# **Exploring the Value of Communities of Practice in Academic Libraries**

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#### Abstract

Communities of practice (CoP) have consistently demonstrated value in the private and public sector as a way for group members to elevate their subject knowledge in a field of practice, solve problems by working together as a group, and create new knowledge for the benefit of both old members and newcomers on an ongoing basis. One example in higher education is several communities in the LOUIS organization (e.g. the System Administrator community) that provide continuing education for members as well as a place, per their website, to share, learn, teach, and question. The CoP framework has been used in academic libraries to improve services in bioinformatics, digital humanities and archives, teaching, publication services and research support, research data management, and virtual reference services. CoP have also been used in the literature for professional development in academic libraries in collaborative continuing education, mentoring, on the job training, discussion groups, and learning communities.

*Keywords:* community of practice, communities of practice, academic libraries, university libraries, college libraries, library services, professional education, and continuing education.

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### Introduction

Communities of practice (CoP) have consistently demonstrated value to organizations both in the public (Belzowski et al., 2013, p. 7; Guerrero, 2014) and private sector (Wenger, et al., 2002, p. 5). One example of a community of practice in higher education is the LOUIS System Administrator Community (LOUIS, n.d.-a). Most academic libraries in Louisiana are part of the LOUIS library consortium, which has an IT-related function for libraries and has the charge to "create a cost-effective collaboration among the institutions for the procurement of library technology and resources" (LOUIS, n.d.-a). Academic library system administrators in Louisiana are part of a LOUIS community that provides members "a place to share, learn, teach, and question," and they further state that communication is paramount to the consortium's success, and these communities allow the sharing of expertise and ideas (LOUIS, n.d.-b).

Importantly, this group of librarians and staff all use the same library systems in their jobs and have similar positions administering those systems (e.g., circulation systems). They also meet once a semester to learn about the latest software trends and updates, but they also discuss problems and solutions with the group. The group discussions serve as learning sessions, but the learning does not stop with those meetings. LOUIS also administers a knowledge base to help system administrators benefit from the collective knowledge of the group and provides training to new system administrators. Belonging to this group also allows system administrators to have a group to interface with on problems or innovations to strengthen their everyday practice, and this community is arguably a community of practice, which is defined and discussed in the subsequent sections of this introduction. The community of practice framework is worthy of exploration for further understanding of how these groups make better collective use of knowledge, provide greater value, and promote better service in academic libraries.

According to Wenger et al. (2002), communities of practice (CoP) are "groups of people who share a concern, a set of problems, or a passion about a topic and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (p. 4). Per the authors, CoP often create work products that they share with group members including best practices, "tools, standards, generic designs, manuals, and other documents," and the collected knowledge helps group members elevate their subject knowledge and practice in their field more effectively. They also stated that CoP can meet in person or be virtual, and Wenger and Wenger-Trayner (2015) stated that the "collective learning" (in a CoP) involves practitioners "in a shared domain of human endeavor" (p. 2).

This article reviews the literature on communities of practice (CoP) in academic libraries, specifically how the framework has been utilized in library services to increase the value library staff provide to their campus communities. Roles that librarians take in the CoP are also discussed including how librarians can act as facilitators in CoP. This article also reviews the literature on ways that CoP have been utilized in academic librarian professional education to increase the knowledge of library staff, which by extension helps them provide better services to their campus communities.

### **Literature Review**

# **Origin of Community of Practice**

The term community of practice (CoP) was first used in learning theory and the

concept was coined during Lave and Wenger's 1991 study of apprenticeship as a learning model (Wenger & Wenger-Traynor, 2015, p. 4). Apprenticeship was important to understanding CoP because newcomers and learners in a community gain an idea of:

Who is involved; what they do; what everyday life is like; how masters talk, walk, work, and generally conduct their lives; how people that are not part of the community of practice interact with it; what other learners are doing; and what

learners need to learn to become full practitioners. (Lave & Wenger, 1991, p. 95) Per Wenger and Wenger-Traynor (2015), apprentices in a community of practice benefit from a "living curriculum" with "learning taking place mostly from journeymen and more advanced apprentices" (p. 4). CoP have found applications and enriched practice in "business, organizational design, government, education, professional associations, development projects, and civic life" (p. 4). An aspect important to identify whether a community is a community of practice is the structure of the CoP.

