Community at a Distance: Employing a Community of Practice Framework in Online Learning for Rural Students

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Library and information science education today must prepare future professionals to leverage various technologies and develop professional networks that will propel them into future careers. Increasingly, today's information professionals need to understand how to create identities, build relationships, and engage in productive work with others in an online, digital environment. A community of practice framework may help to promote the kinds of interactions and identity work needed in an online course and work environment. Additionally, the application of a community of practice framework in an online setting may serve to mitigate the geographic and professional isolation that characterizes rural librarianship.

Keywords: collaboration, community of practice, library education, rural students, school librarians

While many authors attend to the word "community" in community of practice, the term "practice" is equally important. The noun "practice" implies a practical field such as librarianship, while the verb "practice" suggests active participation. In their book *Situated Learning: Legitimate Peripheral Practice,* Lave and Wenger (1991, p. 98) examine learning as an apprenticeship where newcomers learn about a practice through "participation in an activity system about which participants share understandings concerning what they are doing and what that means in their lives and for their communities." Library education is thus focused on providing candidates with meaningful opportunities to participate in the practices of the library and information science professions. Developing such opportunities for rural candidates to find meaningful practice in their communities offers a particular challenge. Rural pre-service professionals need opportunities to participate in their home communities, but also with other professionals who are likely to be geographically distant from them.

KEY POINTS

- A community of practice model provides a structure to promote interactions, trust, and accountability in online LIS instruction.
- Engagement with professional practices through group and partner work, conference attendance, and professional presentations facilitates an emerging LIS identity for pre-professionals.
- A combination of instructor-designed and student-initiated communications facilitates sustained engagement among online LIS students in coursework and beyond graduation.

Educators of pre-service school library professionals are concerned with teaching the skills and dispositions needed to move the profession forward, including the co-creation of new knowledge. Lave and Wenger (1991, p. 93) view a community of practice as a model for learning where newcomers engage in practice, and this engagement is "a condition for the effectiveness of learning." These authors also assert that newcomers learn from their relationships with other newcomers or with their peers. A cohort model of library education, where candidates remain together through their coursework, offers a structure for such learning to potentially flourish. The school library program has a history of research related to improving online education and developing community and leadership through course and program structures (Burns, Howard, & Kimmel, 2016; Kimmel, Howard, & Ruzzi, 2016; Marken & Dickinson, 2013; Pribesh, Dickinson, & Bucher, 2006). This case study examines features of the cohort model as a community of practice that provided a creative space for rural students in a distance program to overcome geographic distances and learn together. Beyond graduation, a sense of community was sustained as they stepped into new roles as collaborative partners in the practice of school librarianship.

Literature review

Community of practice

Lave and Wenger (1991) define communities of practice (CoP) as those relationships in which individuals learn and develop common practices over time. Learning therefore happens as a result of participation more than through an acquisition of predetermined skills. In further work, Wenger (1998) continues to develop a robust theory of CoP that assumes learning is social and developed through the work of participation within a community. Knowing, learning, and sharing knowledge are each done as a part of belonging to the community, rather than as unique elements done for their own benefit (Wenger 2000). Wenger's (1998, p. 173) theory

of CoP proposes three dimensions present in a CoP: mutual engagement, a joint enterprise, and a shared repertoire.

Mutual engagement is about participation in practice together and includes the development of relationships and norms. A joint enterprise binds participants together in a shared purpose for which they are accountable to each other. As participants work together over time, they develop a shared repertoire built from a history of shared experiences and stories. According to Wenger's CoP theory, participants negotiate these dimensions as they work with each other and through practice. In education or training, Wenger (1998, p. 225) asserts, we cannot design learning, only design *for* learning. We may create the structures for students to engage with each other and build in accountability through our assignments, but a CoP is dependent on how the students negotiate the meanings of those engagements and how they engage with other participants in those negotiations. About mutual engagement, Wenger (1998, p. 76) writes, "it is more important to know how to give and receive help than to try to know everything yourself." In a joint enterprise, members negotiate and hold each other accountable to "what matters and what does not, what is important and why it is important, what to do and not to do, what to pay attention to and what to ignore" (Wenger 1998, p. 81). In this sense, diversity within a CoP is a strength that members can negotiate for the benefit of themselves and the community.

