

# Strengthening Virtual Communities of Practice (VCoPs): An Evidence-Based Approach

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This action research study is being used to inform the faculty researchers at a Midwestern university regarding the perceptions of adjunct faculty located across the United States involved with their participation in Virtual Communities of Practice (VCoPs). These data were collected as part of an ongoing effort to increase the exchange of ideas among community members. Findings indicate areas of effectiveness for the VCoP approach and suggest items for improvement, including more regular contact points throughout the semester.

**Keywords:** adjunct faculty, communication, Community of Practice, continuous improvement, Virtual Community of Practice

During the 2015–16 academic year, as part of a review and revision of master’s level curriculum, faculty in the library school at a small, Midwestern university began to introduce communities of practice (CoPs), “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, & Snyder, 2002, p. 4). These communities included both full-time faculty members and national adjunct faculty (NAFs), so called because they are widely dispersed geographically and do not maintain offices on campus grounds. The goal of this implementation was twofold, intending to provide opportunities for further curriculum development and, equally important, to increase support for NAFs, most of whom are library professionals living throughout the United States. Organizers anticipated that creating these learning communities would allow faculty of any rank to increase the content knowledge and pedagogical skill sets needed to be successful in online and face-to-face classrooms. This article describes our initial experiences with the CoP approach and the challenges we encountered during our first implementation phase. It also describes a next phase in the process in which we seek to strengthen community ties for all involved. As part of

this action research process, a survey of NAFs was conducted to measure current knowledge of, participation in, and preferences for their involvement in CoPs. The survey revealed some strengths and also identified weaknesses to overcome as we move forward with the CoP approach, and these will be used as a basis to inform a refinement of the communities themselves. We wish to employ the strongest features of robust, functional CoPs, while mitigating known disruptive factors reported in relevant literature, as a next step in an iterative process for continuous improvement.

CoPs are currently arranged by the courses taught by community members and are composed of a blend of local, full-time faculty, all of whom are located on the university's main campus, and NAFs who are generally geographically located in or near one of our satellite cohort groups of students. Any of these faculty members is welcome to join other practice groups as desired. The conduct of CoP activities occurs in both physical and virtual spaces.

Results of employing the CoP approach to date have not achieved the organizers' expectations in terms of increasing content knowledge and pedagogical skill sets. Therefore, this action research project seeks to determine what aspects of the current model approach worked and which did not, and to identify ways to improve upon the information exchange between all members of the faculty and strengthen the CoP groups in place.

## Literature review

### Theoretical framework

To reach our stated goals of increasing communication and creating a sense of community among our entire faculty group, the use of CoPs seemed to be a logical starting point. Anthropological research conducted among West African tailors formed the basis for what is currently understood to be a model for the CoP approach, and in fact it stems from "the notion that learning through apprenticeship was a matter of legitimate peripheral participation" (Lave & Wenger, 1991, p. 30). New members of

### KEY POINTS:

- Many adjunct faculty are also library practitioners, who are busy not only in their primary roles but also with their families and other interests as well as their teaching duties.
- Curriculum delivery for blended learning (online instruction supplemented with face-to-face meetings) for LIS graduate students can balance and complement instruction from full-time, tenure-track faculty.
- The use of web conferencing tools opens a more personal avenue of the exchange of ideas between faculty and adjunct faculty who teach to the same topics.

apprentice communities gain experience and skills beginning with simpler tasks and routines (starting from the periphery), making a needed contribution to the community group (legitimate participation) as they learn and grow in the profession (Lave & Wenger, 1991). This type of participation, in particular the loose, open form of communities designed around shared topics of interest, had begun to form naturally among faculty at the library school and, once identified, was actively nurtured to create a bridge between tenure-track faculty and the NAFs.

