

School Librarians Leading from the Center in Online Learning Contexts: Informal Communities of Practice Creating Space for Connection and Collaboration

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Abstract

This study used qualitative methodology based on focus group interviews to explore school librarians' involvement during the move to online teaching and learning contexts. Findings indicate these educators felt underutilized because of stakeholder misperceptions of their roles. However, most school librarians in the study reported creating informal communities of practice to support teachers and students through innovative responses to online learning demands caused by the COVID-19 pandemic.

Introduction

School librarians (SLs) fill an important role in K–12 schools as they work with students and school faculty to co-create spaces for teaching and learning, including partnering with school faculty to explore technology-enabled pedagogical opportunities. SLs often assume the role of technology leaders in their buildings and/or districts (AASL, 2016; Johnston, 2012a, 2012b; Mardis & Everhart, 2014) and may provide support to school stakeholders in navigating face-to-face (F2F), hybrid, and online teaching and learning spaces—a skill set with increased relevance and value during the pivot to online learning as a result of the COVID-19 pandemic.

During the pandemic teachers had to find ways to teach their students online. Even teachers comfortable with technology integration in their normal K–12 spaces were challenged to stage their curriculum and manage their engagement with their students using methods and tools with which many were unaccustomed or unaware (Thomas et al., 2019). Given SLs' knowledge and skills in technology integration necessary to create engaging online learning, SLs were positioned to “lead from the center”—a term that has been used to describe the centrality of SLs in school spaces (Dees et al., 2010).

The purpose of this study was to examine the nature and depth of SLs' involvement in their schools' online teaching and learning practices during COVID-19 as schools moved from F2F formats to online contexts. As such, the research questions for this study were:

1. How were school librarians (SLs) included in district and school planning and implementation during the COVID-19 pandemic?
2. What knowledge and skills did school librarians (SLs) have that would support the planning and implementation of online learning?
3. What concerns did school librarians (SLs) have for students and teachers during the planning and implementation of online learning during the COVID-19 pandemic?

Theoretical Framework

This study was grounded in the community of practice (CoP) framework (Lave & Wenger, 1991; Wenger-Trayner & Wenger-Trayner, 2015). CoP describes a formal or informal support network of professionals who share a common goal, concern, or interest, and who engage in activities and discussions to support members in learning. CoPs create spaces for professionals to:

- share existing knowledge,
- engage in the goal of improving practice,
- provide a working space to identify problems and seek solutions using distributed leadership structures, and
- offer a mechanism to collect and evaluate best practices through stakeholder collaboration.

Potential advantages of CoP include:

- stakeholder personal and professional development,
- shared knowledge leading to cultural change,
- focus on particular areas of practice, and
- empowerment of stakeholders in organizational structures.

CoP recognizes that members have a range of skills, knowledge, and experiences. While those new to the learning context are mentored, everyone learns through collaboration in the group. In education spaces, CoP provides spaces for educators, including school librarians, to emerge as leaders based on their existing knowledge and skills, as well as spaces for educators to practice their leadership knowledge and skills (Danielson, 2016). In these spaces, leadership may closely resemble facilitation of process and content with the goal of knowledge sharing and support. Here, CoP member-leaders coordinate the perspectives and actions of those in the group to support a common goal (Cheng & Lee, 2014).

CoPs are defined by three characteristics:

- 1) a shared concern or interest with the intent to problem-solve or seek improvement or innovation (*domain*),
- 2) engagement in activities and discussions to support all members in learning (*community*), and
- 3) members who identify as practitioners with a shared goal or practice (*practice*).

Individuals engaged in a CoP work together to solve problems, to seek information, to share experiences, to pool assets and resources, and to build members' confidence (Lave & Wenger, 1991; Wenger-Trayner & Wenger-Trayner, 2015).

CoPs align with current trends in education, particularly with the presence of professional learning communities (PLCs) in schools or more-organically formed personal learning networks (PLNs). Whereas PLCs tend to be more directed and focused on data-driven decision-making and PLNs tend to be largely informal or *ad hoc* networks, CoPs focus on shared goals defined by teachers in a specific community space (Miller, 2020; Robinson et al., 2020).

