A Literature Review on Communities of Practice as Applied to Sign Language Interpreting and Interpreter Education

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Communities of practices have gained an emergent role in knowledge creation and access, which leads to resolving problems facing learners and workers in modern society. With the increase in technology usage to create social connection and engagement, such communities are not constrained by time or space and can therefore expand a wide range of boundaries (Agrifoglio, 2015; Lave, 1991; Wenger, 1998, 2000; Wenger, McDermott, & Snyder, 2002; Wenger-Trayner & Wenger-Trayner, 2015).

Since the beginning of history, human beings have formed communities that share cultural practices reflecting their collective learning: from a tribe around a fire, to a medieval guild, to a group of nurses in a ward, to a street gang, to a community of engineers. Participating in these communities of practice is essential to learning and is at the very core of what makes human beings capable of meaningful knowledge (Wenger, 2000, p. 229).

The term *community of practice* was coined by anthropologist Jean Lave and educational theorist Etienne Wenger while they were studying apprenticeship as a learning model (Lave & Wenger, 1991). Over time, the term has been applied to a much broader range of learning contexts than only those involving novices. The body of literature that exists about communities of practice includes theoretical, conceptual, and review papers, along with critiques and articles reporting the findings of empirical studies (Agrifoglio, 2015). Empirical investigations range from communities of practice in education and healthcare to learning in business organizations and extra-organizational environments, including financial services, creative and innovative organizations and networks, craft-based learning environments, online communities, and a range of miscellaneous contexts (Agrifoglio, 2015; Merriam et al., 2003).

Some of the earliest knowledge-based social structures occurred when humans lived in caves, during the corporations in ancient Rome, within the artisans in the Middle Ages, and among physicians and nurses, as well as priests and nuns, in the late Middle Ages (Agrifoglio, 2015). In more recent times, communities of practice have been related to organizations, institutions, and industries, whether formally recognized or not. Such communities of practice offer promise as an effective strategy for deepening learning through community, fostering the development of professional identity, and creating pathways for induction within pre-service and in-service professional education programs within and external to the field of interpreting and interpreter education (Bowen-Bailey et al., 2012; Glaze, 2001; Gonge & Buss, 2011; Hetherington, 2012; Johnson & Witter-Merithew, 2004; Lees & Meyer, 2011; Lieberman, 2000; Mancini & Miner, 2013; Miner, 2016; Moore, 2008; Shaffer & Watson, 2004). In considering the application of community of practice in supporting the transition of novice practitioners from interpreter preparation to working as an interpreter, it is also important to recognize its potential for added value in strengthening the continuity of practice among seasoned and experienced practitioners (Curtis, 2017; Dean & Pollard, 2009; Smith et al., 2012; Witter-Merithew et al., 2002).

This literature review examines the body of knowledge and theories addressing communities of practice and the degree to which existing theories have been investigated, with the ultimate goal of exploring the relationships between knowledge and theories and the trends and theories in the fields of sign language interpreting and interpreter education. This review provides a foundation of the theoretical framework from which communities of practice derive their purpose, meaning, structure, function, and operations. In addition, it highlights some of the key issues that should be considered.

Defining Communities of Practice

There are many definitions of communities of practice. Two definitions frequently referenced in the literature "a group of professionals informally bound to one another through exposure to a common class of problems, common pursuit of solutions, and thereby themselves embodying a store of knowledge" (Hildreth et al., 2000, p. 3), and "groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis" (Wenger et al., 2002, p. 7).

Community members share norms and values, carry out critical reflection, share a common way of talking about topics, and engage in dialogue with each other at a professional level, generating an environment characterized by high levels of trust, shared behavioral norms, mutual respect, and reciprocity (Sharratt & Usoro, 2003). The basic building blocks of a social learning system are evident within communities of practice because they are social spaces comprised of the competencies that make up such a system:

> Whether we are apprentices or pioneers, newcomers or old-timers, knowing always involves these two components: the *competence* that our communities have established over time (i.e., what it takes to act and be recognized as a competent member), and our ongoing *experience* of the world as a member (in the context of a given community and beyond). Competence and experience can be in various relations to each other—from very congruent to very divergent. (Wenger, 2002, p. 227)

Wenger (2000) further identified three things that bind such a community: 1) a collectively developed understanding of what their community is about and a process for holding each other accountable to this sense of joint enterprise, 2) mutual engagement, 3) and shared resources—

language, routines, sensibilities, artifacts, tools, stories, styles, etc. All three are interdependent and must be present for a community of practice to be effective.