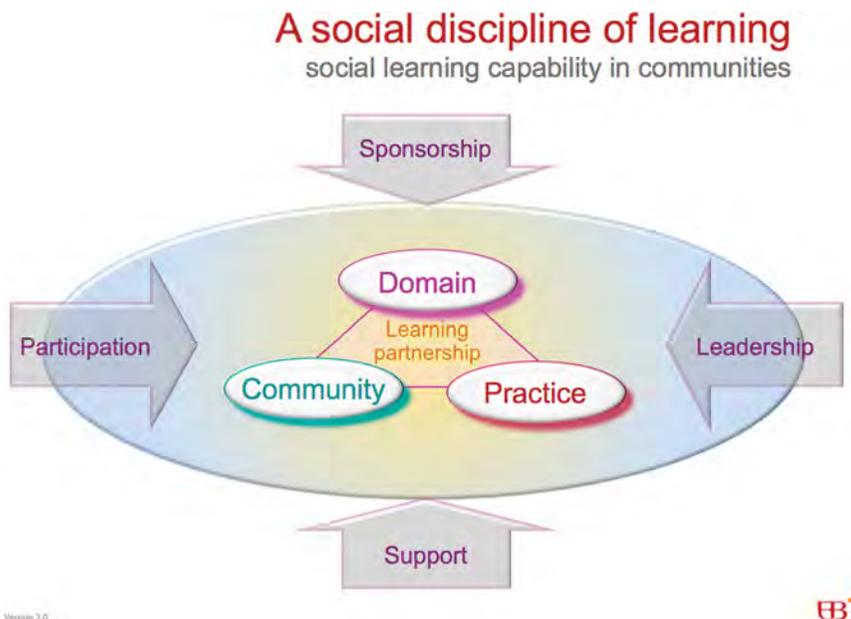
### Wenger's model

Lave and Wenger (1991, p. 30) found that tailors in Liberia used craft apprenticeship to train younger members of the community, who would “become, with remarkably few exceptions, skilled and respected master tailors.” Drawing from this idea of situational learning, that is, the use of intelligent tutoring systems and the cultural transparency of technology, it was our goal to implement a construct that was rooted “in interdependencies across history, technology, developing work activity, careers, and the relations between newcomers and old-timers and among co-workers and practitioners” (Lave & Wenger, 1991, p. 61).

In this model, learning is a situated activity, which has, as its “central characteristic, a process that we call legitimate peripheral participation” (Lave & Wenger, 1991, p. 29). Membership in CoPs “implies a commitment to the domain . . . and a shared competence that distinguishes members from other people” (Wenger, 2011, p. 2). Wenger et al. (2002) also point out that CoPs have three identifying characteristics: domain, community, and practice, all of which are identifiable in our CoPs.

### Virtual Communities of Practice

While the term Community of Practice was coined by Lave and Wenger (1991), VCoP, or Virtual Communities of Practice, is another term used to describe this situated learning. With Wenger's Model (Figure 1) as a basis, the term “virtual” was added by some researchers to recognize the geographically widespread membership of these communities of professionals or students (see Eschenfelder, Heckman, & Sawyer, 1998; Knapp, 1998; McLoughlin, 1999; Pye, 1999). Knapp, in her 1998 article on knowledge management, suggested that future successful knowledge management programs would exhibit the use of a VCoP-type approach, saying, “sharing what is known will be boundary-less, independent of time zones and other geographic differentiators” (Knapp, 1998, p. 6). In our case, the addition of the word “virtual” gives a clearer picture of group members' need to meet using technology as a basis, whether via video conferencing or email exchange, in lieu of physical presence. In our setting, NAF members are spread across the United States and frequently meet with their CoP communities and students using audio-/video-conferencing software, which provides the ability for communication and documentation to be shared



**Figure 1:** Communities of Practice Model, containing the seven elements that form the cornerstone of social learning capabilities in communities.

Note: Adapted from “A Social Discipline of Learning,” by E. Wenger-Trayner and B. Wenger-Trayner, 2015, retrieved from <http://wenger-trayner.com/project/a-social-discipline-of-learning/2015/>.

and stored rapidly: “The hope would be to allow a pool of information to develop which could grow and evolve with the organisation and the projects it describes” (Berners-Lee, 1989).

Regarding VCoPs, Cook-Craig and Sabah (2009) describe steady, strong growth of membership and site hits in their analysis of VCoP participation among social workers, but they note that information sharing is not always a two-way phenomenon. They found that the majority of VCoP use was geared toward accessing knowledge, without sharing their own knowledge (sometimes known as “lurking”). Cook-Craig and Sabah offer the potential explanation that there is a need for “greater organizational sanction, culture and structure that supports and expects that knowledge dissemination will be an integral part of social workers’ jobs” (p. 736).

In a study to determine the effectiveness of five CoP groups begun in 2017 to organize the library system of a Puerto Rican higher-education institution, Sánchez-Cardona, Sánchez-Lugo, & Vélez-González (2012) interviewed 18 of a total of 28 randomly selected librarians (64%), using semi-structured interviews. Interview analyses showed “learning and collaboration among members of the communities as the principal benefits of these communities of practice” (Sánchez-Cardona

et al., 2012, p. 1823). Another measure of VCoP success revolves around social identity within virtual communities. Chang, Hsieh, and Fu (2016) surveyed members of two large VCoP groups, using a seven-point Likert scale and generating a total of 253 valid questionnaires. They measured “feelings of belonging, identity, and attachment to the associated virtual community” (Chang et al., 2016, p. 883). Chang et al. found that leveraging social capital (trust and commitment) can facilitate knowledge sharing of group members, even though the groups are characterized by different personal tendencies of group members. From a practical perspective, order within communities, as well as social capital, was better maintained by “setting rules in written words to clearly communicate a shared vision to members, especially in the case of new or potential members” (Chang et al., 2012, p. 895).