CoPs support teachers in participating in relevant and self-directed, inquiry-based professional development where teachers meet regularly to collaborate on problems of practice (Honawar, 2008). As such, a CoP serves as an intentional collective of colleagues supporting one another through open collaboration. Those with more knowledge address identified needs, provide assistance, and create spaces for members to teach and learn with one another. In other words, for teachers struggling in these online contexts, CoPs were a natural collaborative learning structure aligned with best practices in support of the new demands of online learning contexts (Darling-Hammond et al., 2009).

In the state where this study took place, teachers were familiar with and involved in CoPs through required PLC structures in their school spaces, reflecting a larger national trend (Arkansas Div. of Elementary and Secondary Ed., 2021; Miller, 2020). These formal structures were disrupted by the COVID-19 pandemic. However, this disruption created an opportunity for

school faculty to shift formal, data-focused PLC structures into educator-driven CoPs to support students, thus repurposing existing structures to navigate new problems of practice resulting from the pivot to online learning.

Literature Review

The practices of schools pre-pandemic did not commonly involve online learning pedagogical structures. While there are examples of effective, and even transformative, online instructional design in K–12 contexts, these examples are exceptions rather than pervasive (Greene & Hale, 2017; NEPC, 2013). More common in practice prior to the pandemic was technology integration in face-to-face or hybrid formats in which teachers provided students with work to complete online based on scaffolded classroom experiences (Thomas et al., 2019).

For example, in the state where this study took place, online curriculum design was commonly reserved for rare “snow day” events and most often resembled “packets” of worksheet-type activities provided for students to practice previously learned skills. Many teachers in the state were underprepared to create online content supporting student engagement with that content. However, SLs did possess the knowledge and skills necessary to meet stakeholder needs during the pandemic based on their preparation and role within school structures.

Role of School Librarians

School librarians (SLs) teach students how to select, evaluate, and use information in all formats, as well as support classroom teachers as an instructional partner in curriculum design. SLs support schools in both vertical and horizontal curriculum alignment as they are able to see intersections of pedagogy, curriculum, and technology naturally occurring in school spaces (Johnston, 2012). They work to unify curriculum between grade levels, as well as between subjects, to provide students with cohesive and integrated experiences (Howard, 2010; Purcell, 2010). School librarians also collaborate with teachers to plan in-class curriculum using technology to make learning more effective and engaging.

SLs have a key role to play in creating learning environments that center equity and focus on the achievement of all students (AASL, 2018; Burns & Dawkins, 2021). They center school practice on 21st-century competencies, such as critical thinking, creativity, communication, and collaboration (AASL & Achieve, 2013) and support students’ acquisition of 21st-century literacies, including digital, visual, textual, and technological (AASL, 2009, 2019). Notably, SLs possess expertise in technology platforms, applications, and models supporting student acquisition of 21st-century knowledge and skills (Achterman, 2010).

Historically, SLs have been guided to collaborate with teachers, to coach, to advocate, to administer programs, and to seek intentional integration of technology to support K–12 student learning (DiScala & Subramaniam, 2011). In this work, SLs “lead from the center” (Dees et al., 2010) as they use their skills to guide teachers to support learners effectively. SLs routinely

assume the role of leader of teachers and lead within both formal and informal communities of practice to assist teachers in advancing their knowledge and to support teachers' professional practice, including their use of technology (Wenger-Trayner & Wenger-Trayner, 2015). The leadership work of SLs includes facilitating collaboration across the school (Ash-Argyle & Shoham, 2012), curriculum- and program-planning (DiScala & Subramaniam, 2011), and technology integration (Everhart, et al, 2011; Johnston 2012).

SLs have traditionally played a role in schools' technology-integration efforts (Johnston, 2015), and this focus is woven into standards for their professional preparation (AASL 2016, 2019). Dees et al. (2007) called the SL the "resident technology guru" who is positioned to provide staff development and model effective technology integration. In this role, SLs are expected to remain current on effective technology-supported pedagogy in multiple content areas and model effective strategies for developing multiple literacies (Goerner, 2015; Rivers, 2016). Additionally, SLs support teachers in adopting appropriate technologies, moving past simple substitution to transformational uses of technology that empower student voice (Johnston, 2012; Rivers, 2016). McLeod and Richardson (2011) found SLs' involvement to have significant impact in students' abilities to navigate technology-saturated environments.

Within these contexts, the work of SLs involved in school-level CoPs has resulted in sustained and significant change in teachers' content application and pedagogical practice (Beck, 2020; Slogoski, 2019; Wesely, 2013). Schools where administrators and SLs have a strong connection and where SLs are positioned as part of the leadership teams have reported notable successes in supporting the work of teachers and students (Johnston 2012; Wolf et al., 2014).