Communities of Practice in Relation to Social Learning and Situated Learning Theories

While the use of the term *communities of practice* has become widespread, the term stems from theories based on the idea of learning as social participation (Wenger, 1998). To better understand the concept of communities of practice, an understanding of social learning and situated learning theories is helpful. There are distinctions between the two (Anderson et al., 1996), although the application of the terms in the literature are closely related and often overlap.

Social learning theory stresses the importance of learning through observation in social contexts. Bandura (1977) theorized that people learn by observing others' behavior and the consequences that result from those behaviors. Additionally, learning takes place from the positive and negative consequences of our direct experiences. New patterns of behavior result from these observations and experiences. Bandura believed that "most human behavior is learned observationally through modeling: from observing others, one forms an idea of how new behaviors are performed, and on later occasions this coded information serves as a guide for action" (p. 22). He constructed social learning theory as both a behaviorist and cognitive model that explained human action in terms of a continuous reciprocal interaction between behavioral, cognitive, and environmental influences.

Bandura's work complemented ideas from Vygotsky's 1978 theory that social interaction plays a fundamental role in the development of cognition and Lave's 1988 theory of situated learning (Clancey, 1995). The social environments of classrooms, for instance, provide many opportunities to learn from other people. Thoughtful modeling can promote positive social relationships. "Understanding how *learning is a process of conceiving an activity* and activities

are inherently social, puts emphasis on improving learning addressing issues of membership, participation in a community, and identity" (Clancey, 1995, p. 50).

Wenger (1998) stated that today's modern institutions are largely based on the assumption that "learning is an individual process … that is the result of teaching" (p. 3). Within the context of social learning theory, the idea of learning is displaced. Learning becomes, fundamentally, a social phenomenon and is placed in the context of our lived experience and participation in the world. Thus, learning occurs when individuals are situated as active participants in the practices of social communities.

In bringing forward his ideas of social learning theory, Wenger (1998) started with four main premises:

1) We are social beings. Far from being trivially true, this fact is a central aspect of learning.

2) Knowledge is a matter of competence with respect to valued enterprises—such as singing in tune, discovering scientific facts, fixing machines, writing poetry, being convivial, and so forth.

3) Knowing is a matter of participating in the pursuit of such enterprises, that is, of active engagement in the world.

4) Meaning—our ability to experience the world and our engagement with it as meaningful—is ultimately what learning is to produce.

Wenger further identified four necessary components for social participation in the process of learning:

1) Meaning: A way of talking about our (changing) ability—individually and collectively—to experience our life and the world as meaningful.

2) Practice: A way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action.

3) Community: A way of talking about the social configurations in which our enterprises are defined as worth pursuing and our participation is recognizable as competence.

4) Identity: A way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities.

When these interdependent components are present and operationalized, social learning is evident. Hoza (2010), in discussing teaching interpreting students the importance of collaboration and interdependence in preparation for team interpreting, underscored the importance of these four components.

Noted psychologist L. S. Vygotsky argued that higher functions develop in such a way that interpersonal processes transform into intrapersonal processes, by which he meant that such development appears twice: first, on the social level, and later, on the individual level; first, between people (*interpsychological*), and then inside the child (*intrapsychological*). All the higher functions originate as actual relations between human individuals. (Hoza, 2010, p. 7)

Situated learning theory supports the belief that for learning to occur, it must take place within authentic environments; learning is directly affected by the context in which it takes place (Lave, 1991). Lave and Wenger (1991) asserted that real-world learning is meaningful because it is collaborative, exploratory, and mirrors life problems. Also learning is more likely to transfer when done in an authentic context. Situated learning as an instructional approach follows the work of Dewey (1938, 1997), Vygotsky (1978), and others, who claimed that students are more inclined to learn by actively participating in the learning experience.