More recently, Abigail (2016) reviewed CoP literature related to health care and faculty development, identifying 24 articles in such databases as Medline Complete, CINHALL Complete, ERIC, PsycInfo, and others, including a Google Scholar search to inform the study. Abigail determined that, although CoPs as part of faculty development had the ability to “make a difference to the educators’ practices through actual application of knowledge” (p. 61), “we know little about how the design and delivery of CoPs’ educational activities enhance faculty development programmes” (p. 70). Ergan, Vold, and Nilsen (2014) conducted a pilot case study of VCoPs and determined that a greater focus needed to be placed on the role of the facilitator to ensure success, saying, “It is important that the facilitator upload documents and information, write comments and encourage its members to participate in VCoPs” (p. 309).

### CoPs in higher education

The CoPs in our setting are related to required course topics such as collection development, organization of information, and reference services. The members of a CoP form a community, that is, “relationships that allow them to learn from each other” (Wenger, 2011, p. 1), regardless of whether they work together on a daily basis. Our CoPs include all tenure-track and tenured full-time faculty and the practicing information professionals in the NAF role with teaching responsibility or interest in the community topic. These groups comprise a conjoint practice that is often represented by “a shared repertoire of resources: experiences, stories, tools, ways of addressing recurring problems” (Wenger, 2011, p. 2). For example, the CoPs share teaching experiences, solutions to common teaching challenges, and such learning objects as discussion topics, quizzes, and hands-on learning activities. A CoP is cultivated through the development and exchange of these concepts and materials. As Reilly, Vandenhouten, Gallagher-Lepak, and Ralston-Berg (2012) note, “faculty development has typically been an individual endeavor intended to

further one's professional interests, areas of weakness in pedagogy, or research foci" (p. 102). In their implementation of a CoP-based faculty development program, Reilly et al. found that "faculty described several enhancements to their online courses resulting from their participation as a scholar [in the CoP]" (p. 106).

### *Benefits to adjuncts*

CoPs have been applied to the provision of support for adjunct faculty in higher education. Some of the challenges to providing such support include lack of preparation to teach among adjuncts (Taft, 2012) and provision of support to those who are geographically distant from the home institution (Schnitzer & Crosby, 2003). CoPs can serve to improve the sharing of tacit knowledge from full-time to adjunct faculty for supporting student success and institutional effectiveness (Guzzo, 2013). The more informal, loosely structured CoP seemed a good fit, especially with regard to the time issues faced by NAFs, who work full-time at their libraries and teach part-time for the university. As Webb, Wong, and Hubball (2013, p. 235) note, "Most [adjunct faculty], due to complex workloads, needed longer and more flexible options to engage. Utilization of technology . . . greatly assisted the connectedness in and access to professional development opportunities in these settings." Webb et al. continue, saying "developing a situated and flexible community of practice [is] a critical support for engaging adjunct teaching faculty in scholarly approaches to teaching and learning" (p. 235). Adjuncts have reported finding themselves a part of a learning community beneficial to their learning to be better online teachers (Shattuck & Anderson, 2013). Although some attention has been given to using the CoP approach to support adjunct faculty in higher education, it is not a model that has been widely adopted in library and information science (LIS) education.

### *Benefits to faculty*

Since our NAFs are almost all practitioners with experience and expertise in specialized content areas, one initial purpose in formalizing the CoPs was to provide them with learning opportunities related to both how and what they teach. We aimed to help them integrate their expertise and knowledge with our institution's program outcomes and values. We also aimed to create "partnerships among academic and non-academic learning institutions and communities to create and apply learning and knowledge with stakeholders that are managing and creating sustainable development initiatives" (ALISE, 2016, para. 2). It was thought that the full-time faculty could also benefit from this exchange, in that the practitioners who serve in the NAF role could offer their perspectives about the current library environment, based on their day-to-day work. As a result, LIS instruction from all would be more current and relevant to pre-service professionals.

### *Benefits to students*

The idea that “both expertise and great learning opportunities in teaching and scholarship also reside in non-academic settings” (ALISE, 2016, para. 1) is central to the outcomes we desired for our CoPs. We recognize that implicit in the use of adjunct faculty to teach electives is the notion that practitioners have expertise developed through professional practice in libraries and archives. Connecting students with practitioners not only introduces students to current issues and practices in the profession but also provides them the opportunity to work with practitioners in various library environments.