In defining SLs as leaders, AASL specifically references technology as integral to the role (AASL, 2016), and researchers in the field have noted that SLs are positioned to assume the role of technology leader (Johnston, 2012; Mardis & Everhart, 2014). SLs' technology leadership includes:

- connecting technology tools to national, local, and state educational standards;
- collaborating with teachers and students on the use of technology and digital resources; and
- training teachers and students to use technology as a tool of engagement.

Reaffirming the role of school librarians as strategic leaders, AASL (2018) released a position statement centering the role of school librarians in technology-integration leadership in addition to leadership in curriculum development, instructional design, professional development, student advocacy, information literacy instruction, collaboration, and cross-curricular initiatives.

The International Society for Technology in Education (ISTE) standards are also important to consider as SLs refer to these standards for guidance in their work. Notably, ISTE has specifically elevated the role of school librarians in promoting effective technology integration in K–12 spaces (ISTE, 2010). Despite the proven benefits of SL leadership in school spaces, SLs may face barriers inhibiting their ability to lead (Everhart & Johnston, 2016; Johnston, 2012b). Teachers and principals may not recognize the role and potential of SLs (Hartzell, 2002) or may not have a collective vision for school- and district-level technology usage and integration

(McLeod, 2015). SLs working in spaces where their influence is limited may enact more-traditional, rather than transformational, manifestations of their role. SLs also may be subjected to stereotypes and misconceptions about their role in the school setting that position them as not relevant, archaic, and disconnected (Purcell, 2010). Additionally, some SLs may resist leadership roles (Smith, 2009) or may resist the role of technology integration in their job (Everhart et al., 2011; Kang, 2015).

While these barriers cannot be underestimated, it should be noted that many SLs refute and push back against these stereotypes through collaboration within their professional communities (Johnston, 2012). SLs who realize the potential of their role work to:

- develop relationships with administration and policy makers;
- engage in research and publication;
- create community partnerships; and
- actively participate in local, state, and national professional structures seeking to advance the profession (Purcell, 2010).

Method

Design

In this study we used a qualitative design based on semi-structured focus groups (Creswell & Poth, 2018). The qualitative approach in this study allowed us to examine SLs' perceptions of their involvement in their schools' online learning planning and implementation during the pandemic, as well as their perception of knowledge and skills inherent in their job that could support teachers and students in online teaching and learning.

Participants

Three Zoom-based focus group opportunities were offered to SLs working within the state. The researchers extended invitations to SLs via a professional organization listserv: the state-level ALA/AASL professional organization that has approximately 200 active members. The message sent to members included a copy of the approved IRB informed consent obtained in late May 2020 and stated, "The purpose of this research is to gain understanding in current practices enacted to support K12 students in Alternative Methods of Instruction (AMI) (e.g., remote learning). Specifically, this study seeks to examine to what extent library media specialists and instructional technology specialists are able draw on their professional preparation to support K-12 teachers and K-12 students in online learning environments." The state closed schools in early March 2020, and the focus groups were held in early June 2020.

Participants in the study included sixteen school librarians (SLs) serving at the building level within fourteen different districts in the same state and representing approximately eight percent of those invited to participate. All SLs had worked in classroom teaching roles for multiple years before moving into their specialist roles. Job position titles in the state are determined by state

licensure standards based on earning advanced degrees aligned with the job title. SLs must earn a master's degree as a school librarian from an accredited university. School principals hire SLs for posted positions following state hiring guidelines or promote from within the school/district for the position. SLs in this study worked at the school level, but two also served on district-level leadership teams.

All participants were female, with fourteen of them identifying as White and two identifying as Black. The average years of experience as a specialist within the group was 14 with a range of 2–40. The average years of experience in general education contexts was 20 with a range of 6–42. Eight of the SLs worked at the elementary level, three worked at the middle school or junior high levels, and five at the high school level.

Data Collection

To ensure cohesion across the focus group contexts, we developed focus group questions and a question delivery protocol (see Appendix). Sessions were led by one of us to ensure consistency while the other two captured field notes. All sessions were recorded and transcribed on Zoom for analysis. The session leader read each question aloud and led SLs to engage in a minute of individual reflection. SLs then entered a short response in the Zoom chat function. The session leader engaged the group in an extended discussion based on the chat responses. Chat responses and the subsequent discussions were transcribed for analysis.

