a background in rhetoric, as well as writing center and writing across the curriculum (WAC) leadership experiences, to the center. The distinct disciplinary backgrounds of the two center leaders, as well as the needs, opportunities, and constraints of our institutional context, led us to adopt a multidisciplinary approach to establishing the communication center's mission and programming. We knew, for instance, that our center would need to reach students and faculty in an online format and that it should emphasize communication in 21st-century contexts in keeping with the strategic priorities of the College of Arts and Sciences. Likewise, we knew that support for any form of communication (outside of general education courses) was scarce at our

institution. The campus has no writing center or WAC program, and there are few to no resources to enhance digital literacy skills despite the institution's online presence. Moreover, the majority of the institution's degree programs are STEM-related, with an emphasis on aviation and aerospace fields (e.g., aeronautical engineering, applied meteorology, and aviation business administration). Though the university offers a B.S. in Communication, this program comprises less than three percent of the student population. Taking these factors into consideration, the authors determined that the center would emphasize communication in a broad sense, supporting students and faculty in written, spoken, visual, and digital communication.

Given these institutional context factors, we also knew that we would need to establish partnerships with faculty across disciplines to make a meaningful impact. The small size of the communication department and the university's STEM focus meant that faculty in non-communication disciplines would be vital to the center's success. A multidisciplinary approach, then, would help us meet the challenge of creating a culture of communication at an institution with somewhat narrowly focused disciplinary priorities. The result is a center that includes a student tutoring lab, a communication across the curriculum program, and a research hub, blending communication center best practices with knowledge from a variety of academic disciplines and perspectives from outside academia to serve the broader campus community.

In order to effectively serve students and faculty across the curriculum, we believe that communication centers can benefit from multiple perspectives external to the communication center discipline. This article argues that a multidisciplinary approach to communication centers, achieved through collaborative, multidisciplinary leadership, strategic partnerships, and diverse communication center programming, can establish the center as a central hub of communication that is integral to an institution's mission, strategic plan, and major student success initiatives. The remainder of this article will describe strategies the authors have used to seek out and implement external perspectives in building and co-directing their communication center. It will also provide recommendations for other centers to leverage outside knowledge to expand their services, promote buy-in from diverse campus allies, and cement the center's status in the institution.

Strategic Decisions

This section describes our approach to center co-leadership and the interdisciplinary partnerships that were critical to the launch and early administration of our center. Below, we outline the value of a shared approach to leadership using a collaborative, Co-Director model. Then, we discuss the importance of forming partnerships across campus through listening sessions and early collaborations. Finally, we provide recommendations for other communication centers either starting up, merging with existing centers, or restructuring current center operations.

Collaborative, Co-Director Center Leadership Model

Leadership of the new communication center at our institution was initially envisioned under one director. However, during the

center's start-up year, the need for two leaders quickly became apparent due to the center's student and faculty-focused programming and the multidisciplinary approach needed to support written, spoken, visual, and digital communication. An Assistant Director role was established, with the co-authors serving as Interim Director and Assistant Director. After two academic years, evidence of the need for collaboration between the authors in all areas of center leadership was documented, and a permanent, Co-Director model was proposed to and accepted by university administration.

Successfully negotiating this Co-Director model involved consulting multiple sources of knowledge, including communication center research and practice, as well as external perspectives on collaborative leadership. Based on our experiences from the center's first year of operation, we knew anecdotally that we needed a Co-Director model to effectively implement our center vision and strategic plan. In addition, we had seen a successful Co-Director model in practice during a 2019 visit to a center at another STEM-focused institution. However, when consulting communication center research, we found little discussion of co-leadership models. Therefore, we turned to external perspectives from organizational communication, higher education leadership, and writing program administration research to support our Co-Director proposal.

Previous research has documented advantages to shared leadership models in both academic and nonacademic organizational contexts (Aronson & Hansen, 1998; Humphreys, 2013; Pearce & Conger, 2002; Youngs, 2017). Touted as the first book of its kind on shared

leadership, Pearce & Conger (2002) argued that leadership is a broadly distributed, dynamic activity and interactive process of achieving goals and is necessary in today's team-focused world. In higher education specifically, Humphreys (2013) argued that collaborative leadership allows programs to operate more efficiently as well as to "educate a far wider proportion of the society to meet twenty-first century demands" (p. 4). Applied to communication centers, the Co-Director model allows the center to achieve its goals through an ongoing, dynamic process of ideation, execution, and evaluation of center programming in response to diverse needs across campus.