# **Structure of Communities of Practice**

There are three structural elements present in communities of practice (CoP) (Wegner et al., 2002). According to the authors, CoP often revolve around a well-defined shared domain usually with a central topic that "inspires members to contribute and participate, guides their learning, and gives meaning to their actions" (pp. 27-28). The second element that must be present is a community that "creates the social fabric of learning" (p. 28). The third element of a CoP is a practice, which the authors define as "a set of frameworks, ideas, tools, information, styles, language, stories, and documents that community members share" (p. 29). Per the authors, when a group has all three elements in common, they have the foundation to "steward knowledge," which is vital for

knowledge management purposes (p. 29).

# **Knowledge Management in Library Communities of Practice**

Knowledge management is important in communities of practice (CoP) and is defined as "the process of capturing, developing, sharing, and effectively using organizational knowledge" (Suchitra, 2014, p. 1). Practitioners in these communities participate in knowledge management for strategic reasons to stay competitive in their organizations and "great specialization and collaboration" are required (Wenger, et al., 2002, p. 6). Librarians have expertise in information science and the storing of knowledge, but the collaboration aspect is relevant per Taylor (2004) because not all knowledge in need of management is stored on a computer (p. 22). Some knowledge, per the author, which is relevant to CoP, exists in the minds of community members, and through socializing, knowledge is shared, internalized, and new knowledge is created. Librarians are uniquely positioned to benefit from knowledge management and facilitate or benefit from CoP. Two uses of CoP in academic libraries are for library services and professional development.

### **Applications of Communities of Practice in Academic Libraries**

#### Library Services

Libraries in higher education and beyond are increasingly called upon to market themselves and prove their value. Libraries in the current "knowledge economy" per Moore (2004, p. 72) have used communities of practice (CoP) "to gain competitive advantage," as an "approach to knowledge sharing" and as an "innovative way to foster learning" (Jong-Ae, 2015, p. 47). Further Jong-Ae states that the notion of CoP "provides an intriguing framework for library services," and "it can be integrated into library services to better serve the goal of libraries as educational and cultural institutions" (p. 47). CoP also serve a practical purpose to provide improved services in libraries. The CoP framework has been used in academic libraries to improve services in bioinformatics, digital humanities and archives, teaching, publication services and research support, research data management, and virtual reference services.

A service libraries can provide utilizing a community of practice framework is bioinformatics, which would be useful in higher education institutions. Bioinformatics in Moore, et al. (2004) "involves the use of information science and technology to manage biological data and support computer-based experimentation" (p. 72). The authors' library facilitated services in this area as they were looking for ways to prove their value in the "knowledge economy" to their parent institution (p. 72). The Bioinformatics Community of Practice (CoP) in this case was facilitated by librarians and had members that were "researchers, clinicians, students, and educators" (p. 76). The librarians provided support through instruction, sponsored training, hosted communication forums for the group, (e.g., a listserv), and worked to build partnerships with organizations of interest to the CoP, such as the Carolina Center for Genome Science (pp. 75-76). Also, librarians were uniquely positioned to facilitate the sharing of knowledge within a CoP and by sponsoring the group, they were important partners in the Bioinformatics research community where new knowledge was to be created.

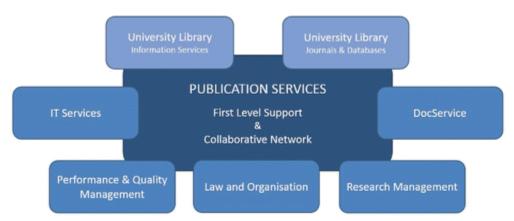
Academic librarians, especially in archives and special collections, often have experience in digitizing documents. In Green's 2014 article, librarians were said to have expertise in text encoding, which makes documents searchable and allows data mining, and librarians have explored utilizing their expertise for outreach to scholars interested in digital humanities scholarship (pp. 220, 224). The case studies in the article, demonstrate how librarians can use their experience to facilitate the teaching of text encoding and relevant tools and research services to scholars as valued library services (p. 222). The author also stated that the librarians facilitated a "scholar's entry into the communities of practice (CoP) that make up digital humanities," which would allow research collaboration versus researchers working alone in the traditional research model (p. 227). Researchers in the digital humanities CoP share Wegner et al.'s (2002) elements for a CoP in that they work in a shared domain and have a common interest in digital humanities digitization so that texts can be viewed online, the contents can be searchable, and also texts that have been encoded can be part of data mining research projects (p. 228).