Data Analysis

Data were coded using the constant comparative method. Based on a read of the data, emergent codes were identified, defined, and refined in an iterative process and then clustered into categories (Creswell & Poth, 2018; Krueger & Casey, 2009; Saldana, 2016). Two of us independently coded the data and then met to compare and align our coding using joint-probability of agreement.

Findings

The qualitative data yielded 158 separately coded comments. Categories from this data were aligned with the research questions and include:

- 1) SLs' perception of their involvement in district planning and implementation of online learning;
- 2) the knowledge and skills SLs felt they had that were used or could have been used to support online learning, as well as perceived gaps in their abilities relevant to supporting online teaching and learning; and
- 3) concerns for various stakeholders engaged in online learning during the pandemic (see Table 1).

Table 1.

Qualitative categories and codes

Category	Codes	# of codes assigned	% of codes assigned in category
Involvement: SLs' discussion of their level of involvement in their school/district pivot to online learning	Not Involved	20	25.64
	Minimally Involved (<i>subcodes: tech support, posting</i>)	14	17.95
	Independent Innovators (<i>subcodes: teacher PD, PLCs, created material</i>)	25	32.05
	Perceptions of SL role tied to involvement (<i>subcodes: not seen/not understood, not core</i>)	19	24.36
Knowledge and Skills (and Gaps): SLs' reflection on their own curated knowledge and skills that had been helpful or could have been helpful during the pivot to online learning. SLs also mentioned gaps in their knowledge/skills they recognized during this time.	Curriculum (<i>subcodes: cross-curricular, problem- or project-based learning</i>)	7	14.29
	Technology	23	46.94
	Online Resources	3	6.12
	Pedagogical knowledge	16	32.65
Concerns: SLs' consideration of specific concerns for K–12 teachers and students during their school/district pivot to online learning.	Specific populations (<i>subcodes: poverty, English Language Learners, special education, rural students</i>)	10	32.26
	Student motivation and engagement (<i>subcodes: access, grading/accountability, core/electives, social-emotional learning</i>)	17	54.84
	Teacher knowledge and disposition	4	12.90

The largest category of codes assigned to remarks (49.37% of all codes assigned) discussed SLs' *involvement* in the pivot to online learning contexts, with *all* SLs noting they were not formally involved in building-level initiatives to support teachers or students in online learning. In exploring this line of inquiry further, 14 SLs noted minimal involvement at the behest of administration. We asked the SLs "how involved are you in the decision-making processes around AMI?". SLs were asked to reflect for a minute and then respond in chat with a word describing their level of involvement of their own choosing. SL responses were tracked in the initial chat response to each question allowing us to note their perceived level of involvement in building and district decision making and implementation in the move to online learning. Their responses allowed us to discuss as a group how they were involved and what they did or were asked to do. SLs noted their primary involvement included technology troubleshooting and posting information on school resource pages (17.95% of codes in category). SLs attributed their lack of formal involvement to the feeling that their role was not well understood or seen as central to the school mission (24.36% of codes in category). SLs also described their independent efforts to support teachers and students (32.05% of codes in category), including offering professional development (PD) to teachers, forming *ad hoc* PLCs (informal CoPs), and creating materials and curriculum for teachers, students, and families.

SLs also discussed the *knowledge and skills* they felt they possessed that could be useful in support of online learning, and articulated perceived *gaps* in their knowledge and skills (31.01% of all codes assigned), including: knowledge of curriculum (vertical and horizontal alignment) (14.29% codes assigned within category); knowledge of technology (46.94% codes within category); knowledge of online resources (6.12% codes within category); and pedagogical knowledge (32.65% codes within category). Interestingly, the gaps SLs identified aligned with the technology and pedagogy subcodes as the SLs identified a need to know even more about technology to support online learning and more about pedagogy specific to supporting teaching and learning in online contexts. Specifically, SLs noted strengths they felt they had in promoting cross-curricular and problem- or project-based learning; however, they noted they had curated these skills in working with students in physical spaces using technology. In contrast, using purely online contexts to support and engage students was a gap they had identified. These intersections in the qualitative data were most frequently noted as "but" or "however" statements. For example, one SL noted, "when I am with students, I can make sure they understand and can do the work. However, I don't know how to better teach students to self-monitor and self-direct when learning remotely. I feel like helping students hone these soft tech skills in a way that would help them gain confidence to ask questions and assess self needs would offer the most individual gains for learners."