Like communication centers, writing programs are often linked to an introductory class within a specific department (Dryer et al., 2014; LeFebvre et al., 2017). Yet, they must frequently (for better or worse) respond to a cross-disciplinary campus interest in effective communication, as they are often borne out of "institutional accreditation requirements, calls for attention to communication competency, pressure brought by competing school offerings or burgeoning enrollment" (Hobgood, 2015, p. 194). While very little scholarship exists describing shared leadership models in communication centers, communication departments, or communication across the curriculum programs, Writing Program Administration (WPA) scholarship has explored collaborative or distributed leadership models in earnest since the 1990s (Aronson & Hansen, 1998; Bosquet et al., 2004; Gunner, 1994; Janangelo & Hansen, 1995; Keller et al., 1998; Miller-Cochran, 2018; Schell, 1998). This scholarship contends that a shared leadership model "challenges

and destabilizes many traditional (and problematic) tenets of bureaucracy" (Aronson & Hansen, 1998, p. 28), making the program more adaptable and prepared for change. Informed by these external perspectives, the Co-Director structure allows the authors to pursue diverse partnership and collaboration opportunities based on our individual positions within the university and to grow the center rapidly in a short amount of time. Research from multiple disciplines on shared leadership has helped us develop an effective distribution of labor, allowing each Co-Director to balance administration of the center with their own teaching and research.

Even with a shared leadership structure, the labor of directing a communication center is extensive and multifaceted, which is why the authors rely on the methods described by WPA scholars (Aronson & Henson, 1998; Miller-Cochran, 2018) as well as the Evaluation of Communication Center Directors standards (Turner & Sheckels, 2015b) when documenting the center's accomplishments to university administration. The Evaluation of Communication Center Directors procedures and criteria were approved by the Communication Centers Section of the National Communication Association in 2007 and approved by the National Association of Communication Centers in April 2008. In addition to a list of center director responsibilities, these documents provide five areas of intellectual work completed by directors: "program creation, curricular design, faculty development, program assessment and evaluation, and program-related textual production (in a variety of media)" (Turner & Sheckels, 2015a, p. 210). In our proposal to university administration, the

Evaluation Criteria helpfully summarized the rationale for why our center needed two tenure-track Co-Directors and why those positions needed appropriate workload reallocation for their administrative functions. In addition, the Evaluation Criteria became helpful in writing formal job descriptions for the leadership positions.

Multidisciplinary Center Leadership

Importantly, under our Co-Director model, each leader represents a distinct area of disciplinary expertise and experience that contributes to center success. Together, the authors' two backgrounds contributed to the center's broad emphasis on written, spoken, visual, and digital communication.

Rister has an extensive background in teaching Speech Communication and has spent the past seven years as the lead faculty member in charge of the university's general education Speech course. Her position as Co-Director ensured that the communication center would fulfill the traditional center mission of supporting this foundational course (McCall et al., 2017). In addition, Rister's nonprofit background informed the center's foundational documents including a mission, strategic plan, and annual plan that were tied to the university's strategic directions. These documents helped secure a sizable initial budget for the center. Brown (2020) points out one notable communication center's status as an established nonprofit organization, which emphasizes the importance of Rister's nonprofit leadership experience to center startup. Meanwhile, Velez's experience in writing centers and WAC programs informed the hiring and training of the communication center tutors,

equipping the center to support multiple forms of communication. This background also helped establish the center's programming, which includes one-on-one tutoring, student and faculty-centered workshops, and curriculum development work. Finally, the authors' experiences combined to inform the center's assessment methods, resulting in a robust annual program evaluation that is now a model for other support centers in our college. Overall, the center is seen as a strong example of how to successfully start up an initiative, transitioning from idea to action, at the college and university levels. This success can be attributed to the multidisciplinary center leadership utilized during startup.

As with Co-Director models, few studies of communication centers specifically focus on the implications of a multi- or interdisciplinary leadership approach. LeFebvre et al.'s (2017) survey indicated that approximately twenty percent of communication center directors have degrees in fields other than Communication, such as English or Education, but the survey did not indicate how many centers currently have multiple directors or coordinators, or how directors with backgrounds other than Communication might collaborate with Communication faculty to help develop the center's services. Aligning with the Evaluation of Communication Center Directors procedures and criteria, Co-Directors with multiple areas of disciplinary expertise can allow for "program creation, curricular design, faculty development, program assessment and evaluation, and program-related textual production" that more broadly address student, faculty, and institutional communication needs (Turner & Sheckels, 2015a, p. 210). In our case,

multidisciplinary co-leadership has resulted in an increased scope for the center, both in terms of its broad approach to communication and its programming beyond student tutoring or coaching.