In *Situated Learning*, Lave and Wenger (1991, p. 94) discuss the theory of a community of practice as "decentering" the role of the instructor and thus moving "the focus of analysis away from teaching onto the intricate structuring of a community's learning resources." In this CoP model, knowledge is distributed among the community, or it resides within the shared or collective experiences of the group. Wenger's dimensions of mutual engagement, joint enterprise, and shared repertoire are applied to this case study to analyze the development of community among a cohort of students engaged in continued learning. The focus is on the student experience and voice rather than the instructor's.

Collaboration in school library practice

In the school library field, Wenger's decentering of the instructor role is expressed through the field's focus on collaboration as a means of integrating the expertise and resources of the school librarian and library program into instruction. The profession's 1998 standards for school library programs, *Information Power: Building Partnership for Learning*, emphasize that "the significance of collaboration is increasingly important. Collaboration is essential as [school librarians] work with teachers to plan, conduct, and evaluate learning activities" (American Association of School Librarians & Association for Educational Communications and Technology, 1998, p. 50). In the *National School Library Standards* (AASL, 2018), *collaborate* is one of six "shared foundations" that are shared by learners,

school librarians, and school library programs. The key commitment of this shared foundation is to "work effectively with others to broaden perspectives and work toward common goals" (AASL, 2018, p. 83). Closely aligning expectations for learners, school library professionals, and school libraries, the new standards situate *collaborate* as an expectation for the practice of school librarians, a disposition modeled and expected of learners, and a component of the spaces created for learning in the school library. Professional standards also place an emphasis on collaboration as a required practice for school library candidates: "Candidates are effective teachers who demonstrate knowledge of learners and learning and who model and promote collaborative planning, instruction in multiple literacies, and inquiry-based learning, enabling members of the learning community to become effective users and creators of ideas and information" (NCATE, 2010, p. 1).

The roles of school librarians as instructional partners and collaborators are considered pivotal to the integration of technology into student learning (McDonald 2006; Oliver 2003), access and retrieval of useful information (Saunders 2010), and the ethical use of information (Hollandsworth, Dowdy, & Donovan, 2011). The school librarian collaborates with classroom teachers to develop assignments that are matched to academic standards and include key critical-thinking skills, technology, information literacy skills, and core social and cultural competencies. The school librarian guides instructional design by working with the classroom teacher to establish learning objectives and goals, and by implementing assessment strategies before, during, and after assigned units of study (AASL, 2009, p. 17). Educators of pre-service school librarians often design collaboration experiences where students practice and develop the dispositions and skills they will implement in their future practice (Gross & Witte, 2016; Moreillon, 2014; Rawson, Anderson, & Hughes-Hassell, 2015).

Challenges of rural librarianship

The cohort in this study consisted of students located in rural parts of the state and offered a particular challenge for collaborative activities and the development of community. Rural librarianship is fraught with challenges of isolation, small size, and distance (Freeman, n.d.). Rural school libraries represent a particular kind of geographic and economic diversity subject to under-served access to twenty-first-century library resources and school library professionals. K–12 students in rural areas are less likely to have a school librarian with a master's degree than those in urban or suburban regions (National Center for Education Statistics, 2013). Many rural counties face high poverty levels and inequities. For example, Strange (2011) notes the inequities of federal Title One funding to rural schools. K–12 students from schools affected by poverty also have fewer school library resources, including staffing, new materials, and access to school libraries (Pribesh, Gavigan, & Dickinson, 2011). Teachers in these areas face lower

professional salaries and geographic and professional isolation (Mollenkopf, 2009).

In the library field, rural practitioners face barriers to access for professional development (Kendrick, Leaver, & Tritt, 2013; Little, 2017) and graduate education (Kymes & Ray, 2012; Mellon & Kester, 2004). Challenges such as unreliable access to up-to-date technology and a sense of isolation persist for rural graduate students and may impede the development of community. Kymes and Ray (2012) found that technology access and student attrition were major challenges for an online, rural cohort. Library education may also default to the urban/suburban model described by Roberts (2017), who suggests that LIS education should be more inclusive of the rural perspective through a less "metropolitan-centric" curriculum. Online education offers the possibility to close geographic distances, particularly for students in remote, rural areas with the promise of access to online webinars, courses, and graduate programs (Kymes & Ray, 2012; Little, 2017; Mellon & Kester, 2004). A cohort model where students remain together throughout a program of study offers opportunities for a more sustained community.