Unlike traditional learning that occurs through abstract, out-of-context experiences such as lectures and books, situated learning takes place through the relationships between people and connecting prior knowledge with authentic, informal, and often unintended contextual learning. Situated learning environments place students in authentic situations where they are actively immersed in an activity while using problem-solving and critical thinking skills. These opportunities involve a social community which replicates real-world situations. In this situation, a student's role changes from being a beginner to an expert as they become more active and immersed in the social community where learning often is unintentional rather than deliberate. Therefore, the social community matures and learns through collaboration and "sharing of purposeful, patterned activity" (Lave & Wenger, 1996).

Similarities and differences between the two theories of social learning and situated learning suggest that the distinctions are not always fixed—the propositions overlap depending upon the context (Anderson et al., 1996, pp. 5-11).Similarities between the two theories include:

- Learning happens in the real-world.
- Learning is social and happens through human interaction.
- Learning comes from the modeling and mentoring of others.

Differences between the two theories include:

- The concept of learning transfer differs between the two theories.
- Learning through observing the mistakes and successes of others can be applied to other situations and at other times in social learning.
- If learning does not take place in its authentic context, transfer is not expected in situated learning.

Barab and Duffy (2000) noted an essential shift from learning designed for collaborative classroom practice to learning designed to connect students with society through *legitimate peripheral participation* in communities of practice. Legitimate peripheral participation describes how newcomers become experienced members and eventually seasoned participants of a community of practice or collaborative project (Lave & Wenger, 1991). Barab and Duffy (2000) encouraged the use of such communities to support novices acquiring the identity necessary to become full participants in professional communities. Johnson (2001) also stated that this transition from novice to full participation can be achieved by ensuring that communities include: 1) different levels of expertise that are simultaneously present in the community of practice, 2) fluid peripheral-to-center movement that symbolizes the progression from moving from a novice to an expert, and 3) completely authentic tasks and communication. Supporting concepts include aspects of constructivism, for example problem-based learning activities, facilitation, collaborative learning, and negotiated goals. Also, community knowledge is greater than individual knowledge, and requires an environment of safety and trust. Johnson (2001) contended that how these aspects are forged will differ between communities of practice that organize in face-to-face contexts versus virtual communities.

Some scholars have cautioned that such distinctions between social learning and situated learning theories may be overgeneralized, because empirical evidence shows, in the field of math education, for instance, that transfer occurs in simulated contexts as well as authentic contexts (see, for example, Anderson et al., 1996; Gonge & Buus, 2011). Mann et al. (2009) have cautioned that the evidence to support and inform curricular interventions and innovations remains largely theoretical, and therefore possibly overgeneralized. Furthermore, because the

literature on communities of practice and its related components are dispersed across several fields, it is unclear which teaching and learning approaches may have efficacy or impact.

Application of Social Learning and Situated Learning Theories to the Fields of Sign Language Interpreting and Interpreter Education

The emergence of studies and programs that apply both theories of social and situated learning within a constructivist framework are present within sign language interpreting and interpreter education research. Although much of the literature is theoretical in nature, empirical evidence is growing, primarily related to outcomes associated with in-service training, mentoring, supervision, case conferencing, and limited study of induction of new practitioners into the field.

Shaffer and Watson (2004) reported on a peer mentorship program initiated by a grassroots effort from interpreter practitioners within a shared geographic area. This peer mentorship program led to the formation of a community of practice that evolved over time. From this formal network, the practitioners acquired the means to assess their work objectively, hold dialogue about professional growth one-to-one or in groups, and view themselves and others as professionals deserving of respect and consideration. While in the program, participants engaged in one-on-one mentoring sessions and workshops that brought together all program participants for discussion and reflection, goal setting, and orientation to various strategies for use in the mentoring process. In the second cycle of the program, a listserv (email discussion group) was established bringing participants together for reflection. This resulted in a shift from coordinator leadership to peer leadership. Relying heavily on constructivist theory, the program evolved to embody seven key principles: permission, accountability, listening, authenticity,

reciprocity and mutuality, shared context, and separation of self from work (Shaffer & Watson, 2004).