In our role as educators, our ideal end result is to develop competent library professionals who are themselves able to create and manage sustainable education development initiatives, that is, to advance democracy, to create an educated citizenry, and to solve social problems. This goal aligns with the Association for Library and Information Science Education’s (ALISE) 2017 conference theme of Community Engagement and Social Responsibility and is integral as we strive to “develop further collaboration between LIS programs and their larger communities” (ALISE, 2016, para. 2). Connecting and creating partnerships between the academy and practitioners is an opportunity not only to inform evidence-based practice for this purpose but also to address students’ perennial concern that learning about theory in library school doesn’t prepare them for working in libraries.

### **Our application of CoPs**

The creation of CoPs allows practitioner librarians (i.e., non-academics) and academics (e.g., full-time faculty) to come together in “groups of people who share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger-Trayner & Wenger-Trayner, 2015, p. 1). This is done in order to engage all faculty voices in the instructional process and to create information paths and content sharing for all. We also wished to support ALISE’s (2016) objective to create additional opportunities for these conversations to aid in the development of real-world, service-oriented projects to engage student learning. We envisioned this as a step toward enabling higher-level conversations between our current tenure-track faculty, our adjunct faculty, and the larger LIS community, aligning with ALISE to create an exchange of ideas and resources in a shared context of partnership.

To implement practice communities, the curriculum was broken out into ten topics-based CoP groups. The virtual location of the groups was a course in the learning management system (LMS) licensed by the university. A full-time, tenure-track teaching faculty member was assigned as convener to each group, relying on the set of “interdependent tasks that contribute to a predefined, shared objective” (Wenger et al., 2002, p. 43) to drive communication efforts. Information about the CoP model, the

courses included under each topic heading, and the assigned “leaders” of each group was described in faculty meetings and via a lunch-and-learn web meeting broadcast to all adjunct faculty, and saved and posted for all for later viewing. Each faculty convener had autonomy in the respective CoP assigned to him or her and could convene (or not convene) the group based upon the needs and schedules of those involved.

### **Benefits realized**

Shattuck and Anderson (2013, p. 189) reported on the results of a study of MarylandOnline’s Certificate for Online Adjunct Teaching course (COAT), noting, “this course placed instructors as students within a paced, asynchronous online course that was structured to be similar” to the kinds of courses being taught at the institution. Among some practice communities, particularly those where long-term adjuncts were involved, this proved to be true. The sharing of ideas and alignment of content showed long-term value in the CoP approach and gave us cause to review the program to garner new interest and correct some of the program’s identified shortcomings.

### **Challenges encountered**

As Attebury, Perret, Kenyon, and Green (2013) discovered among University of Idaho Library faculty, the initial positive response to the idea of CoP use waned. Using surveys and focus groups to inform their study, Attebury et al. describe three emergent themes regarding this occurrence: a too formal structure, a gap between anticipated and realized benefits, and ambiguity of group purpose. We have also identified three major challenges resulting from our first attempt at establishing strong practice communities: lack of structure, contracts and access to systems, and full-time faculty participation. Each of these challenges will need to be addressed in order to establish a stronger, more viable system of information sharing and to develop and maintain the communication levels and involvement of all participants.

#### *Lack of structure*

One of the greatest challenges in assessing the effectiveness of CoPs lies in one of their strengths: their open nature. Although the “first characteristic of practice as the source of coherence of a community is the mutual engagement of participants” (Wenger, 1998, p. 73), it is also true that, “communities of practice are not stable or static entities. They evolve over time as new members join and others leave” (Roberts, 2006, p. 625). This is especially true of the NAF environment, where connection to the community is disrupted by the changing nature of adjunct teaching assignments (e.g., adjuncts often do not teach courses offered in consecutive semesters), and is limited by university policies as they relate to access to information technology services (discussed below). These continuity breaks were exacerbated by gaps in communication, in some cases, from

faculty conveners for CoPs, whose time was already filled with teaching, research, and service commitments.

### *Contracts and access to systems*

Adjuncts, by definition, are not regular employees of the institution, and the policies surrounding access to university systems often preclude continuous access to password-based university resources. This loss of connection to the community has caused frustration in the past among NAF members and creates yet another challenge for participation in CoP groups. Additionally, NAF faculty must wait until all contract paperwork is approved before being granted access to online learning environments, where both CoPs and regular courses reside, causing another logjam with time resources.