Building community from a distance

Many school library students are prepared in online programs where interactions are increasingly digital. Additionally, as they move into positions as school librarians, they will find themselves collaborating through digital technologies with students and other professionals. As Zach and Agosto (2009) note, the experience of collaborating with others who are geographically distant has become a necessary workplace skill for librarians. They propose a framework for using online tools to foster a collaborative environment that includes engagement of the instructor, personalization, group work, and the use of blogs and wikis in addition to the course discussion board. Distance students may find themselves at an advantage because of their experiences using these online technologies for group work and other collaborative assignments. This has led some instructors in face-to-face instruction to include online technologies in course assignments. For example, Agosto, Copeland, and Zach (2013) report including online collaborative tools in their face-to-face course to provide pre-service librarians with experience using tools such as blogs. They found the blog experience provided expanded opportunities for students to engage with course content and with each other. Blog posts became a shared resource often referenced in face-to-face discussions and promoting a sense of community.

Yukawa (2010) identified CoP as an effective model in a blended classroom to convey the knowledge, skills, and values of librarianship. She specifically designed a course using a CoP model in order to address the limitations of online communications, asserting that this model "provides for an integrated model of inquiry learning and social learning

within the context of professional community building" (p. 60). Her study identified collaboration as an effect of the CoP model because students spontaneously and repeatedly mentioned it despite the fact that it was not a course objective. Holzweiss, Joyner, Fuller, Henderson, and Young (2014) examined the needs of graduate students in online coursework and found they often referred to their best learning experiences as those involved with a community of practice that focused on the creation and sharing of knowledge. A CoP framework has been employed by researchers to examine collaborative learning in professional development (Patton & Parker, 2017; Yukawa & Harada, 2009), in technology integration (Zorfass & Rivero, 2005), and in an online bilingual classroom (Cho, 2016).

Old Dominion University's online program and CoP

The school library program has a long history with online education. Research comparing students from an online cohort with a similar face-to-face cohort found no significant differences in achievement between the two groups (Pribesh et al., 2006). Marken and Dickinson (2013) initiated a CoP framework in an early course in a school library graduate program to explore community engagement. Participants were nontraditional students new to graduate-level coursework and to online learning. This study included content-rich coursework and activities purposefully designed to promote and enhance community in online courses. Grounded in multiple CoP frameworks (Dewey 1938; Giddens 1979; Wenger 2000), the study investigated student perceptions of CoP with the goal of increased retention and motivation in practice. Students perceived active participation to be a key factor in community success. They also identified barriers to the formation of CoP within the program: time, inadequate participation, technology issues, and lack of face-to-face interaction.

Faculty in the school library program have worked to mitigate these identified barriers over time, employing additional course structures to encourage student participation, including synchronous online office hours with faculty; a discussion forum for assignment, course, and program questions; and a separate forum for "hallway chatter," where students can share celebrations, tribulations, and news with each other. Burns et al. (2016) explored the meanings these spaces held for students as a third space in an online program. Participants reported a shift in their own understanding of community as it relates to an online community of learners and to the library profession as a whole. They perceived that a shared third space in online courses facilitated the establishment of a CoP. Additionally, these spaces provided insight into how school librarians develop their CoPs, which assist in shaping their identities and collaborative pedagogies. The guided support from library educators in establishing opportunities and online spaces helped to facilitate CoPs in these online communities.

Purpose

As online education continues to mature, graduate programs seek to understand how to deepen student learning through the establishment of communities of practice (CoPs). Online education continues to expand the reach of our programs to rural and remote areas, and the skills of online collaboration become more essential in today's workplaces. Through an IMLS grant (RE-01-13-0008-13), the university's online program was able to provide financial, academic, and mentoring support to a cohort of 11 school library candidates drawn from rural, western regions of Virginia The grant covered tuition and also provided funding for face-to-face meetings on campus during the summers and at a state conference. Each student was also funded to attend a national conference with faculty and mentors. These students, who were classroom teachers, were educated to fill positions as school librarians and to take on roles as collaborators and leaders in their communities and the profession. In this case study, the analysis applies a CoP lens to investigate how participation in the cohort influenced the development of community, collaboration, and leadership for pre-service school librarians. The following research question guided the study:

> What are the perceptions of rural students enrolled in a graduate pre-service library program about the experience of engaging in a community of practice through the activities and structures of an online cohort, including coursework, fieldwork, and professional engagement in state and national conferences?