The multidisciplinary Co-Director model also expands the center's capacity for innovation, improvement/refinement, and dissemination through research and professional organizations. For example, through the two Co-Directors, our center maintains an active presence at the National Communication Association and National Association of Communication Centers conferences as well as the Conference on College Composition and Communication and International Writing Centers Association. Research from the center has also been published in both Communication and Rhetoric and Composition outlets, leading to increased potential for inter-institutional collaboration and partnership.

Fostering Strategic Partnerships Across Disciplines

Strategic partnerships are vital for a communication center's success and a productive way of learning from other disciplines. Multidisciplinary partnerships with both faculty and staff were invaluable to our center's formation and startup year. For instance, at an institution with such a small communication presence, the success of the communication center was dependent on early buy-in from faculty and administrators in other disciplines. This buy-in was gained through several strategies, including a listening tour, collaborations with the university's Marketing and Communications Department, and

establishing early partnerships with other university programs.

Before the official launch of our center, the authors conducted a listening tour across the institution, including representative faculty and/or department chairs from each college on campus. We also met with potential collaborators including the Faculty Senate and curriculum committees, as well as staff from the campus library and from departments such as Instructional Design and Development and the Center for Teaching and Learning Excellence. This strategy was informed by the authors' prior leadership backgrounds outside of communication centers, research in communication centers, and awareness of our institutional context. Cuny, Ellis-Harrison, and Williams (2019) advocate for a listening tour model for communication centers supporting STEM-focused populations. The research team advised centers to start by conducting an inventory of existing relationships on campus and how those relationships can be leveraged. This case study is helpful for all centers seeking to develop campus relationships, but it provides an especially helpful outline for centers like ours that seek to support STEM students. Before conducting the listening tour, we were unsure how much enthusiasm faculty in STEM fields would show for the idea of teaching communication. Similar to Conners and Brammer (2018), we asked, "how can we meet our audience where they are, especially if they do not realize that they are our audience?" (p. 24). These listening sessions helped get the word out about the center's mission and vision in a variety of settings, allowing the authors to clarify any misconceptions about the new center and its mission. The listening tour also

afforded an opportunity to learn more about various disciplinary practices related to teaching communication. We found that faculty were eager to learn more about topics like designing effective assignments and providing feedback on written and spoken communication, but we were also met with enthusiasm from faculty who were willing to share knowledge about communication as it is taught in disciplines like Management or Aerospace Engineering. This information helped us shape what became the center's three pillars - student support, teaching support, and research. They were particularly informative in the development of the Communication Across the Curriculum program.

The listening tour helped us understand faculty perceptions about student communication across the institution and determine faculty interest in communication teaching support. We were fortunate that, aside from a few statements bemoaning students' "poor communication skills," faculty were overwhelmingly positive, invested in helping the center succeed in supporting student communication, and interested in actively supporting student communication in their disciplines themselves. This high level of engagement from faculty in the disciplines has helped us persuade students that communication is important to their academic and professional success. At the official launch event of our center, faculty from aeronautics and business were each given a 20-minute speaking segment to discuss communication in their disciplines, and those faculty members have since become advocates for the center in their own departments and colleges, helping us to spread the word

about the center's services and its value to the institution.

In addition to the listening tour, partnerships with various groups across campus were vital through the center's startup period and beyond. These groups included the university's Marketing and Communications Department, the library, the Center for Teaching and Learning, and the Office of Research. Taking a cue from Rister's nonprofit leadership background, the Co-Directors met with Marketing Department representatives to put together a strategy for publicizing the center's launch. As a result, the Marketing Department created a variety of professional-grade materials for the center, including an official logo, a professionally filmed and edited trailer for the center's services, pop-up banners and rack cards for use at university events, and official marketing emails from the University Communications account. In addition, the Marketing team regularly posts center events on official university social media accounts, increasing our visibility and attendance substantially. To date, the center's video trailer has been viewed nearly 9,000 times on the university's YouTube page, and the center has over 30,000 faculty and staff followers on the campus social media site.

Establishing early partnerships with faculty across disciplines and other university programs garnered support for the communication center through publicity and co-sponsored events. Perhaps more importantly, however, these partnerships have helped shape the communication center with input from multiple disciplines. Learning more about different disciplinary conventions and expectations for communication helped us plan the kinds of support our

tutoring center would provide. Likewise, speaking with the Center for Teaching and Learning Excellence and the Office of Research better prepared us to support faculty across disciplines through online professional development programming. For centers just starting out, we recommend the above strategies to help establish the center's place within the institution writ large and to create buy-in from faculty and students across campus. The outcomes of a listening tour include increased partnership and collaboration opportunities as well as buy-in and support for the center's mission, benefitting the center in the short term and the long term.