### *Full-time faculty participation*

Another identified challenge was the lack of participation by some members of the full-time teaching faculty. Although faculty approved the CoP structure schedule, it was not a “front burner” topic for many. When coupled with the time constraints faced by everyone at the start of a semester, water-cooler discussions with some members of the full-time faculty confirmed that community development did not occur in all cases; in fact, for some faculty, no further action was taken to communicate with adjuncts in various communities.

## **Methods**

Because we are members of the community under investigation, we chose to approach our research problem using action research: “Action research is a systematic, research based approach to improving conditions in a specific setting . . . the process entails actively studying one’s own practice in order to improve it” (Farmer, 2018, p. 48).

Institutional review board (IRB) approval was sought and received prior to the survey launch. The survey was sent to the last known personal email address of each member of the adjunct faculty who were not currently teaching, as it was not possible to contact adjuncts off contract using their university email accounts. For that reason, a combination of known email addresses, university-supplied email addresses (for current NAFs), and email addresses obtained via various web searches was used, with a total of 58 participants identified.

The electronic data-collection tool Survey Monkey was used to launch the survey instrument. The Statement of Informed Consent indicated that no names, IP addresses, or other identifying data were collected via the electronic survey instrument in order to protect these individuals’ privacy, considering the part-time nature of their work. The first survey question verified participants’ understanding of the Statement of Informed Consent. A Yes/No option button gave participants the ability to agree to having “read and understood the Statement of Informed Consent” given;

choosing “yes” took them to the next survey question, while choosing “no” exited participants from the survey.

The Survey Monkey instrument was open for a total of 25 days, from January 22 to February 15, 2018, and an automated reminder email was sent to non-responders on February 8. Survey results were downloaded to the primary researcher’s password-coded computer and will be maintained on file there.

The implementation of CoP groups is not without its downsides. Wenger et al. (2002, p. 159) note, “To allow communities to flourish, it is more important to pay constant attention and fine-tune the process as it evolves.” In order to measure adjunct faculty recognition for, perceptions of, and engagement with our CoPs as they existed at that time, survey questions were developed and tested by the researchers to determine what aspects of the current model worked, and which didn’t, and to collect data on preferred methods for the frequency and modality of communication streams. We asked

- how many courses each taught for the program;
- if technology access and support were sufficient for effective teaching;
- whether NAFs had access to the right people for effective teaching; and
- about preferred information sources for ideas regarding course content, questions about the campus LMS, questions about the enterprise management system (for grading), and questions about due dates and other academic/administrative scheduling information.

Along with gathering information regarding preferred points of contact, we asked about NAF preferences for frequency of communication versus the actual number of communications during a semester. These questions dealt with the topics of course preparation, course delivery, and teaching strategies. We also explored recognition and identification with the CoP communities with which NAFs were aligned:

- Have you been assigned a Community of Practice?
- Is the term Community of Practice something you associate with your work at this institution?

Two open-ended questions were used to collect data on NAF ideas for CoP improvement. Researchers asked participants to identify their greatest point of frustration as a NAF member and asked for suggestions for improving communication streams. Finally, permission for sharing/reporting on participants’ comments was sought.

As noted in the limitations section, action research as a methodology has the downside of not being generalizable; however, this type of research allowed us to remain close to the individuals and the data, allowing us to “leverage that insider status in order to gain information and insights that an outsider might not be able to obtain” (Farmer, 2018, p. 58).

Table 1: Survey response rates by type

Category	Number	Percent
Not responded	30	51.72
Partial responses	3	5.17
Complete responses	13	22.41
Opted out <sup>a</sup>	1	1.72
Bounced <sup>b</sup>	11	18.97
Total recipients	58	

<sup>a</sup> Recipients who have opted out have, either at the time of this survey or any other, chosen to unsubscribe from all survey invitations sent through Survey Monkey.

<sup>b</sup> Recipients whose messages bounced did not receive the survey, as it was undeliverable.

Table 2: Courses taught

Courses taught	Responses	Percent
One	5	38.46
Two	1	7.69
Three	2	15.38
Four or More	5	38.46
Total	13	

## Results

Of the 58 people to whom invitations were sent requesting participation in the survey, 51.27% (30) failed to respond, 18.97% (11) of the emails were undeliverable, and 27.58% (16) responded to the survey. Of those responding, 13 completed the survey, resulting in a 22.41% overall response rate, a 28.26% response rate of those who received the survey. These results are summarized in Table 1.

Participants were then asked about their experience teaching with the program. Table 2 summarizes the number of courses each NAF member has taught.

Next, participants were asked about their access to technology, information, and resources, in two separate questions. Table 3 shows that NAFs overwhelmingly agreed that their access was at the levels they required.