Wiesman and Forestal (2006) introduced a comprehensive plan for the development of mentorship programs based on their extensive experiences in creating and implementing programs across the United States. They emphasized that an effective mentorship program begins by investing in the development of the leadership—the mentors—who support the learning of novices. Throughout the plan, mentors were connected through a community of practice to support one another and provide guidance and reflection about challenging mentor practice decision-making. Wiesman and Forestal advocated for mentors to work in teams of one deaf member and one non-deaf member. This allowed mentors to approach support for the novice practitioner more holistically by fostering competence in language, culture, interpreting, and interpreting practice. Novice practitioners benefited from this dual approach because it broadened their perspectives and expanded their social learning contexts.

Dean and Pollard (2009) described the application of observation-supervision (O-S) as a problem-based learning approach to interpreter education and reported the results of a mixed-methods study conducted over four geographically diverse iterations in community mental health settings. Forty ASL interpreters participated in O-S groups, and 40 others comprised two control groups. Measurements included a pre-/post-test of mental health knowledge, a mental health interpreting practical exam, and objective and subjective participant evaluations. The results indicated that the O-S format was superior to an equivalent amount of didactic training in imparting mental health knowledge. Practical exam and participant evaluation results confirmed that the O-S process was effective in imparting interpreting judgment and ethical decision-making skills. Dean and Pollard asserted that O-S can be employed in other specialized

interpreting practice settings and with spoken as well as sign language interpreters. Furthermore, it offered promise that by infusing O-S into the fiber of interpreter education, entering practitioners could form the habits and skills associated with reflective practice. This practice of reflection could then become part of their engagement in field-based communities of practice.

Smith et al. (2012) detailed a similar innovative, one-year pilot program of supervised transition from school to work for graduates of a baccalaureate interpreter preparation program. Essentially, recent graduates engaged in regular supervision sessions with experienced practitioners focusing on constructive discussion about interpreting, with the goal of improving their interpretation work. The supervision model was based on the constructs of the demand-control schema (Dean & Pollard, 2001). In addition to regular supervision sessions, participants were paired with a mentor to work with individually. The goal of this program was to provide continued, structured support to graduates as they entered the workforce as professional interpreters; it offered a promising model of supervised induction through a few collaborating communities of practice. During supervision sessions, graduates and supervisors engaged in case conferencing of the graduates' real-world experiences. Individual work with mentors also allowed for improvement of specific performance goals. In addition, supervisors participated in their own community of practice to reflect upon guiding supervision sessions and to contribute support and consultation for the supervisory process. Mentors participated in a similar process. Each group also provided feedback to the interpreter education program that included insight on curricular improvement.

Hetherington (2012) argued for the development of consultative supervision within the interpreting profession to reduce work-related stress, to provide interpreters with opportunities for regular examination of their practice, and to protect those for whom interpreters provided a

service. She asserted that supervision is a recognized means of accountability and support for many professions, yet it is largely absent from the training and continuing professional development of interpreters. Furthermore, the absence of literature on occupational stress for interpreters implies that the profession does not recognize or validate such stress. Hetherington drew on findings from a qualitative research study (Hetherington, 2011) into occupational stress among sign language interpreters in the northwest of England to make an argument for the benefits of consultative supervision for the interpreting profession. Her findings were similar to those of Dean and Pollard (2005) and supported the conceptualization of interpreting as a practice profession requiring the support framework of supervision. Hetherington recommended that existing models of consultative supervision be adapted, and new ones developed in order to combat stress experienced by practitioners, by providing interpreters with regular, protected time to receive support, guidance, and feedback on their work. It becomes clear that there is a need to create, through communities of practice, induction pathways for new interpreters entering the workforce and an ongoing system of support for interpreters at all stages of their careers.

In addition, as master-level and doctoral education programs have been implemented to prepare interpreter educators, other applications of theoretical frameworks have been represented in the research of graduates, and the application of both social learning and situated learning theories have been further examined. Miner (2016) reported the results of her two-part doctoral study that included a survey of teaching methods of interpreter educators and preliminary results of student interviews about their experiences in a short-term interpreter educational program designed to situate their learning in as many authentic interpreting contexts as possible. The results of the first part of the study showed that, of the nine learning activities reported as used most often in their skills courses, all nine types of learning activities were from categories of

learning contexts of “least authenticity” or “no authenticity.” At the same time, the activities from the categories of “semi-authentic” context, “some authenticity,” and “most authenticity” were reported as never or rarely used. The survey revealed that, for the educators in the study, activities that were used the most often were the ones with the least authentic context.