Leadership and Strategic Partnership Recommendations

Starting a communication center, particularly a center with a multi-pronged mission and vision, is a daunting task. In our case, the authors were fortunate that the College of Arts and Sciences had already identified communication as a critical area for growth and attention, leading to fewer uphill battles over the need for the center's existence. However, challenges still abound in creating a successful center. For instance, the authors acknowledge that a Co-Director model can be challenging to implement, particularly when it comes to hiring and/or allocating course release time for two individuals. The authors spent two academic years sharing a single director's course releases under the Interim Director / Assistant Director model. Recommendations for the permanent Co-Director model were incorporated into rigorous annual program evaluation documents submitted to administration, which led to the approved Co-Directorship. This kind of documentation may be valuable

to other centers advocating for a hiring plan involving Co-Directors or for a restructuring of current center leadership. In addition to center-specific data gathered to make the case at your institution, value may be found in the Evaluation of Communication Center Directors: Procedures and Criteria. Annual evaluation of center leadership using the criteria of innovation, improvement/refinement, dissemination, and empirical results can be utilized to provide evidence of the need for a Co-Director model. As these criteria were adapted from writing centers and writing programs, research from outside the communication center discipline may also contribute to making the case for center Co-Directors.

In addition, a multidisciplinary approach to forming early partnerships can help new center administrators overcome the initial hurdles of launching a successful center. A listening tour featuring meetings with multiple departments and colleges can help to promote buy-in for the center, thereby increasing its reach across campus. Likewise, hearing from faculty in non-communication disciplines about the communication expectations of their fields can help lay the groundwork for a Communication Across the Curriculum program and inform the kinds of support offered in the communication tutoring center. The influence of this multidisciplinary approach to center programming is described further in the following section of this article.

Multidisciplinary Communication Center Programming

Three Pillar Center Structure

Perhaps the most significant benefit of our collaborative, multidisciplinary leadership approach and the strategic partnerships formed in the center's startup phase is our center's increased capacity to serve both students and faculty across our institution. The result is a center with a three-pillar structure: student support, teaching support, and research support in the area of communication. The student support pillar, known as the Virtual Communication Lab, is an online tutoring center assisting students with spoken, written, visual, and digital communication. The teaching support pillar, our Communication Across the Curriculum program, provides workshops, online resources, and one-on-one consultations focused on teaching communication across disciplines. The research pillar connects with faculty across the institution to produce communication research and to bring a communication lens to interdisciplinary research projects.

The Co-Directors each bring their distinct disciplinary and professional backgrounds to bear on all three pillars to support the center's mission, strategic and annual plan goals, and daily operations. In this sense, our approach most closely aligns with Morgan's (1997) model of "organic" organizations, wherein the members of the team have specializations but contribute to organizational goals in a fluid and flexible manner. In our case, while both authors have distinct areas of specialty as Co-Directors, we each contribute to all three pillars of the center rather than having a hard delineation between our roles and scope of responsibilities. Again, this collaborative leadership structure allows the center to operate in multiple professional and disciplinary circles, learning from and contributing to multiple fields of research and practice.

The tripartite programming approach also ensures that the communication center is visible to a variety of allies across the institution, meaning that in addition to the co-directors' distinct disciplinary perspectives, the center is also shaped by knowledge from an even wider variety of disciplines, from engineering to business.

Incorporating Perspectives from Writing Centers, Digital Studios, and WAC Programs

As noted above, our center supports all forms of communication-- written, spoken, visual, and digital--in our support of students and faculty. As such, in developing the center's three pillars of programming, the authors drew on best practices in communication center and communication across the curriculum (CXC) histories, as well as adjacent fields like writing centers, digital studios, and writing across the curriculum (WAC). In addition to the authors' combined disciplinary contributions, our institutional context enabled this broad approach to communication support. Although at many institutions, the communication center and CXC program are younger than their writing center and WAC counterparts, our campus has never had a writing center nor a WAC program. Consequently, there was high demand for student and faculty support in both speaking and writing. We, therefore, envisioned our center as the institution's central hub of communication: a space that would meet our institution's demand for oral and written communication support as well as integrate visual and digital communication, two areas that LeFebvre et al. (2017) described as largely absent in communication centers. In other words, the combined

approach was an opportunity for our center to support these varied types of communication on its own terms, rather than serving as an addendum to an established writing center or WAC program.