The following comments were given in addition to question responses:

- “Losing access to canvas/email/buzzin [sic] during summers and/or “off” semesters is problematic.”
- “The technology access is great once achieved, but there is often a very short time before being granted access and the beginning of the term, not leaving much time to edit content.”

Table 3: Sufficient access

Option	To technologies	Percent	To people/resources	Percent
Yes	13	100.00	12	92.31
No	0	0	0	0
Not sure	0	0	1	7.69
Total	13		13	

Table 4: Communication preferences

Topic	Communication method						Total
	By phone	Via email	In a FB-type group	Twitter	Web meeting	Other method	
Course content	0	11	1	0	0	1 <sup>a</sup>	13
LMS	0	11	0	0	1	1 <sup>a</sup>	13
Enterprise Management System	0	12	1	0	0	0	13
Due dates, etc.	0	13	0	0	0	0	13

<sup>a</sup> Via Canvas.

- “Not really. I have to use my own personal computer, phone, web-cam, mic, and software for all communications and projects. I am reluctant to talk with students unless it's over Zoom or some other web conferencing tool because I am not comfortable chatting on my personal phone.”

Respondents were asked how they would most like to get information about

- new ideas for course content;
- the LMS;
- the university's enterprise management system; and
- due dates and other scheduling information.

Table 4 illustrates that for all four questions, participants overwhelmingly preferred email communication.

Respondents were also asked a series of comparison questions regarding desired versus actual time communicating with full-time teaching faculty on the topics of course preparation, delivery, and strategies. The first regarded communication, asking “how often DO YOU” communicate and following with “how often WOULD YOU LIKE TO” communicate (in any form) with a member of the full-time teaching faculty on the topics of

Table 5: Communication frequency

Frequency	Course preparation		Course delivery		Teaching strategies	
	How often do you	How often do you want to	How often do you	How often do you want to	How often do you	How often do you want to
Daily	0	0	0	0	0	0
Weekly	1	2	0	1	0	0
Monthly	0	3	2	4	0	3
Once or twice a semester	7	7	6	7	5	7
Never	5	1	5	1	8	3
TOTAL	13	13	13	13	13	13

Table 6: Communication sources

Information source	Number	Percent
My CoP group	0	0
Local program director	2	15.38
Faculty member	5	38.46
The dean	3	23.08
TechHelp (graduate student technology workers)	3	23.08
TOTAL	13	

course preparation, course delivery (content planning, assignment generation, etc.), and teaching strategies (how to be a better teacher, engaging students, etc.).

According to their responses, most NAFs receive communication about course preparation once or twice a semester, although some report never receiving them. Most NAFs would like to receive communications about course preparation once or twice a semester. These results are summarized in [Table 5](#).

In order to understand current information flows from the NAF perspective, participants were asked, “Who gives you the most/best information regarding the library school as it relates to your teaching duties?” Responses in this category ([Table 6](#)) reflect an opportunity to provide more focused, targeted information to adjunct faculty, regardless of their involvement in other groups. Most NAFs obtain the most/best information from other department faculty members, although some receive it from the dean or the graduate student technology support workers who

Table 7: CoP assignment awareness

Are You a Member of a CoP?	Number	Percent
Yes, one	1	7.77
More than one	4	30.77
No	4	30.77
I'm not sure	4	30.77
Total	13	

Table 8: Association of CoP with the university

Association	Number	Percent
Yes	5	38.46
No	8	61.54
Total	13	

are physically located on the university's main campus. Notably, none perceived they were receiving the most/best information about the university, the department, or teaching from their CoP groups.

The question of individual knowledge of CoP assignments was important to researchers. We asked, "Have you been assigned a Community of Practice?" to determine whether NAF members knew that they were associated with one. As is illustrated in Table 7, the majority (more than 60%) did not think or were not sure that they had been assigned to a CoP. Complementing this question, researchers asked, "Is the term Community of Practice something you associate with your work at this institution?" Again, the majority of respondents (61%) answered in the negative, as noted in Table 8.

Finally, study participants were asked to respond to two open-ended questions. Of the 13 NAF instructors who responded to the open-ended question prompts, all but one agreed to share their responses with others. The first question asked participants to articulate their greatest frustration points as members of the NAF. Unsurprisingly, responses to these prompts were mixed. Most of the negative responses included comments about a lack of connection to the university and/or program:

- "Feeling disconnected geographically and professionally from the program."
- "I was not able to discover much about how the courses I led had been taught previously."
- "Lack of community."
- "Getting access at the start of the term and getting the course 'rolled' from a previous semester."