Methods

Participants in this qualitative case study included the 11 graduate students and the two practicing school librarians assigned to work with them as mentors. The data sources for this study were interviews with the 11 students who completed the program and the two mentors. Interviews were conducted online one semester after students completed all program requirements, including field experience. Only three of the students were practicing school librarians at the time. Interviews were conducted through Adobe Connect and transcribed. Members of the research team randomly divided the participants to interview. Participants were invited to participate through an email that described the study and sought informed consent. All invited participants responded affirmatively with consent to be included. An interview protocol was used in all interviews, with questions included about the cohort experience, mentors, and continued engagement with other members of the cohort and with the profession. A final question employed a heuristic elicitation method (Eisenhardt, Shrum, Harding, & Cuthbert, 1988). The question "Thinking back over the [cohort] experience, what words would you use to describe it?" was asked, and then all of their responses were read back to the participant,

followed by the question "Which of these words best captures the experience and why?"

Interviews were transcribed and were analyzed using a qualitative process of coding and developing themes across the participant responses. Unfortunately, the audio quality of one interview was insufficient for transcription and unavailable for analysis, thus reducing the transcripts to those of 10 students and two mentors. The three researchers independently coded each transcript and then met to discuss discrepancies and develop a final coding scheme. Passages often represented several lines in the transcript that described a single activity; these became the unit of analysis for the study. These passages were then coded as to the type of activity they were describing: cohort, coursework, community service, student teaching, mentorship, and professional activities (such as conference attendance or committee work). Within these categories of activities, passages were analyzed for Wenger's three dimensions of a community of practice: mutual engagement, joint enterprise, and shared repertoire. Table 1 shows how the dimensions were defined for the analysis, with examples of coded passages. Patterns were examined within these dimensions and relative to the kind of activity described.

Findings

This case study examined how a cohort model provided the design for a more sustained community of practice for a group of students in an online, pre-professional school library program. Students took all of their courses together and had opportunities to work with multiple members of

Table 1: Wenger's dimensions of CoP

Wenger's dimensions of community of practice	Working definition	Example
Mutual engagement	Opportunities to interact with others.	"I liked coming up in the summers and getting to meet everyone." (Beth 17)
Joint enterprise	Working toward and holding one another accountable for a shared purpose. Often the joint enterprise is school librarianship or coursework.	"I think that as we got to know each other more, we were able to help each other learn more from one another." (Claudia 55)
Shared repertoire	A history of working together that becomes a resource for the group—e.g., relationships and shared stories.	"Those of us that are librarians now talk and share ideas and those that are still in the classroom ask, 'How do you like it?'" (Jackie 84)

the cohort through partner and group work. Additionally, they had several shared experiences, including conference attendance, a community service project, and student teaching. Findings regarding how they developed this community of practice are organized and analyzed below by the three dimensions of mutual engagement, joint enterprise, and shared repertoire. Pseudonyms have been employed for all participants.

Mutual engagement—"So Far Away"

Mutual engagement is a dimension of a community of practice that involves participating with others and building relationships. While students spoke often about the ways in which they interacted with each other face-to-face, from the beginning of the program through opportunities to get together, including summer meetings on campus and at professional conferences, they also spoke about geographic distance: "We're all in the same state, but sometimes it feels like we're so far away" (Mary 48). Course structures and assignments helped to mitigate this sense of isolation, as students were often assigned to partners or groups: "I am glad we had those experiences because otherwise I would have felt disconnected just doing discussion boards" (Lucy 106). These interactions helped students to get to know one another in the cohort: "I really liked how we got to work with the other students—sometimes we teamed up ourselves and other times we were working with other people" (Beth 16). Mary saw the instructor's hand in some of the group assignments: "Maybe you grouped people together who you thought weren't meshing or something like that" (52).

Students also went outside course structures and leveraged social media, including Facebook, Twitter, and texting, as well as phone conversations to work with each other. While course structures disappeared after the courses ended, these student-generated structures allowed them to remain engaged with each other beyond the program. Several months after coursework was completed, Claudia indicated, "Not too long ago I was texting with Cyndi and Mary" (68). Beyond graduation, students also discussed plans to meet up with each other in person and at conferences. Gloria mentioned the irony of having to go out of state to see others: "And isn't that so weird going to New York and you meet people from Virginia!" (200). Lucy talked about writing and presenting together and sharing expenses: "I hope to go to conference with them because conferences are expensive. Sharing a room with someone I know is great" (118–19).