In establishing the Virtual Communication Lab, we turned to writing centers and digital studios to shape the center's mission, scope, and pedagogical approaches. Communication center scholars have traced the similar histories of communication and writing centers (Yook & Atkins-Sayre, 2012), noting that collaboration between the two kinds of support services is somewhat rare (Brown et al., 2019; Maugh, 2012). Some debate exists as to the effectiveness of collaborative or combined communication and writing centers: while LeFebvre et al. (2017) argued that combined writing and communication centers often force oral communication to the background or omit it altogether, Maugh (2012) advocated for a combined, universalized approach to tutoring communication concepts out of a "need for coherence and consistency" (p. 177). In part due to the authors' distinct disciplinary backgrounds, establishing a center at our institution presented an opportunity for a genuinely collaborative approach, one that supports communication in a broad sense through "complementary but not synonymous" approaches to writing and speaking (Hobgood, 2015, p. 195). Our center's name and mission indicate our broad approach to communication support: *The Virtual Communication Lab supports students in written, spoken, visual, and digital communication.*

The emphasis on digital communication and literacy was particularly important in the formation of our center, as our institution serves

a primarily distance learner population. As such, the Virtual Communication Lab is a fully online center. As LeFebvre et al. (2017) noted, few communication centers have traditionally offered virtual tutoring options, with Davis et al.'s (2019) study as one of few examples of virtual communication center scholarship. Therefore, we again turned to writing centers, which have been steadily increasing and expanding virtual support since the late 1990s (Harris & Pemberton, 1996; Hewett, 2004; Kastman Breuch, 2005; Neaderhiser & Wolfe, 2009). We drew upon this precedent in designing our own services, using a combination of asynchronous resources and synchronous tutoring and workshops conducted through Adobe Connect and Zoom.

To integrate visual and digital communication support in our center, we also turned to digital studios, a "makerspace" (Markgraf & Hillis, 2021) style of tutoring center that focuses on supporting digital and multimedia composition and communication. Makerspaces often provide workspace and access to tools and materials for the creation of multimodal projects. Many digital studios combine Socratic-style mentoring, emphasizing rhetorical effectiveness and audience awareness, with technical instruction to help visitors master the use of digital communication tools like the Adobe Creative Suite, iMovie, Audacity, and web publishing platforms like Wordpress. In digital studios, visitors book time at a workspace rather than with a tutor and can work independently or seek guidance as needed. Though the Virtual Communication Lab's fully online structure has not allowed us to take advantage of the full makerspace element of many digital studios, the

focus on digital and multimedia composition has informed our center's digital communication support services.

For us, incorporating elements of the digital studio model has meant adopting a flexible pedagogical approach when working with students on digital communication. Many of the students who visit the center are adult learners who are often unfamiliar with the wide range of digital composing tools available to them, and assignments like video presentations or infographics may be daunting from both technical and content perspectives. In these cases, a tutoring session may involve a combination of Socratic discussion about the assignment goals and the student's rhetorical context for communication, guided selection of an appropriate tool for composing or delivery, direct instruction on the use of the tool, and independent work time for the student, with the tutor present to answer questions as needed. In this sense, tutors may shift from acting as test audiences in one moment to providing technical instruction in the next, depending on the tutee's need for explicit direction with a particular composing tool. In addition, we have integrated platform-specific support for students creating ePortfolios with Weebly, Wix, or Digication, and we began supplementing our regular workshops on presentations with special sessions focused on using Zoom as a presentation delivery tool.

The result of this combined approach is a center that provides diverse forms of support united through common goals. We agree with Maugh (2012) that the underlying similarities in communication and writing center histories and missions warrant a combined writing and communication center structure. We also contend,

along with Hobgood (2015), that important differences between written and spoken communication, as well as disparities in students' technical abilities with digital communication tools, can and should contribute to distinct, though complementary, pedagogical approaches within tutoring sessions.

Both communication and writing centers have long "resisted becoming sites simply engaged in skills training, handling multimedia aids, or managing anxiety" (Hobgood, 2015, p. 194). Informed by writing centers, communication centers, and digital studios, our combined approach emphasizes the situatedness of effective communication, helping students to understand the affordances and constraints of the variety of media and modalities in which they communicate and to see the bigger picture of how those modalities come together in a communication context (e.g., presentations as multimodal events: text and multimedia aids connect to presentation content and delivery). Our center's primary pedagogical approach grounded in the Socratic method is common to both writing and communication centers, (Brown et al., 2019) and emphasizes communication as a process (Hobgood, 2015), with particular attention to invention through collaborative conversation.

Importantly, we also see the combined communication center as an opportunity for tutors and tutees to have productive conversations about how audience expectations across communication modalities can shape the communication process. For example, as a result of a partnership with a department in another college, the Virtual Communication Lab works with all students enrolled in a Master's-level capstone. The center supports

these learners through the entire capstone process, which involves writing a research manuscript and delivering a final, defense-style presentation typically delivered via Zoom and sometimes aided by a research poster. Guiding students through all aspects of this multifaceted communication project enables us to help students grasp the specific demands of the written, spoken, visual, and digital modalities of the capstone and how they relate to each other. This enhanced fluency with multiple communication modalities is enabled by our combined center approach which brings together communication centers, writing centers, and digital studios.