Finally, SLs noted *concerns* they had in the pivot to online learning (19.62% of all codes). Concerns for specific student populations included students in poverty, English Language Learners, students with special needs, and students in rural areas (32.26% codes assigned within category). SLs also expressed concerns about teachers' knowledge and dispositions to support students online (12.90% codes within category), and concerns for students' motivation and engagement in online learning (54.84% codes within category).

Discussion

Involvement

All SLs in the study reported that their involvement with planning and implementation of online teaching and learning during the onset of the pandemic was minimal, noting that they were “an untapped resource.” One SL noted, “It would be nice to be at the table. After they push stuff out, I can show them better ways to have done it. But they didn’t ask.” SLs reported not being asked to be part of the district or building planning or leadership teams, noting their feeling that “the ‘top’ makes decisions and funnels down what needs to be done.” Two SLs noted that they were asked for input about curriculum but that they did not feel heard, with one stating, “They asked for input but they did not hear us. For this event, most of the planning was dictated.”

When SLs were asked to help, they spoke primarily of task-based activities, including posting materials on the school website, pushing out information through school communication systems, troubleshooting technology issues, or looking up student passwords. One SL noted, “I was just asked to post links, keep up with the library Facebook page and the school website. That’s all.” Another SL stated, “I was asked to manage materials, which meant getting books back from students and cleaning [the books].”

In considering their level of involvement in supporting teachers and students during the pandemic, SLs discussed feeling like their role was not understood and that they felt disempowered to lead in their local contexts. One SL stated “most people don’t fully understand what librarians bring to the table.” Another SL noted she felt the district “doesn’t ‘buy into’ or ‘see’ us; no one at the district level is advocating for us based on the needs of students.” Sadly, these are not unique findings. Previous researchers have also found that SLs’ roles were not understood and that they were disempowered (Everhart et al., 2011; Kang 2015; Purcell, 2010; Smith, 2009). In our study—and older ones—these findings represent missed opportunities to take advantage of the skills and knowledge of SLs as specialists. As one SL said, “I tried to let [my] principal know that I could do more than just check out books, but she and the other teachers just did not know how to use my knowledge ... I really hope they will start to want to use tech more after this pandemic.”

Despite not being explicitly included, the majority of SLs inserted themselves into informal school structures when they saw an opportunity. SLs described using their relationships with teachers in the building to offer technology support. In this capacity, their work included offering and leading informal, as-needed teacher PD under their own auspices, offering technology PD and support to teachers and students, creating informal, as-needed PLCs for teachers and for their own professional groups, and supporting students and faculty through innovative technology applications (for example, Bitmoji forums, Facebook live posts). One SL stated, “I offered Google training for one grade-level team.” Another SL noted, “I helped our math teacher create a Facebook group.” Another said, “I joined a Zoom call to help [special education] teachers think about how to engage their students.”

Knowledge and Skills (and Gaps)

SLs discussed specific knowledge and skills they felt they contributed or could have contributed to their schools and districts during online learning. All SLs noted their extensive knowledge of technology platforms and applications that could have been useful to support online learning during the pandemic. They noted their advanced training in technology and readily listed many platforms and applications to support online learning, including screencasting, video demonstrations, social media, Bitmoji, Flipgrid (now “Flip”), Zoom, Google Classroom, Padlet, Kahoot!, and others. One SL noted, “I’m not being utilized to help teachers with online sources and resources for online lessons.”

SLs noted their abilities to plan project- and problem-based learning curricula supported by Open Educational Resources (OERs) that schools could have utilized during this time. They spoke of specific OERs that could have been useful in creating and implementing online curriculum during the pandemic. SLs also noted their knowledge of online resources. As one SL said, “I have knowledge of apps, sites, resources. For example, history could be using AR Traveler. I know particularly resources that can integrate into Google Classroom.” Multiple SLs talked about their knowledge of online books and online libraries, and this finding aligns to the research base affirming SLs knowledge of OERs (AASL, 2016; Baker et al., 2019; Kang, 2015).

SLs emphasized their knowledge of curriculum as important to consider. They noted their strengths in understanding horizontal alignment of curriculum and in supporting teachers pre-pandemic to make cross-curricular connections. One SL noted, “I have the ability to connect teachers across curriculum because of knowledge of what teacher A and teacher B are doing.” SLs also noted that their curriculum expertise included a specific ability to design for project- and problem-based learning, with one SL stating, “My biggest skill set is in project-based learning and cross-curricular content. I would have loved to see more of that in the AMI [Alternate Methods of Instruction] packets.”