Students were also led to engagements beyond the cohort through program requirements, including a community service project and student teaching. As a part of their participation in the funded grant, each student in the cohort was required to complete a service project in their own community. This requirement led them to negotiate engagements within their larger professional communities, where they experienced varying levels

of success. Mary referenced moving beyond the school library to take a role in the community: "Looking outside of the library and how you can stretch your library outside of the library, ways you can connect people to the community, and being a community leader" (Mary 48). Community relationships were also strengthened through the student teaching experience. Mary and Gloria shared a student teaching placement and described their collaborative practicum placement: "I think it was especially nice because Gloria was there, too, and we got to bounce ideas off of each other" (Mary 80). They also drew support from their mentor and cooperating school librarian: "I really enjoyed being able to talk with Georgia" (Gloria 88). Likewise, Claudia spoke about her interactions with a knowledgeable mentor: "We used to talk about different things, and concerns, and suggestions. And I enjoyed when Valerie got to come and observe me that day and talk" (89).

Often a lack of structure for the mentorship dimension of the program prohibited engagement, and distances were difficult to overcome. The 11 students were assigned to one of two mentors based on their geographic location. When asked about the mentor in the interviews, some students seemed unaware they had been assigned a mentor: "Exactly whom are you referring to?" (Debra 112). All students were within two hours of their assigned mentor, which was still a considerable distance for the mentor to visit everyone or to convene a face-to-face meeting of the small group: "[Our mentor] was so far away we never did get to go to her school" (Claudia 128). Two students did mention using tools like Google Hangouts or Google Chat to stay in touch with their mentor group. Overall, students stated that a lack of a formal relationship or protocol with their mentors prevented any meaningful engagement: "I think there are things we could have done if maybe the structure was set up. Maybe we could have fostered it a bit more" (Lucy 160). Gloria was eventually assigned to student teach with her mentor, and working together allowed them the opportunity for mutual engagement: "I started considering her a mentor when I actually started working with her but not before that" (Gloria 148).

A community of practice is about joining and sustaining a professional practice such as librarianship. To this end, students in the cohort were given multiple opportunities to be professionally engaged throughout the program. In particular at the regional, state, and national levels, students were expected to attend and participate in conferences. These requirements led them to practices they now plan to continue: "I enjoyed learning from other librarians, meeting other people, just the whole experience was wonderful, and I'm so glad that I had to do it. Now I don't want to stop doing it" (Claudia 149–50). They saw their engagement with the profession expanding: "I would like to get into the organizations and be more active there and attend more of the conferences and be an active member in it" (Debra 184).

Joint Enterprise—"Knowing Each Other's Strengths and Weaknesses"

The cohort model provided the sense of shared purpose and accountability that defines a joint enterprise. Students grew to rely on each other's strengths and weaknesses. They knew what they could hold each other accountable to do. Debra encapsulates the way in which they counted on each other as they worked together on shared projects:

> So when it came time to partnering on things we all knew what we were good at; it really built a sense of camaraderie between us having the same set of people the whole way through, knowing each other's strengths and weaknesses and we're really there to help each other out. (Debra 68)

Course assignments were required of students and therefore built in accountability, so numerous responses relating to coursework were coded as joint enterprise. The assignments provided a shared purpose and often required interactions with others. Comments included new understanding and appreciation for the collaborative role of the school librarian. Mary explained, "I was kind of hesitant because I had to go to talk to people and I don't usually like doing that. But looking back on that it was kind of eye-opening and kind of a neat way to start even though it was sort of scary just jumping right into it" (5–6). This response referenced an early assignment to visit different types of libraries. Gloria described, "I did enjoy when we did the collaborative projects . . . in the role of the librarian . . . and working with the classroom teacher and trying to enhance what they were teaching while trying to get in the standards that I wanted to teach at the same time" (121–24). The students in the cohort realized the benefit of assignments that required working with others. Claudia contrasted these experiences with other online programs: "A lot of my other online courses—I didn't have to do that, so it was nice to have that to do" (20).