Similar to the tutoring lab's combined approach, the Communication Across the Curriculum program incorporates perspectives from other CXC and WAC programs, adopting a broad approach to support faculty teaching needs in communication. Both CXC and WAC programs arose out of twentieth century higher education reform and have championed communication--whether spoken or written--beyond the Communication or English department's introductory course or major. However, as Dannels and Housley Gaffney (2009) noted, the two initiatives have historically not collaborated: "although the timeframes for the development of the CXC and WAC initiatives have been overlapping, and similar, the scholarly and programmatic developmental paths have been parallel, yet (until recently) separate" (p. 126). Branding the center as a "one stop shop" for supporting all forms of communication helps faculty build stronger communication assignments, regardless of the *type* of communication assignment, and has

allowed us to begin productive conversations with faculty across disciplines about the affordances of assigning various types of communication activities. Thus, our programming is informed by both CXC and WAC approaches and the needs of our predominantly online, STEM-focused population. We have adopted this strategy both to suit the needs of our institutional context, which had no established WAC program or support for teaching visual or digital communication, and because we understand that both oral and written communication foster learning in and identification with a discipline's community of practice (Carter et al., 2007; MacArther et al., 2020). Our goal in drawing on both CXC and WAC approaches has been to bring these parallel paths together in a holistic approach to supporting faculty across disciplines (and classroom modalities) in teaching communication.

Incorporating External Perspectives from Other Disciplines

In addition to perspectives from writing centers and WAC programs, which share parallel histories with communication centers and CXC programs, the authors have branched farther from the communication discipline to inform the center's three pillars.

One of the most significant methods through which the student pillar has incorporated external approaches is by employing tutors from outside of communication majors. As previously described, the university's B.S. in Communication is extremely small, and no degrees in English, Education, or other humanities and social sciences are offered. Currently, therefore, the Virtual Communication Lab's student tutors all come from

STEM and business majors. What began as a staffing necessity has turned into an asset for our communication center, increasing the center's ability to extend beyond the introductory speech course and provide meaningful support for communication in the disciplines.

Employing STEM and business students in the Virtual Communication Lab has allowed us to provide direct peer mentoring in discipline-specific communication, following the Communication in the Disciplines (CID) framework. The CID framework acknowledges the varying conventions of communication across disciplines and the subsequent "need to tailor communication education to the specific needs of various disciplines" (Yook et al., 2012, p. 74). This strategy is supported by MacArthur et al. (2020), who argued that "[c]ommunication centers that offer science communication training opportunities are uniquely positioned to empower scientists to navigate [the] complex system" of science communication (p. 62). In our experiences, this is true for both the tutees who visit the center and the STEM students who work as tutors. Velez (in press) completed a series of tutoring observations and one-on-one interviews with center tutors, finding that communication tutors from STEM backgrounds utilized both their disciplinary coursework and internship experiences as well as rhetorical knowledge gained through communication center training to advise students in discipline-specific communication. As students from non-communication disciplines are trained in communication center pedagogy, they develop a keener understanding of the conventions of communication in their disciplines, which they can then

share with student tutees to foster deeper engagement and build knowledge. In Velez's (in press) observations, STEM tutors built rapport with tutees by invoking their own experiences with communication assignments in STEM coursework, and their feedback to other students included specific guidance on the expectations for descriptive communication in lab settings, strategies for collaborative writing and presenting, or how to present equations and calculations effectively. Employing students from STEM and business majors contributes to a communication center that is both of and for students (Yook & Atkins-Sayre, 2012). Because these student tutors have a firsthand understanding of science and business communication, they serve as a bridge between the communication center and students in majors like engineering who may not otherwise see the value of communication to their academic and professional pursuits. In addition, tutors from all disciplines can find value in the professional development communication centers offer student employees. LaGrone and Mills (2020) pointed out the value of professional development for tutors in the communication center, highlighting the key qualities of adaptability, collaboration, comfortability, conflict management, and structure learned through center work. These skills are transferable to a variety of contexts, including both academic and professional environments in STEM and business. Indeed, in Velez's (in press) study, tutors commented that working in the Virtual Communication Lab enhanced their sense of self-identity as both competent communicators and as student leaders in STEM.