In the second part, Miner (2016) conducted a case study that examined the use and efficacy of situated learning activities in a short-term, intensive in-service interpreting program inclusive of engagement in a community of practice where the novices worked with certified practitioners who collaborated with them in teams for all assignments. Preliminary case study results indicated that students found activities with the most authenticity to be very meaningful in a variety of ways. This study provides a valuable snapshot of the potential benefits of incorporating authentic, situated learning experiences framed within the context of active engagement in a community of practice, as part of pre-service and in-service programs for sign language interpreters.

Curtis (2017) conducted a study that included survey responses from 113 sign language interpreters about their experiences attending supervision sessions utilizing the demand-control schema framework. In this study, supervision was defined as an intentional interaction between two or more practitioners, the goal of which was to engage in reflective practice, ensure quality services for consumers, and support the well-being of the practitioners. Benefits of supervision revealed from this research could be categorized as enriched learning (formative), increased professional standards and accountability (normative), and support for the well-being of the practitioner (restorative). Curtis further reported that some of the most frequently cited benefits in these categories included relationships with colleagues, new perspectives, professional development, more options for responding to work demands, better understanding of decision-

making, and support. Curtis's findings indicated that current issues in the areas of education, standards and ethics, and work-related stress for practitioners within the sign language interpreting field may be effectively addressed through professional peer supervision groups. Her recommendations included establishing an infrastructure for the provision of professional peer supervision, requiring supervision as a component of credentialing interpreters, and conducting further research on supervision.

Communities of Practice in Practice Professions

A *practice profession* refers to practice-based fields where practitioners execute professional service directly within the context of human interaction, typically with patients, clients, or in the case of sign language interpreting, consumers (Dean & Pollard, 2011). Examples of practice professions include social work, counseling, teaching, law, and medicine (including nursing and midwifery), among others (Dean & Pollard, 2011; Mann et al., 2009; Nicolini et al., 2003). The conception of practices applied by practice professionals is tied to various schools of thought within disciplines and evolves over time through practice, reflection, and incorporation of the profession's scholarship (Parboosingh, 2002; Witter-Merithew, 2008). Accordingly, although standards and best practices exist, each application may be somewhat unique in that each provision of professional service is influenced by a set of factors associated with the specific individuals (patient, client, consumer) within a specific context (Llewellyn-Jones & Lee, 2014; Turner, 2005). As a result, in addition to the body of knowledge and varied technical skills required of the professional, there is also the need to possess well-developed and mature professional judgement and discretion as part of the practitioner's decision latitude (Dean & Pollard, 2011; Turner, 2005). Ethical application of decision latitude requires a range of interpersonal and intrapersonal skills that enable professionals to interface effectively with the

individuals who are depending upon their services (Llewellyn-Jones & Lee, 2014; Nicodemus et al., 2011; Turner, 2005). Such competencies are essential for sign language interpreters, based on data collected from students, practitioners, educators, consumers, and other stakeholders, in a national entry-to-practice competencies project (Witter-Merithew & Johnson, 2005).

Communities of Practice in the Field of Teacher Education

There is evidence of the value of communities of practice for preparation of teachers. Lieberman (2000) noted that traditional approaches to professional development for teachers have largely failed and explained the value of learning communities or teaching community networks in teacher education:

> Teachers have been considered as passive receivers of prescriptive programs, given little time or incentive to integrate these new programs into their classroom practice. Networks, in contrast, involve their members in a variety of activities that reflect the purposes and changing needs of their participants. They attract teachers because they mount agendas that give teachers opportunities to create as well as receive knowledge. Teachers become members of a community where they are valued as partners and colleagues, participants in an ongoing effort to better the learning process for themselves and their students. (p. 226)

Lieberman further indicated some of the reasons for the popularity and effectiveness of such teaching community networks:

> Perhaps their loose structure and flexible organization are more in tune with the rapid technological and socioeconomic changes of this era, providing the kinds of knowledge and experience that teachers need to be successful with their students. By providing avenues for members to deal with real problems, to work collaboratively, and to

communicate more effectively with a diverse population, networks are uniquely suited to the development of learning communities that are both local and national. (p. 228)

Lieberman (2000) studied 16 educational reform networks and provided a frame for understanding them based on common themes and tensions. Each of the examined partnerships and networks began small and tentatively, growing over the years with their members' and leaders' needs, desires, and vision. Some networks came together for seemingly simple purposes, such as promoting dialogue between university and school personnel. In several instances, charismatic leaders captured educators' imagination by sharing their visions for more democratic schools. Other leaders, who planned summer offerings for teachers, could not figure out how to sustain their networks without year-round activities. Different purposes brought people together with a focus for their collaborative work. Whatever the genesis of these networks, they proved to be training grounds for building collaboration, consensus, and commitment to continuous learning.

Eckert (2006) argued that communities of practice provide for a system of accountability between the individual, group, and place of the community in the broader social order, and such communities provide a setting in which linguistic practice emerges as a function of this link. Eckert stated that studies of communities of practice, therefore, had considerable explanatory power for the broader demographics of language variability. These studies provide evidence of how communities of practice can be used to promote and establish common ways of discussing topics and practices specific to a given community. This could potentially advance agreement around the professional terminology used within the fields of interpreting and interpreter education.

Zhao and Kuh (2004) examined the effect of participation in a learning community on student success and satisfaction. The authors randomly selected approximately 80,000 first-year and senior students from four-year institutions who completed the National Survey of Student Engagement (NSSE). Zhao and Kuh created scales to measure levels of student engagement, perceived quality of campus environment, and self-reported learning outcomes. Results showed that participation in a learning community were positively linked to students' overall satisfaction and academic performance. These findings offer promising benefits for the use of planned, structured, and facilitated learning communities as part of pre-service interpreter education programs with the goals of creating deeper connections between learners and laying foundations for entry-into-practice by linking learners to teachers and other experts through communities of practice.

Vescio et al. (2008) reviewed 10 American studies and an English study examining the impact of communities of practice on teaching practices and student learning. These authors examined the studies to discern connections between participation in a learning community and teachers' classroom practices. Although few studies went beyond self-reports, a small number of empirical studies explored the impact of membership in a community of practice on teaching practice and student learning. The researchers concluded the practices of teachers within communities of practice became more student-centered over time. Findings also revealed participants increased their use of techniques such as increased flexibility of classroom arrangements and adjusting the pace of instruction to accommodate varying levels of student content mastery.

The collective results of these studies suggest that well-developed communities of practice have positive impact on both professional practice and student achievement. Similar

studies within the field of interpreting, interpreter education, and interpreter teacher preparation programs would be a valuable contribution to furthering understanding of applications and benefits of professional learning communities to advance these fields.

Conceptualizing the Field of Interpreting as a Practice Profession

Fritsch-Rudser (1986) stated the need for the field of interpreting to expand its conceptualization of the practice framework from which interpreters operate to align with practice-based professions. He noted the many misconceptions within the field related to the role and responsibility of practitioners and what constituted ethical practice. One issue of particular concern was the beliefs and assumptions regarding the obligation of interpreters to keep information confidential. Fritsch-Rudser insisted confidentiality could still be preserved through professional supervision and that there was a need for supervisory relationships for interpreters—such as those that exist within the fields of psychology and mental health practice—to reduce occupational stress and provide guidance in complex decision-making.

Dean and Pollard (2001, 2004, 2005, 2006) introduced and expanded the idea of conceptualizing the work of interpreters from a practice profession perspective. Their body of scholarship has deepened the understanding and encouraged acceptance of this perspective within the fields of interpreting and interpreter education. They framed the argument for interpreting as a practice profession in the following way.