Many described the community service project as an important learning experience where they felt they moved out of their comfort zone. For example, Jackie expressed, "Then I just loved it so much and I was like, 'You know, this is actually kind of fun'" (240). But many also found their community service work difficult to sustain and recognized the lack of a shared purpose or joint enterprise as problematic. While students were required to complete the project, their community partners were not similarly invested: "I feel like there could have been more potential for some kind of professional relationship out of that, but where we didn't have a lot of support for what we were actually doing, it kind of fell flat" (Gloria 79). The projects that were more sustainable were those that included a network of support within the community and continued to foster a mutual joint enterprise. Brenda shared the success of her project: "We've been doing it for two years and we're going to continue it next year" (76).

The student teaching experience allowed the students to begin to feel more confident in their emerging role as school librarian and to gain recognition for their growing expertise. They began to work with others to negotiate tasks they would be called upon to complete as school librarians and expressed growing confidence in their ability to contribute in this role. Several students described instances in their placements that exemplified recognition and accountability for their emerging expertise. Debra described the contributions she was able to bring to her school library placement and the relationship with her sponsoring librarian: "She's been a librarian for a long time so this was a little intimidating for her whereas I had just finished up all these courses. So I helped her set up some of her makerspace and some of her different spaces around her library and did some of her lessons with her 1st, 2nd, and 3rd grade" (90). Mary and Gloria also felt this growing confidence: "Georgia was very receptive to our ideas. Summer time was a time of renewal for her and she seemed genuinely happy to have us there. I couldn't have had a better experience" (Mary 85). Some students were assigned introductory tasks, while others were given more immediate ownership. Jackie explained the shared ownership in her placement: "I know a couple of my cohort teammates said, 'All I'm getting to do is weed books and shelve books' and mine said, 'Here, you can do everything'" (130).

Professional engagements reported by the students provided evidence of students becoming school librarians and joining in a shared purpose reflecting the values, knowledge, and activities of the profession. Lave and Wenger (1991) discuss newcomers to a community of practice being afforded "legitimate peripheral participation." Students in the cohort were required to present at a regional conference of the state school library association, providing the opportunity for this type of participation. This experience required their engagement with the professional community, and many students expressed discomfort with this level of participation that went beyond the periphery. They did, however, report that they were clearly welcomed as legitimate: "We were among colleagues and they looked like they genuinely wanted to learn from us, even though we didn't have a whole lot to offer in terms of hands-on, real-world experience" (Mary 147). This continued the joint enterprise in which students participated in the CoP with one another and with a broader community. As one student indicated, conference attendance was her "first real world library conference" (Mary 148).

Shared repertoire—things "I will continue doing and thinking about"

In these interviews, conducted months after the students had completed the program, students continued to reference relationships built through shared experiences in courses and cohort activities. Most spoke about working with classmates in partner and group projects as a resource

enabling these continuing relationships: “Especially for online work, it really opened the opportunities for us to open up to each other and develop that trust and develop that feedback from one another” (Cyndi 5). They even spoke wistfully about discussion board posts in their coursework: “I really miss talking to [the cohort] about what we’re learning in life” (Kim 51). The relationships students developed with each other continued to serve as a resource after graduation. All students spoke about continuing plans to get together with other members of the cohort. Months after graduation, they reported discussing professional matters with each other with reference to their shared history in coursework: “All of us are on Facebook as friends—the whole group. So we message each other and share ideas” (Jackie 82–83). Participants also envisioned taking these experiences forward into their workplaces as school librarians: “I feel like I got a lot of immediate things I learned and also a lot I know that I will continue doing and thinking about” (Gloria 28). These relationships and practices became part of the shared repertoire of the members of the cohort.

Relationships developed through the service project established additional shared histories for the students. As Claudia said, “It helped us all to see a way to give back to our community and maybe see something to continue on” (85). The service project was part of the repertoire they could draw upon as they moved into new identities as school librarians. As Jackie said, it moved her out of her “comfort zone.” As a natural introvert, she found that her biggest takeaway was growth: “I know as a teacher I tend to be like, ‘I know what I’m doing and let me do my own thing’” (237). The project provided a means for sharing within and beyond the cohort group. Gloria elaborated, “I’ll always remember the experience and so that will help so maybe I’ll know how to phrase things differently next time or what things will and won’t work even if I didn’t get exactly what I wanted out of it” (81).