- “Uncertainty/timeliness of being informed of future teaching assignments.”
- “Not having a sense of what other classes are being taught, how they are delivered, and by whom.”
- “I am not sure what I need to do to have the opportunity to teach another course.”
- “Lack of any communication from the Dean except for specific due dates regarding grades; not knowing if/when teaching assignments will be given; everything becomes ‘an emergency’ because it is handled at the last minute.”

On the other hand, rather than providing frustrations, some participants pointed out having a lack of them:

- “Everything is fine. When I have a question and reach out I am given great support.”
- “I have none. Our Dean is amazing. This is my 8th year as a lecturer.”
- “Thanks to other faculty and student tech support, I can’t say I have experienced much frustration.”

One other NAF member’s greatest frustration was “trying to cram so much content into a single course.”

The second open-ended question sought suggestions for improving the communication stream between members of the full-time faculty and NAFs. Of the eight responses given to this question that the participants agreed to share, two offered no new suggestions. One response was simply “None,” and two responses were positive in nature:

1. “None, our full-time faculty are amazing. They provide a wonderful example on how to effectively conduct weekend classes. They are helpful, student centered, and professional. This is the best group of faculty since I started (2010).”
2. “I never felt it was a problem, though it was easier when I lived in in the same town as the main campus. I only taught one course while living out of the area, and communicated with full time faculty much less, but not to the point where it was a problem.”

The remaining six responses, which participants gave their permission to use, garnered these suggestions:

1. “Creating opportunities for basic introductions and networking would be a very good start. I don’t really have any sense of who teaches what, how my courses fit within larger curriculum goals, and what my students have learned by the time they reach my classes.”
2. The brown bag sessions are nice mostly for their social aspect, but my rooms in which they’re held are not set up for true online/ F2F communication (e.g., I can’t see a projection screen or read

- a physical handout.) As a result, the online participants, who are nearly always adjuncts, are made to feel a bit like an afterthought.”
3. “Ways to interact with national and fulltime faculty on a regular basis to share ideas with each other.”
  4. “Maybe have a mentoring-type setup in which regular teaching faculty help new adjunct faculty settle into their duties. I felt a little bit like I was on an island because I didn’t know where to turn when questions arose.”
  5. “Better implementing the communities of practice.”
  6. “I think even a Go to Meeting kind of ‘meeting’ for introductions and orientation would be helpful.”

## Discussion

Based on the categorical data we collected from our NAFs, overall they report that they have adequate technology support, with the exception of gaining access to university credentialed tools (email and the LMS). Most prefer email communication with the department once or twice a semester. The most frequent and best information comes from a variety of sources within the department, but not from the formal CoPs, which they know little or nothing about. The diversity of sources of information also suggests that NAFs may feel that either they do not need to or do not know to whom they should reach out with questions about teaching. Neither the local program directors (local to satellite cohort groups of students) nor the technology graduate assistants are trained to provide guidance related to pedagogy and teaching.

So, while some communication is happening, it is not happening on a consistent basis. Since the research suggests that CoPs can serve to improve the sharing of tacit knowledge from full-time to adjunct faculty for supporting student success and institutional effectiveness (Guzzo, 2013) and adjuncts have reported finding themselves a part of a learning community beneficial to their learning to be better online teachers (Shattuck & Anderson, 2013), it seems that our decision to work to strategically improve CoPs and, through them, the NAF teaching experience is a good one.

The literature suggests several actions we can take to improve preparation to teach among NAFs. The first is “developing a situated and flexible community of practice,” as suggested by Webb et al. (2013, p. 235). For our NAFs, CoPs have to be virtual in order both to create flexibility to situate the information being communicated so that it is available at the time of need and to accommodate the geographical separation imposed by each member’s home location.

The themes apparent in our participants’ responses to open-ended questions about their experiences teaching for this department also mirror those reported in the literature. Most of our respondents sought more structured communications related to course content and teaching assignments. With regard to course content, NAFs wanted to know more

about the course they were teaching and the content that students in their courses had already encountered. These results support Schnitzer & Crosby's (2003) findings that institutions were challenged to provide support to adjuncts who are geographically distant from the home institution.

Themes in our participants' recommendations for improving communications between the home institution and NAF also mirror recommendations that have emerged from similar studies. Several participants sought more thorough introductions to full-time faculty and other NAFs and opportunities to network with them. Others recommended that more attention be paid to distance attendees (who are often NAF) during "lunch and learn" sessions and in the existing CoPs. And one recommended that new NAFs be assigned a mentor from among the full-time faculty. Sánchez-Cardona et al. (2012, p. 1823) pointed to "learning and collaboration among members of the [virtual communities of practice] as the principal benefits of these communities of practice," and Chang et al. (2016, p. 883) measured "feelings of belonging, identity, and attachment to the associated virtual community [of practice]."