The STEM and business student tutors also serve as a bridge between the center's student and teaching pillars, allowing our Communication Across the Curriculum program to be better informed about the ways students learn to discuss communication assignments with peers in their disciplines. Tutors collaborate with faculty members on preparing Communication Across the Curriculum workshops, using knowledge gained from their own course experiences as well as their tutoring sessions to inform teaching pillar programming. This collaboration between the center's pillars enhances the interdisciplinary nature of the teaching support pillar, which, in addition to utilizing a dually-informed WAC and CXC approach, is sustained through collaboration with faculty from across disciplines as well as other programs and initiatives. According to Dannels and Housley Gaffney (2009),

> the amount of CXC scholarly work focusing on collaborative relationships with other initiatives is limited...Collaborative partnerships with WAC and other disciplinary or administrative entities could explore various topics, such as intersections between oral communication and service learning, writing, technology, active learning, inquiry-guided instruction, and distance education. (p. 141)

Our center's Communication Across the Curriculum is designed to explore precisely the kinds of intersections that Dannels and Housley Gaffney (2009) described. A somewhat unique aspect of our center's Communication Across the Curriculum program is that our monthly workshops are led by speakers from across disciplines. Featured speakers, to date, have included faculty from business,

psychology, history, and mathematics, as well as staff members from the Center for Teaching and Learning Excellence. For example, a Center for Teaching and Learning representative led a workshop on effective feedback in online courses, emphasizing assessment and feedback "as its own communicative genre" (Dannels & Housley Gaffney, 2009, p. 138). The strategy of multidisciplinary presenters challenges traditional CXC models which involve communication faculty "changing and enhancing...disciplinary cultures' teaching practices, instructional resources, and student learning abilities" (Dannels & Housley Gaffney, 2009, p. 125). In other words, rather than a unidirectional process of faculty development that originates with communication faculty and extends outward to other disciplines, the program becomes a more authentic exchange of communication pedagogy across the curriculum. As a result of the strong interdisciplinary partnerships developed under this model, our Communication Across the Curriculum programming saw an increase from ten to 40 monthly attendees in the span of one year. We attribute this increase to our listening tour partnerships from the startup period, which contributed to increased marketing of these events, and to the influence of the multidisciplinary speakers who encourage colleagues from their respective departments to attend.

All presenters work in tandem with the authors to develop workshop materials and to compile additional resources for attendees which are housed in an online resource repository. Using the university's learning management system, Canvas, our center's online resource hub includes an archive of prior CXC

workshops and other materials for teaching communication, including links to communication teaching journals, article PDFs, and OER resources faculty can use in their courses. Anyone with a university email address may be enrolled by contacting the Co-Directors. Providing this range of content has multiple benefits. First, the archived workshop sessions led by non-communication faculty demonstrate to viewers that they can contribute to conversations about teaching communication regardless of their discipline, avoiding the perception that the CXC program consists of communication faculty telling others how to teach. At the same time, the supplemental materials, including links to relevant articles in *Communication Teacher* and *Research in Online Literacy Education,* ensures that the program's grounding in the communication discipline is not hindered.

In addition to monthly workshops and an online resource repository, the center Co-Directors conduct individual curriculum consultations with faculty who are developing new courses and teaching communication assignments. For example, one Co-Director worked closely with the faculty in charge of developing a new Master of Science in Emergency Services to integrate reflective communication and an electronic portfolio throughout the entire curriculum. This process involved presentations to the curriculum committee as well as assignment and rubric design workshops. All of these were informed by both the disciplinary faculty expertise and the Co-Director's own disciplinary background. These collaborative consultations allow us to learn more about what faculty in various disciplines value about

communication, the communication genres they see as most necessary for students to master, and the kinds of communication assignments currently in existence in different degree programs. This data creates a feedback loop that not only informs our future teaching support programming, but also our tutoring center practice, allowing us to train tutors in more varied forms of disciplinary communication. Results from these consultations also help us to continue promoting the center and ensure widespread faculty understanding of the center's mission.

Finally, our center's research pillar was developed with the understanding that the majority of faculty at our STEM-focused institution conduct research external to communication. As such, while the Co-Directors conduct communication research as outlined above, our center also strives to develop and foster partnerships with non-discipline specific programs that support research. These partnerships allow our center to support research in two ways: by connecting with institutional researchers across disciplines to share knowledge about communication and by promoting collaboration on interdisciplinary research with a communication focus.

As with our student and teaching pillars, our research pillar emphasizes collaboration, in this case with campus entities who support research, so as to share knowledge about communication. For example, our center collaborated at the campus level with the Office of Research, and at the college level with our faculty writing group. The Office of Research regularly hosts non-discipline specific workshops designed to support faculty researchers in areas such as writing research

agendas, securing grant funding, and presenting at academic conferences. When these workshops include communication-focused elements, such as delivering effective conference presentations, the authors co-present to share knowledge and resources relevant to those areas. We also partnered with the chair of another department within our college to run a summer writing group for interested faculty. These partnerships allow our center to contribute a communication perspective to non-discipline specific programs that support research, thereby increasing center visibility. In addition, this collaboration allows us to meet faculty across all disciplines, cataloguing faculty research interests, noting places for interdisciplinary collaboration on research with a communication focus, and determining where future research partnership opportunities might exist. The center's faculty resource hub in Canvas serves as the primary way we archive this information for ongoing and future research projects and collaborations.