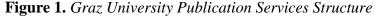
Researchers also have a shared scholarly practice and are part of an academic community, which are other structural elements for a CoP mentioned in Wegner, et al. (2002). Librarians provide a vital service by helping digital humanities practitioners on their campus learn to use text encoding and relevant tools to help them learn a "shared repertoire' of skills and knowledge" as part of a community of practice (Wegner et. al., 2002, p. 229), which connects "scholars to methodologies for digital humanities research" (Green, 2014, p. 232). Also in Lave and Wenger (1991), CoP are useful for initiating neophytes into a practice and the CoP for Digital Humanities helped do this by providing training to new and existing scholars and allowing all in the community to gain skills in text encoding and the use of relevant tools to digitize humanities texts (p. 222). Green (2014) stated that librarians being facilitators in a Digital Humanities CoP "allows librarians to become active contributors in the research enterprise" (pp. 232-233), and the

author showed through 5 case studies that this CoP model can benefit digital humanities researchers in higher education.

Another use of a community of practice (CoP) framework in academic libraries is in teaching. Traditional library instruction involves one-way communication in the form of lecture and demonstration. Macklin (2008) wrote about using a problem-based learning approach to teach in a classroom utilizing a CoP environment for "sharing experiences and disseminating information for collaboration and problem solving" (p. 238). In this environment per the author, students participated in exercises that put them in charge of their learning experience and that of their peers, which is a departure from tradition. These exercises facilitated student learning which "is a process of participation in communities of practice, participation that is at first legitimately peripheral but that increases gradually in engagement and complexity" as the learner participates more fully in their own learning (Lave & Wenger, 1991, p. i). Arguably, students participating in their learning are forced to solve problems and identify connections between the problem and information retrieved, which helps reinforce the information seeking and problemsolving concepts that librarians want students to learn. This process initiates students into their own learning CoP with librarians as facilitators.

An additional library service utilizing a community of practice (CoP) is publication services. In Ginther, et al. (2017), a new cross-departmental unit Publications Services was created at the University of Graz, and this unit included collaboration with a couple of library departments and five departments outside the library (see Figure 1).





Library staff assumed the role of initial point of contact for Publication Services related business for the collaborating departments and provided front line support such as workshops. The author did say that library staff had challenges related to time providing front level support for Publication Services and balancing their library-related responsibilities (p. 145). The Publication Services CoP fit within Wegner et al.'s (2002) idea that CoP practitioners can serve two roles as community members and operational line team members within an organization and bring their team experience to the community to help them with their problems (p. 18). Also, Wegner et al. in Cox (2005) stated that a CoP is also a management tool with work focusing on ''innovation'' and "problem solving'' (p. 533), and the Publication Services CoP provided a value-added service to the university.

Another author, Coombs et al. (2017), also featured the idea of a community of practice (CoP) for a concept related to publication services, which is research support services. The Research Support Services Improvement Group CoP at De Montfort University (Coombs et al., 2017) featured a less formal working group as compared to the interdepartmental arrangement of the Graz University's Publication Services CoP (Ginther, et al., 2017). In Coombs, the foci of Research Support Services were open access publishing and providing services to researchers in general (p. 160). This informal CoP arrangement of employees included library staff, such as the repository manager and liaison librarians; the Research, Business, and Innovation Directorate; and also, members of the staff of the Center for Learning and Study Support. This working group differed from the Graz CoP in Ginther et al. (2017) because there was not a formal department, which one group member highlighted as a challenge in Coombs et al. (2017) because they argued for a more strategic approach "to ensure the right people are on board, particularly relating to compliance and areas with IT requirements or infrastructure needs" (p. 167).

Another challenge with the working group was that skill sets and knowledge could be lost if a member leaves the CoP (Coombs et al., 2017, p. 166). The Graz CoP was part of a unit that had formal departments with set positions, so with planning, knowledge transfer could occur when someone left a job and a new person was hired for that position (Ginther, et al., 2017). Benefits in Coombs (2017) were said to be the informal CoP for research support led to greater communication, autonomy, and the working group members got to learn about what went on in other areas of the university, and better understood researchers since the members were not all focused in one department (pp. 163, 165, 167).