Finally, SLs noted their own pedagogical knowledge and spoke about their abilities to support students, families, and teachers. One SL stated, “I know my students’ personalities, interests and abilities.... I am well versed to supply engaging and innovative information.” Another SL noted, “I know how to provide choice and give options for students’ voice.”

SLs were open in discussing the specific knowledge and skills they felt they were lacking in supporting online learning, specifically in the comments assigned codes for technology and pedagogical knowledge. In the comments assigned the technology code, SLs said things like, “I wish I knew of more free options beyond Google Classroom,” and “I need more expertise with YouTube and podcasting.” Interestingly, the majority of SLs focused on softer skills important to student educational success, such as supporting engagement of students, motivating reluctant learners, and holding learners accountable. Participants made comments like, “How do I help kids not feel overwhelmed so they don’t shut down?” and “I want to know how to keep kids engaged and help with their soft skills like persistence, reflection, and time management.”

Concerns

SLs noted specific concerns for faculty and students in online learning environments. SLs discussed specific student populations of concern, including students in poverty, English Language Learners, students with special needs, and students in rural areas. For students in poverty and students in rural areas, lack of access to WiFi and devices was central to participants' conversations. One SL noted, "I work at an all-free-lunch school; students don't have internet or devices at home." Notably, one SL stated, "Districts need to start thinking about internet access and device access – *equity* is important to think about now!" In thinking about students with special needs and English Language Learners, SLs made the following comments: "Our teachers need support training on accessibility features," "It is much harder to support special needs students," and "We have difficulties in communicating with Spanish-speaking families."

SLs noted that students needed support in understanding how to navigate online learning and that reliance on technology could alienate students who might need help with technology troubleshooting. One SL noted, "I think the word 'intentional' is key. We need to be explicit and intentional in helping them navigate this kind of self-guided learning." Another affirmed, "We need to have kids and teachers practice teaching online [before the skill becomes essential]. Have kids in the library and have the teacher online teach from classroom space. To allow kids to be in those spaces and have those discussions with them."

SLs also discussed decisions schools made that they felt may have contributed to student disengagement, including the privileging of core content over elective coursework, and the lack of focus on social-emotional needs of families and students. Students' abilities to remain connected to the learning experience was a common topic. Comments included, "They cut the electives and focused only on core subjects... there are no fun electives anymore," and "Kids were not the focus. Sending stuff out 'to do' was not enough. Put kids center. Make sure teachers are connecting with kids, and kids are being heard and are sending information back. This was frustrating and a cold environment."

All SLs expressed frustration around the topic of grading and accountability in online learning. This concern was driven by a statewide decision allowing districts to finalize students' grades based on their work prior to the online pivot, thus making some students feel any work assigned and completed after the pivot was irrelevant. As one SL noted, "How in the world do we even get students to check their e-mails if their work doesn't count anymore!?! It's infuriating."

Finally, SLs discussed concerns about teachers' willingness and ability to embrace technologies to fully support online learning. They noted a pre-pandemic reluctance on the part of many teachers in their spaces to embrace technology integration in their instructional practice and noted teachers' reliance on didactic learning approaches exclusive of authentic technology integration. As one SL noted, "The kids are fine with technology. Fine. The complication is the teacher."

Communities of Practice

When the categories derived from SL data were mapped to the CoP characteristics, a clear alignment was evident. Regardless of lack of formal inclusion in school shifts to online learning in response to the pandemic, SLs worked with teachers to support the shared concern or *domain* of making online teaching operational and effective using informal or *ad hoc* networks. SLs reported informal engagement in activities that supported members of their local professional *community* focused on shared teaching *practice* as they sought to become independent innovators within their shared communities (see Table 2). SLs' involvement with the informal communities of practice in their school spaces provide evidence of their willingness and ability to lead from the center in supporting colleagues explore the intersections of pedagogy, curriculum and technology (Dees et al., 2010; Johnston, 2012). SLs used their expertise and skills to support and guide teachers in informal structures to use technology to support learners (Everhart, et al, 2011; Johnston 2012; Wenger-Trayner & Wenger-Trayner, 2015), facilitate collaboration across colleagues (Ash-Argyle & Shoham, 2012), and plan curriculum (DiScala & Subramaniam, 2011).