Student teaching, where students are assigned to work with a practicing school librarian, is a relationship that one might expect would persist and serve as a resource as the students become practicing school librarians. Jackie, for example, described such a relationship with her cooperating teacher:

> I think having someone who had been a librarian in that division and knew how things worked and what the expectations were for librarians. I could really talk to her about how do you do this and how do you do that and where do you go for this and any questions that I knew I was going to have when the school year started and how to use the whole system—the library management systems—and how to order books and stuff like that. Instead of having someone on the phone that I could call and go, “Okay, this is going to sound like a stupid question?” But then I would ask and they would go, “No, we’ve all had this question when we

> started off. You're not stupid, you're just normal." That was very positive. (115–22)

Lucy also recognized the potential for a sustained relationship that might serve as a future resource: "If you plant the seed correctly, then at the end of the program you're still connected to your mentor and working with them" (187). But for many of the students, the student teaching and mentoring did not create a natural bridge to a new, professional CoP. Distance persisted as a barrier affecting the student teaching placement as well. For example, Brenda described the problems in her area: "I live in a small county surrounded by small counties and so budget-wise we don't really do summer school like you would think of, it's credit recovery, and it's computerized so there's nothing a librarian can supplement" (99).

Discussion

In these findings, Wenger's dimensions of a community of practice allow for an exploration of the strengths and weaknesses in the structure of a rural cohort of pre-service school librarians. The CoP model provided a community where students got to know one another through numerous mutual engagements and developed a sense of trust and joint enterprise based on understanding each other's strengths and weaknesses. They became accountable to each other and developed ways of communicating that allowed them to remain in touch beyond course structures and beyond graduation. Many program and course structures required students to interact and engage with each other. Opportunities to meet face-to-face were highly valued and frequently mentioned. Students also referenced group and partner work within multiple courses as important interactions because they were often assigned to work with cohort members who were less familiar to them. Discussion boards and group work developed accountability to others in the course. These structures provided the decentering identified by Lave and Wenger (1991), where the focus was on creating relationships with other learners, instructors, and practitioners in a dense network of collaborative learning. This ability to collaborate within a shared community was a key skill for participating in a community of practice beyond the program of study.

A clear goal of this community of practice was to introduce participants to the larger community of practice of professional librarianship. This cohort met once a year on the Old Dominion University campus in Norfolk, Virginia, and attended state and national conferences where they got together with classmates and faculty face to face. Funding allowed each student to attend a state school library conference and a national library conference. These experiences provided an entry into the larger practice of librarianship and propelled many students into further professional engagement, including committee memberships, professional activities such as writing and book reviewing, and leadership roles in the state organization and on national committees. The grant-funded attendance at

conferences became a part of the repertoire shared by participants but also allowed them to partake of the profession's shared repertoire. Their engagement with their communities and with professional organizations supported an ultimate goal of pre-professional programs: to develop leadership and collaboration beyond the program in communities, schools, and the profession.

Beyond the program, students talked about staying in touch through texting, Facebook, and Twitter, making it apparent that somewhere in the program they added each other as contacts to their phones and social media pages. Wenger (1998, p. 67) talks about the importance of the duality of participation and reification in a CoP: "An excessive emphasis on formalism without corresponding levels of participation, or conversely a neglect of explanations and formal structure, can easily result in an experience of meaninglessness." While the program refined or formalized some engagements through assignments to partner and group work and discussion boards, students also participated in more organic ways through texting and social media. Long after course assignments and the university's course management went away, these informal networks persisted. Through the program, students learned what they could hold each other accountable for knowing and doing. Each mentioned that, following graduation, they knew they could continue to reach out to cohort members for professional assistance and they hoped to see each other at conferences. Shared ways of interacting that "the community has produced or adopted in the course of its existence, and which have become part of its practice" (Wenger, 1998, p. 83) become part of the community's repertoire.

Wenger's dimensions of CoP and duality of participation and reification also help to explain why engagements with the program mentors or community members failed to fully materialize or be sustained for some students. Expectations for mentors were not fully reified within the course or program structures. Grant funding included two opportunities for students to meet with mentors: once at a state conference and once at a national conference. These were not sufficient engagements to allow students and mentors to get to know each other, develop a clear, shared purpose, or engage in common experiences that might have established a shared repertoire as they moved forward. Students were also expected to identify and develop their own community service projects with varying degrees of success. In these cases, students dealt with real-life barriers to collaborative community projects such as identifying shared goals, finding resources, and communicating with stakeholders. A university-developed service project might have formalized some aspects, such as goals and resources, but likely would have constrained students' participation within their local communities.