Another use of a community of practice (CoP) in academic libraries is suggested by Savage and Cadwallader's 2017 article where the library collaborated in an interdisciplinary effort to have staff become research data management (RDM) experts. The Data Champion (DC) Programme goal was to create "a community of RDM advocates and trainers with strong links to both central support infrastructure and their local communities of research practice" (para 4). At Cambridge University, the majority of the DC's were post-doc researchers and Ph.D. students, and 2 librarians participated in this program (para 8). Radford et. al. (2017) stated that CoPs with members outside the library can often be more successful due to their diversity (p. 440). This DC group in Savage & Cadwallader (2017) met the criteria for a CoP in that members had a shared domain with common problems that required the sharing of knowledge and expertise on an ongoing basis, and they had a common academic practice (Wegner et al., 2002, pp. 2, 4). The DC CoP met regularly with lunch forums with speakers; members also had the opportunity to present at these meetings to share knowledge with other community members (Savage & Cadwallader, 2017, para 10). Members also had access to online resources such as an "email list and Slack channel" to communicate and "to share expertise and collaborate on activities" and a shared Google Drive with how-to, forum meeting materials, and training materials (para 11).

One activity many CoPs do in the literature that makes them a learning group instead of just an interest group is that they share and reuse materials that are created (Wegner, 2000). This group had an aim to "build a comprehensive resource and knowledge base to underpin future DC activities and make it easier for new DC's to offer support" (Savage & Cadwallader, 2017, para 11). Lave and Wegner (1999) argued that CoPs are useful for helping newcomers learn through interactions with group members and the utilization of newly acquired knowledge (pp. 94-95). The DC Community succeeded in providing RDM support to new DC's and scholars at Cambridge, and "boosting research engagement in RDM" (Savage & Cadwallader, 2017, para 27). Another library service that benefits from the use of a community of practice (CoP) is virtual reference services (VRS). In Radford et al. (2017), a group of 50 librarians that work fully or partially in virtual reference was interviewed to "investigate ways to better utilize librarians' subject expertise via online collaboration" (p. 439). A CoP approach was found, per the author, "to be a useful framework to understand VRS professional's approaches to their work" (p. 339) and help members "solve problems and develop new approaches and tools" (p. 440). VRS may be offered through a service for a single library or through a large library consortium. In this research study, Wenger in Radford et al. (2017), stated that the VRS CoP shared all structural elements of a CoP and librarians:

(a) demonstrate a shared domain of interest/engagement in participation in the interest of serving information user needs, (b) operate within a community that regularly shares information, and (c) have been educated in the tenets of a shared

practice through the Library Information Sciences degree programs. (p. 440) Librarians in the VRS CoP often collaborated with other librarians on how to use a reference tool or database or on a question if it fell outside of their area of expertise, which is also commonly done in face-to-face reference. Collaboration also can lead to better reference service with more than one insight on solving a problem and can "reduce error and oversight" (p. 440). Also, collaboration for more complex reference queries can increase the likelihood of a thorough answer, and the author indicated that collaborating or referring questions outside of the CoP can also be useful if there is a non-librarian expert or faculty member (p. 445).

# **Professional Development**

Communities of practice (CoP) are useful in academic libraries to help librarians strengthen their skills and increase their knowledge. Professional development within a CoP helps librarians to better serve students, faculty, and staff, and this learning is crucial for librarians as there is an expectation for them to develop "their understanding and expertise in their course of work, both as they apply their knowledge to the problems of their domain, as well as learn about and adapt to new technologies, services, and practices..." (Bilodeaua & Carson, 2014, p. 26). Some types of professional development found in the literature where CoP have been utilized are collaborative continuing education, mentoring, on the job training, discussion groups, and learning communities.