Table 2

Study findings aligned to Communities of Practice (CoP) characteristics

CoP Characteristics	Study Findings Alignment
Domain: identity defined by a shared concern or interest with the intent to problem-solve or seek improvement or innovation	Concerns: SLs' consideration of specific concerns for K–12 teachers and students during their school/district pivot to online learning (RQ 3).
Community: engagement in activities and discussions to support all members in learning	Involvement: SLs' discussion of their level of involvement in their school/district pivot to online learning (RQ 1).
Practice: identity as practitioners with a shared goal or practice	Knowledge and Skills (and Gaps): SLs' reflection on their own curated knowledge and skills that were helpful or could have been helpful during the pivot to online learning. SLs also identified gaps in their knowledge/skills they recognized during this time (RQ 2).

Domain

In CoPs, domain is defined as a shared concern or interest with the intent to problem-solve or seek improvement or innovation. In this study, SLs articulated a shared need to support K–12 students and teachers during the pivot to online learning, and all SLs in the study expressed a desire to be involved in solving the problems presented during this time. This concern was a

point of exploration for us and articulated in the study research questions (RQ), specifically RQ3 as SLs explored concerns they had for students and teachers in online learning contexts.

All SLs in the study worried about students' ability to engage in online learning due to access, students' motivation to engage in online learning, a lack of student accountability, the exclusion of elective course options, and a lack of focus on social-emotional needs of students. They also expressed concerns about teachers' ability or willingness to design engaging online learning experiences. The reliance of districts on "packets" during this time was viewed as something that worked against student engagement as SLs discussed the need to create engaging curriculum for students. Many of the SLs talked about the decision within the state to not "grade" student work after the schools shut down, and the issues of accountability this decision raised for both teachers and students. SLs felt the focus on the core content to the exclusion of elective subjects limited student engagement. As one SL noted, "This was frustrating and a cold environment."

SLs noted specific concerns about equity for students in poverty, English Language Learners, students with special needs, and students in rural areas. This focus aligned with the school librarianship research base, in which the role of SLs in creating learning environments that center equity and focus on the achievement of all students has been recognized (AASL, 2018). Additionally, SLs described limitations in providing online learning environments that are student-centered and culturally responsive (Thomas et al., 2019).

Community

In CoPs, community members engage in activities and discussions to support all members in learning. In these contexts, all members share roles as both leaders and learners, and members move in and out of both roles depending on expertise and need to share information, help each other, and problem-solve. This focus was a point of exploration for this research and was articulated in the study research questions, specifically RQ1 as SLs explored how their schools did or did not take advantage of their skills and knowledge during the pandemic. In the pivot to online learning, SLs had much to contribute to the faculty in their schools.

While SLs in this study reported they were minimally involved in the formal decision-making structures during this time period, they also reported engaging in informal actions to support members of their community. In other words, SLs in this study found ways to insert themselves into local structures to support students and faculty. As one SL noted, "We librarians superimposed ourselves in the structures to share resources, lessons, etc." SLs reported showing classroom teachers how to use technology more meaningfully and powerfully, and thus leading PD for teachers and collaborating with them. Examples included creating a Facebook group for a math class, supporting a special education class on Zoom, offering Google training for grade-level teams, and co-creating content (for example, a Google Jamboard, a Bitmoji forum with digital phonics-based sound cards, and YouTube screencasts).

SLs also noted the work they did on their own to support students. One SL posted resources for her students on her own webpage and did screencast booktalks while also providing free online books. Another noted that she connected students to online libraries. SLs created informal PLCs

among themselves and with their teacher groups to promote ideas and activities and to offer support.

Practice

In CoPs, community members identify as practitioners with specialized knowledge and skills they can bring to bear on a shared goal or practice. The SLs in the study discussed the knowledge and skills they possessed that were useful or that could have been useful in the pandemic. In the focus groups, participants particularly identified their knowledge of curriculum, technology, online resources, and pedagogy as untapped resources during the move to virtual teaching and learning. They described their unofficial engagement in activities and discussions in their efforts to support students, families, and teachers in online contexts. This focus was a point of exploration for us and was articulated in the RQ2 as SLs explored their identity as practitioners with specialized knowledge and skills.