Multidisciplinary Programming Recommendations

Based on the authors' experiences building a multi-pillar communication center shaped by a variety of disciplinary perspectives, we recommend that new and established centers adopt multidisciplinary strategies in center programming, with some caveats based on institutional context. For instance, while a combined writing and communication center approach may not be feasible at an institution with a large and established writing center and a small or newer communication center, the authors recommend collaborations between the two types of centers when possible, particularly if the collaboration would

increase the communication center's reach. We also recommend employing students from a variety of disciplines and learning about their experiences with discipline-specific communication. In addition to mentoring students in their own disciplines, tutors from STEM and business backgrounds can train tutors from communication or English majors in other disciplinary conventions for communication, making the entire tutoring staff more well-rounded. All student tutors, regardless of major, can benefit from the professional development opportunities afforded by working in the communication center.

Employing students from across disciplines can also open doors to collaboration with disciplinary faculty. The authors recommend that communication centers with a CXC program regularly invite non-communication faculty to participate in the CXC program in prominent roles, such as leading professional development workshops or collaborating on pedagogy-focused conference presentations. A second recommendation is to foster intentional partnerships with WAC programs as well as with other campus entities that support teaching, such as Centers for Teaching and Learning. As a result of our multidisciplinary, partnership-forward approach, we have seen positive levels of buy-in and cross-disciplinary support for our center. Attendees at monthly CXC workshops have consistently included faculty from all three colleges on our campus as well as from multiple disciplines within our own college of Arts and Sciences, including meteorology, mathematics, history, and physics.

Developing and sustaining these diverse faculty partnerships can also lead to productive interdisciplinary research collaborations. As innovation and distribution are a critical part of center director evaluation and thus center work (Turner & Shekels, 2015b), establishing research partnerships can benefit communication centers regardless of whether they have a formalized research pillar. During the first two years of our center operations, the authors were non-tenure track faculty finishing PhDs. To demonstrate our ability to create a research hub, it was critical for the center to not only produce research but also form interdisciplinary partnerships. As documented by LeFebvre et al. (2017), in a study on communication centers at two-year and four-year institutions, "the highest degree earned for most directors is a Master's degree" (p. 445). With many communication center leaders not holding terminal degrees, interdisciplinary collaboration with research offices, libraries, tenured and tenure-track faculty, and other allies may contribute to raising the research profile of the center.

Conclusion

To ensure communication centers establish themselves as critical to their institution's mission, strategic plan, and major student success initiatives, a multidisciplinary approach is recommended to draw knowledge from a variety of disciplines and even perspectives from outside of academia. The authors specifically recommend centers implement three key strategies: collaborative, multidisciplinary leadership; strategic partnerships; and diverse communication center programming.

A Co-Director model whereby multiple disciplines are represented in center leadership is recommended, and external perspectives from organizational communication, higher

education leadership, and writing program administration research support such a model. Co-Directors can contribute to a center that is more adaptable, flexible, and innovative in establishing and achieving goals, responding to campus needs and even disseminating center accomplishments through research and professional organizations.

A three-pillar center structure with student support, teaching support, and research support pillars may allow centers to serve more students and faculty across the institution. Importantly, recommendations for each of these three pillars relies heavily on incorporating multiple external perspectives and leveraging outside knowledge. With respect to the student support pillar, collaboration between writing and communication centers and recruiting student tutors from outside communication departments may increase center reach, provide well-rounded training for tutors, and improve the overall student tutee experience. When considering the teaching support pillar, drawing from both CXC and WAC approaches and fostering broad, multidisciplinary partnerships on campus with individual people and campus entities may allow for increased buy-in, attendance, and support for the center. Finally, partnerships external to the center may increase the profile of a research support pillar, especially in cases where center leaders are not currently on the tenure track.

Central to all of the strategies described above is prioritizing strategic partnerships, both in the center's startup phase and beyond. Multidisciplinary partnerships can help a new center launch successfully, reinvigorate an established but struggling center, or help successful

centers adapt to shifting institutional needs and priorities. Overall, these recommendations may allow centers to expand their services, to promote buy-in from diverse campus constituents, to meet the ever-changing needs of students and faculty, and to cement the center's status as vital to the institution.

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