One method of continuing education for academic librarians is online communities. In Luo et al.'s 2017 case study, an online community of librarians was formed "to provide a venue for librarian researchers "to share information",..."create new knowledge",... and "contribute to the growth of academic librarianship"; this group was also said to allow members to "provide/receive social support, and experience camaraderie" (p. 512). This online community was said by the Luo et al. to be a community of practice (CoP), which per Wenger and Lave in Jong-Ae (2015) is based on practice based "social interactive dimensions of situated learning" (p. 47). The group met Wenger et. al.'s (2002) structural elements of a CoP in that the group of librarians constituted a community that provided a "social fabric for learning" with a shared domain of contributing to research and knowledge, and a shared practice (pp. 27-28) with an interest in providing librarians with the tools "to provide optimal information services to researchers" (Luo, et al., 2017, p. 512). Wenger and Lave (1999) previously explored the idea that newcomers in a CoP learn skills from masters in an apprenticeship learning model, and group members in Luo et al.'s (2017) case study completed a "mastery experience" project with support via facilitators and group members via social media to hone their research skills and increase their confidence (p. 513). The authors felt the online CoP succeeded in helping librarians have the support to overcome potential barriers in the research process.

Communities of practice (CoP) have been utilized to facilitate continuing education in teaching and pedagogy for library instructors (Osborn, 2017; Wiley, 2014). In Osborn (2017), a group was created to help librarians increase their teaching skills through collaborative continuing education (p. 162). The author stated that a Learning and Teaching CoP was formed to increase research librarians' pedagogy knowledge and relevant teaching skills. Another way a CoP would be helpful in professional development would be to help librarians stay current with academic trends. In the author's CoP group, librarians studied modules in higher education trends and pedagogy and had the benefit of meeting with speaker experts from outside the library to provide relevant professional insight. They also had monthly meetings, which allowed librarians to "improve their practice by providing a forum to identify solutions to common problems and a process to collect and evaluate best practices" (p. 165). Just as in other CoPs, an additional benefit for the group was the maintaining of a shared library of documents, such as: "best practice examples of the learning and teaching research resources (statements of learning outcomes, lesson plans, learning and teaching activities, and assessment rubrics)" (p. 165). These resources would be of benefit to any library teaching faculty member to use to help them learn to produce similar documents or to

improve their own. Meeting with other professionals and sharing knowledge can also help librarians strengthen their practice through knowledge creation and assimilation and assist with finding innovative solutions to problems.

Communities of practice (CoP) have also had applications for helping academic librarians improve their job skills through mentoring. In several articles, junior librarians have been matched with senior librarians in an informal mentoring arrangement (Bilodeaua & Carson, 2014, p. 29; Henrich & Attebury, 2010). The authors in both articles stated that mentoring of academic librarians often focused on the navigation of the tenure process and also research, writing, publishing, and teaching. Henrich and Attebury (2010), wrote that the CoP in their study focused on collaboration and fostering relationships with faculty, but their group decided that the primary focus of their CoP would be more on research and collaboration than tenure.

Formal mentoring arrangements may not allow as much dialog and sharing of information as informal arrangements, and the authors stated that these arrangements "may no longer be the best means for transferring tacit knowledge and preparing library leaders for the future" (Henrich & Attebury, 2010, p. 163). Mentoring in a Teaching and Learning CoP can help new librarians have the benefit of the shared professional experience of a senior librarian and help the new librarian have a sounding board to discuss problems and proposed solutions. Additionally, junior librarians in a CoP benefit from the opportunity to get feedback and talk about research ideas with senior library CoP members (Henrich & Attebury, 2010, p. 163). Mentoring within a CoP also provides a "safe and mutually beneficial environment" (p. 163) for new librarians to ask questions and learn to navigate their academic institution and job duties. Communities of practice (CoP) have also been utilized for staff training in academic libraries. In Goodwin and Gola (2008), the staff at Texas A&M Libraries (TAMU) launched a new federated search tool, and one of the training approaches they used was the CoP model (p. 245). While traditional methods, such as lecture, are important in training, TAMU librarians found that some of the best learning takes place when participants both learn from each other and when learning is "task driven versus curriculum driven" (p. 250). The authors also stated that the CoP approach was also useful for allowing training participants to share experiences, such as search strategies; they also discussed how patrons may search in the new system and practiced what they learned (p. 252). Solely utilizing the lecture training method would have limited the training experience by not allowing the sharing of knowledge and skills from both participants and trainers, which is a powerful experience that is possible when trainers incorporate a CoP in their training sessions.