SLs also laid bare their own perceived gaps in their own knowledge, indicating a desire to continue engaging in learning to support stakeholders in their school communities. Here, SLs talked about needing to know more about how to better engage students, and to more fully scaffold the efforts of students and teachers. Additionally, SLs noted needing to know how to better advocate for themselves and their professional role, or as one SL said, “I want to know more about how to ‘sell’ to teachers the value of the librarian,” while another SL noted, “Librarians need to be more politically savvy to advocate to legislators. When the budget takes a hit, they need to think about schools, accessibility, and provide for every student, not just students with internet and devices.”

Limitations of the Study

When engaged in qualitative inquiry, fully removing researcher bias is impossible. It is imperative to provide a subjectivity statement that describes researchers’ approach to the study and how this approach may have influenced data interpretation. This study posited that teachers’ familiarity with CoPs through existent state-mandated PLC structures would support teachers’ ability and inclination to work together to navigate the demands brought on by the COVID-19 pandemic and that SLs would be included in the formal and/or informal structures created during the pandemic due to the skill set possessed by these individuals, especially the skills specific to technology usage and integration. This position both guided and delimited the study design and resultant data.

Additional limitations of this study include SLs’ self-selection for attendance in the focus group interviews, potentially including bias in their responses regarding the pivot to online learning. The study was enacted in a limited geographic area. However, the demographics of the focus-group attendees are representative of the profession and representative of the larger education profession.

Conclusion

The findings of the study were analyzed using the lens of the Communities of Practice framework. We found that SLs in the study were minimally involved in their schools' switch to online learning. SLs felt their official role was minimized due to faculty and administration having a limited understanding of SLs' work. Even though SLs' involvement was not explicitly included by district/school initiatives, SLs voluntarily engaged in informal actions aligned with the CoP framework and worked independently outside district direction to support students and teachers.

The SLs involved in the study detailed specific knowledge and skills they possessed to support online learning, including insights into the curriculum, depth of knowledge in best practices for technology integration, and extensive knowledge of OER resources. These findings indicate that schools/districts can and should be more inclusive of SLs in planning for technology use in teaching and learning, and position them as leaders in this work. Additionally, this study provides evidence that online teaching and learning competencies should be intentionally embedded in SL preparation programs.

Finally, SLs gave voice to specific concerns they had for faculty and students. Concerns for students included questions about how to engage and motivate students during online learning while holding them accountable. Concerns for teachers centered on teachers' knowledge, skills, and dispositions related to effective technology integration. SLs also expressed concerns for specific student populations, including students in poverty, English Language Learners, students with special learning needs, and students in rural areas.

The experiences described by SLs in this study reflect a continuation of "business as usual" in K–12 spaces regardless of delivery format (for example, online, hybrid, F2F). SLs described feeling minimized or misunderstood (RQ1) despite their specialized training, knowledge, and skills (RQ2). Furthermore, the concerns expressed by the SLs, particularly for marginalized groups of students, are also familiar (RQ3). While the pivot to online learning provided opportunities to disrupt traditional school patterns, this study found that traditional school patterns were continued and/or amplified based on the perceptions of the SLs in this study.

The findings of this study inform districts and schools of the potential of SLs in supporting teachers and students in online teaching and learning. Although SLs were minimally involved in the school or district decision-making process, they continued to act as advocates for their profession and to offer support to students and teachers through informal CoPs whenever possible. Recommendations for the field include explicit inclusion of SLs in continued work to support teachers and students in online teaching and learning contexts. The participants in this study wanted to lend their expertise, skills, effort, and time to support the teachers and learners they served. In doing so, these SLs led from the center (Dees et al., 2010) and saw their efforts to support colleagues and student as a natural extension of the work they do daily.

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Appendix

Focus Group Interview Protocol

1. Please tell us who you are and your job title.
2. What grade level(s) do you support?
3. How long have you been working in education? And how long have you been a school librarian?
4. Describe your preparation in supporting teachers/ students in online/online learning?
5. How involved are you in the decision-making processes around AMI [Alternative Methods of Instruction]?
6. What knowledge/skills do you have that you are or (could be) using to support teachers/students during AMI?
7. What knowledge/skills do you have that aren't being used to support teachers/ students during AMI?
8. (pending response to previous question) Why do you think schools aren't using your skills/preparation to support teachers/students during AMI?
9. What more do you wish you knew to support student learning in online spaces?
10. Do you have any advice to the researchers in developing strategies to train school library specialists?

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