Since overcoming potential lack of preparation to teach among adjuncts as identified by Taft (2012) is also among our goals, and since both learning to improve teaching (Sánchez-Cardona et al., 2012) and the use of CoPs as part of faculty development had the ability to change educators' practices through knowledge application (Abigail, 2016), it makes sense that we should focus our efforts to improve our NAFs' experiences in our existing CoPs. Chang et al. (2016) further found that leveraging social capital (trust and commitment) can facilitate knowledge sharing among group members, which suggests that in order to reinvigorate our CoPs, we should act on our participants' recommendation for creating opportunities for introductions and networking.

### Changes based on study findings

As we take a step back and attempt to breathe new life into our VCoP program, we will use the data collected during the research process to guide our efforts. In sum, we will implement the following:

- a revamp of the shared course to update contact information for all faculty team members, using the system's free site;
- broader use of the shared files area, with instruction, to share course materials;
- an all-faculty web meeting two weeks prior to the start of the semester;
- a follow-up email that supplies a table of VCoP members and their related courses;
- a start-of-semester email reinforcing webinar content and encouraging communication;
- a midterm touch-base, also via email; and
- an end-of-semester wrap-up email explaining the LMS's end-of-course access options, and verifying off-contract contact information.

### *LMS updates*

The course shell used for NAF faculty content will be updated and moved to the free LMS site, to ensure access regardless of contract standing. All contact lists will be updated. New NAF faculty will be added as needed to the course, using non-university account addresses solicited by the researchers and department administrative staff. Previous brown-bag recordings will be “archived” to a single content page, providing continued access while identifying the content as being older in nature. A video will explain how to access and navigate the LMS’s shared content area to add and reuse course content; another will describe NAFs’ ability to create, import, and export courses from the free platform to ours.

### *Onboarding support*

Two weeks prior to the start of each semester, a web conference will be used to introduce NAF members, their teaching duties, and their specialties in the field to regular faculty, along with their course loads/teaching locations and research interests. Information will be given to all involved regarding each VCoP, the contact/lead for each group, and specific courses being taught by each member of the teaching team in the upcoming semester. Representatives from our IT group will be scheduled to attend, both to offer introductions and contact information and to answer any technology questions that arise. Each VCoP group will be encouraged to meet as best fits members’ schedules. As is common for our web meetings, this content will be recorded and posted to the NAF course shell.

On the first day of classes, an email reminder will be sent to all VCoP community members. This email message has been generated by the researchers to remind NAFs of the convener for each VCoP and will serve to transfer active participation of the VCoP to the leader who convenes it.

### *Midterm touch-base*

The week before time mid-term grades are due, another mailing will be sent to NAF members from the researchers, including a video that outlines the specifics for inputting mid-term grades into the university’s enterprise management system. This brief video will also be stored in the NAF course shell. Full-time teaching faculty will be encouraged to reach out to their groups to offer support or exchange teaching ideas as needed.

## **Limitations**

Although the low response rate is one limitation to this study, it is instructive in and of itself. It is anticipated that improved attention to maintaining external email account contact information, coupled with stronger semester-long communication, will improve the delivery rate of messages, as well as the response rate.

Another limitation occurs with the more casual identification of full-time faculty needs and expectations of the NAF/VCoP program. At the close of the next academic year, these faculty will also be interviewed to gather data

on their view of the program, how well it works, and whether the additional time requirement for their involvement is felt to be justified.

One question in the survey could have been clearer. Researchers asked about the number of courses taught by NAFs but did not specify a time frame. Therefore, responses may have been given for a single semester's teaching or the teaching offered during the time. Future surveys will correct for this.

Since we approached our research problem as action research, the results should not be generalized to other populations. However, it is our hope that, with the publication of our problems and results, our work may inform similar actions to support adjunct teaching in other LIS programs.

### Implications for future study

After evaluating responses, web-based focus groups will help in the development of guidelines for activity. As noted above, the inclusion of full-time teaching faculty voices will be helpful in giving a true picture of the overall effectiveness of the VCoP program. These focus groups will help us identify emerging themes that arise from both full-time faculty and the adjuncts who are so important to our work.

As we consider further development of VCoP communities, the need for mentoring is also called to light. The addition of mentors within communities could be beneficial, not only for adjuncts but also for new tenure-track faculty, to help acclimate them to their new roles.

Another area of measurement can occur in the area of course evaluations, to determine whether instructors' strong involvement in a VCoP can be clearly demonstrated to improve student learning. The first step in such an endeavor, of course, will be to determine what measures of student learning can be related to improved teaching rather than to other influences.

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