Another way that academic librarians increase their skills and knowledge is through discussion groups. In Fitzgibbons et al. (2017), one type of discussion group was a journal club (p. 774). One of the objectives of the club was "developing a community of practice (CoP), learning about research trends and methodologies, and integrating evidence into practice" (p. 774). A journal club, when practiced as a CoP, per the authors, provides both the "motivation and the opportunity for informal learning to take place" (p. 775). It also allows librarians to come together to critically appraise journal articles as a group and review more articles than they would have done alone. Also, new knowledge is created when group members share opinions and critiques, and learning takes place. Journal clubs also "help promote an environment where scholarly activities are valued, often building CoPs that extend beyond the scope of a single journal meeting" (p. 780). Journal clubs also function as a CoP by allowing librarians to deepen their knowledge and skills with discussions on "new ideas, strategies, current trends, and issues in the field" and help by "facilitating staff decision making and discussion of complex problems" (Hickman & Allen, 2005, p. 643).

Learning communities are another area where librarians can engage in professional development using a community of practice (CoP) framework. One type of learning community is a department of reference librarians. Reference librarians constantly must update their skills; while this learning can occur alone, librarians can gain these skills as part of a reference department CoP. A reference department CoP has all the structural elements of a CoP since librarians function as a community with a common goal of shared practice and share a domain of knowledge on resources, tools, and common problems (Wenger, et. al., 2002). Miller (2011) stated that a reference department as a CoP forms a "knowledge structure" for reference librarians "to communicate general or subject knowledge, mediate unfamiliar concepts or content, discuss or apply knowledge, and even build an infrastructure for sharing knowledge" (p. 23). In medium and small libraries, librarians must be general and subject generalists and sometimes get assigned a reference subject area that falls outside of their subject knowledge. In the case of being a neophyte to a subject area, Miller (2011) stated that one way of "keeping up" in a field is reading or solitary study, which a librarian new to the subject could try to do alone (p. 20). However, as an alternative, Knapp in Miller argued that "librarians should exchange information and engage in wide-ranging discussion with colleagues because there is a social dimension to developing... knowledge" (p. 20). Miller

put forth the idea that collective workplace learning in a CoP is effective for reference librarians since they often learn about new subject-specific databases and resources, tools, and encounter problems in their work through other colleagues, and this helps them learn and increases their knowledge (p. 22). Learning in the author's Reference CoP took place in reference desk cross-training with other colleagues and meetings, but librarians also compiled a searchable bank of common questions and commiserated on assignments so that all librarians in reference could benefit from the knowledge and better serve customers. The idea of practitioners compiling knowledge for their community to share and reuse was discussed in Wegner et. al. (2002) as a "shared repertoire of knowledge and skills" (p. 229) and is a task that reference librarians do well both for their CoP and for their patrons.

#### Conclusion

Communities of practice are useful in academic libraries for cultivating knowledge management and sharing, problem-solving, and innovation in library services. Interdisciplinary and interdepartmental collaborations in CoP also provide greater access to services in the campus community and improve library services. CoP increase library personnel opportunities for learning and access to resources through peer interaction.

#### **Limitations of Existing Research**

Research on the use of communities of practice in academic libraries is compelling but does have some limitations. Research revealed that there are insufficient journal articles that research the effectiveness or even the perceptions of the effectiveness of CoP in academic libraries including library services and professional education. Documenting the efforts of CoP in general in these areas has been done, but according to Urquhart et al. (2010) a review of the literature provided "few clear criteria for judging effectiveness in communities of practice" (p. 49). One study was completed in Coombs (2017) where academic library staff were interviewed about their experience being involved in a CoP to evaluate the effectiveness of a research support services CoP. Two criteria that were evaluated were members' "perceptions of learning gain" and "whether a CoP approach could improve support" in their research support services CoP (p. 161). Arguably, more research needs to be done on the effectiveness of different library services and professional education efforts for library staff. Research studies on CoP effectiveness or perceptions of effectiveness for group members could be completed by utilizing interviews and survey instruments to gather data.

### **Directions For Future Research**

Some areas of library services that are not currently utilizing CoP in the literature are library circulation and access services, acquisitions, technical services, and collection development. Studies with library staff facilitating a CoP in these areas and documenting how the CoP improved knowledge sharing and the relevant library service would guide others to set up their CoP in these areas and expand the literature. Another area that may benefit from future study in the literature would be for groups of reference subject specialist librarians to form a CoP to facilitate knowledge sharing, orient newcomers, and gather resources specific to that subject discipline to share with the group.

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