Attention to this duality of reification and participation might be important to the success of a CoP. Attebury, Perret, Kenyon, and Green (2013), for example, found that an overly formal structure along with a

lack of shared purpose led to the failure of a CoP of university librarians. The finding in Yukawa's (2010) study that students identified collaboration as an important course outcome even though it was not explicitly a course objective might suggest the value of allowing some relationships to develop more organically. Notably, attrition was not a problem with this cohort. Out of the 12 students who started with the cohort in the first semester, 11 completed the program. The 12th student accepted a position as a school librarian early in the program and fell behind in coursework as she was overwhelmed with her new responsibilities. Part of the formal design of the cohort was to treat it as a single entity rather than divide students into sub-cohorts. Kymes and Ray (2012) reported that attrition was one of the problems faced by a CoP cohort that employed a hub model where small subgroups met regularly face to face. Perhaps a structure that breaks the cohort into smaller cohorts offered less cohesion and diversity than one where the students were encouraged to work with everyone in the cohort.

Recommendations

Ultimately, insights from this study might help educators to strengthen pedagogy to promote deeper learning in students and to advance the knowledge of the field. The cohort model, where students went through the coursework and other program requirements together, was clearly an important structure in sustaining a community of practice throughout this program and beyond graduation. Grant funds allowed these students to remain together as a cohort. Often the reality is that students who start a program together do not move through coursework at the same pace, and so finding ways to keep these students connected may be more challenging. A few lessons from this study suggest effective ways to promote such connections. Introductory coursework might intentionally mix up partners and groups in assignments to encourage sharing and develop trust and accountability to diverse members of a new cohort. Such assignments often require students to develop a means of communication outside of course structures; they add each other to social networks and phone contacts. These contacts could persist and sustain professional collaborations beyond graduation. Naming a group of students in an introductory course as a cohort and encouraging them to develop communications outside of the course structures could be first steps toward creating a shared and more persistent cohort identity.

One way to create accountability is through assessment of discussion boards as well as group and partner assignments. Including accountability to classmates might serve to strengthen the joint enterprise that is a dimension of Wenger's theory of CoP. Van Aalst (2006) proposes a framework of knowledge building for asynchronous online learning that extends the development of collaborative work as a shared repertoire. He suggests that we might promote deeper learning by encouraging

students to see their work as "building a communal resource for learning" (p. 283), treating shared work such as discussion boards as a database that might be indexed and further referenced to build upon and improve the ideas of the group. Such intentionality in course design might lead to developing accountability that extends beyond the term of a course or cohort.

Future research

Future research might follow this cohort into practice to identify how lessons learned about collaborating with others within a community of practice framework might translate into the practice of teaching and collaboration in a school library. These participants clearly expressed how the cohort experience translated into a sense of membership in the library profession and continued collaborative work and professional learning. A follow-up study might examine the persistence of those relationships as well as the application of those collaborative practices in their schools and communities. The participants in this study were members of a grant-funded cohort that provided resources to keep students together through coursework as well as face-to-face meetings on campus and at state and national conferences. Future research might explore a community of practice among a similar, but unfunded, cohort. An intriguing finding was the use of external technologies such as texting and social media to stay in touch. The university now provides each student with Google Drive and associated tools. Future research might explore the opportunities afforded by these tools for communication but also for creating a shared archive of student work to sustain a CoP. Finally, distance education continues to offer opportunity for students who are distributed at a distance, particularly in rural areas. Future research might compare outcomes (grades, continuance, and graduation) between distance students placed in a cohort and students who are not in a cohort.

Conclusion

Wenger's dimensions of a professional learning community—mutual engagement, joint enterprise, and shared repertoire—provide a lens to understand how the presence or absence of any one of these dimensions contributes to the development of a learning community and collaboration. The sustained design of a cohort provided multiple opportunities for mutual engagement with fellow classmates. Partner and group work in assignments established accountability to a joint enterprise. The time frame across three years provided the material to develop a shared repertoire. But the interviews also suggest why some aspects of the cohort were less successful, including connections with mentors, student teaching, and community service projects, because they did not offer structure or reification to enable students to meaningfully incorporate these features into the CoP.

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