The practice professions, including interpreting, are generally viewed as fundamentally distinct from other professions that do not have human service as their primary focus nor require the same degree of professional judgment involving people that the practice professions do. Professions such as engineering and accounting may require the acquisition of complex skills, but their occupational roles are more akin to technicians than practitioners. In contrast,

interpreters cannot deliver effective professional service armed only with a technical knowledge of source and target languages, Deaf culture, and a code of ethics. Like all practice professionals, they must supplement their technical knowledge and skills with input, exchange, and judgment regarding the consumers they are serving in a specific environment and in a specific communicative situation. (Dean & Pollard, 2004)

Witter-Merithew (2008) elaborated further on interpreting as a practice profession, from the perspective of an administrator of pre-service and in-service interpreter education programs. In practice professions, these ways of doing things are conceived by practitioners over time through a process of application of theory drawn from the profession's scholarship. As more scholarship and research emerge, practices evolve, improve and change. (Chong et al., 2000).

When a practice profession approach is applied to the teaching and learning of practice-based competencies, it results in practice-based learning. This is learning which arises out of, or is focused on, working practice in a chosen profession. Such learning would include courses and learning activities linked to authentic work placements, those which require the application of principles of practice in real-world settings that build on experience gained from authentic work, and reflection on that work with other, more experienced, practitioners. (Nicolini et al., 2003; Fabb & Marshall, 1994; Fleming, 1993).

In furthering the application of communities of practice to sign language interpreting, the full conception of the work of interpreters in both spoken and sign languages as a practice profession has been delayed by a few factors—particularly by inconsistencies in the definition of role and responsibilities (Llewellyn-Jones & Lee, 2014; Turner, 2005) and as a result of what is referred to as the *invisibility ideal* (Dean & Pollard, 2011). The invisibility ideal relates to the historic view of interpreting as merely a process of transferring meaning from one language to

another, leading to an expectation that the interpreter can and must function "as if invisible"— a conduit transferring meaning from one language to another. This conception has been repeatedly challenged (Angelelli, 2004; Cokely, 2000, 2005; Dean, 2007; Dean & Pollard, 2005; Fritsch-Rudser, 1986; Gallai, 2015; Hetherington, 2012; Llewellyn-Jones & Lee, 2014; Metzger, 1999; Nicodemus et al., 2011; Turner, 2005; Volk, 2014; Witter-Merithew & Johnson, 2005), but remains a strong influence on the field's discourse and discussion of problem-solving.

Researchers in interpreting in the twenty-first century no longer seek to understand *if* community interpreters are visible and active participants, but rather to what degree and with what consequences (Hale, 2007, 2008; Mikkelson, 2008). However, broad acceptance of this perspective has yet to be achieved, as evidenced in the work of Dean et al. (2009), who stated,

> Seeking supervision on complex cases, ethical issues, etc., is a fundamental and common practice that all mental health professionals engage in. In fact, ethical standards in the mental health professions mandate that such supervision be obtained whenever needed. Failure to do so is considered an ethical breach. Patient confidentiality is understood as applying to supervision, not in the sense that patient specifics cannot be discussed they often must be but in the sense that the confidentiality commitment the clinician makes to the patient is 'extended' to include the individual providing supervision. This perspective on the mandatory nature of peer supervision and the presumption that such confidential supervision is an extension of provider-consumer confidentiality is one that many interpreters find unusual, even uncomfortable, even though it is the norm among practice professionals. (p. 66)

As the fields of interpreting and interpreter education continue to explore and embrace a fuller characterization of the work of interpreters, there is benefit in continuing to conceptualize

the fields as practice professions. Given the limited, but growing, empirical evidence from within the field of interpreting and interpreter education, looking to research from other practice professions can also be informative.

Communities of Practice in the Fields of Interpreting and Interpreter Education

Communities of practice that are informally bound around common issues and those that are bound together in more formal ways and who are committed to interacting regularly towards a specific purpose are evidenced within the fields of interpreting and interpreter education in varying degrees. One illustration is the members' listservs offered by the Registry of Interpreters for the Deaf (RID). The groups organize around a common identity and/or a focus of practice, such as Interpreters and Transliterators of Color, Deaf Caucus, Bisexual, Lesbian, Gay, Intersex, Trans* Interpreters, Deaf-parented Interpreters, and educational interpreters. Each group is comprised of individuals at all levels of the organization, including seasoned practitioners, students of interpreting, certified interpreters, those aspiring to become certified, advocates, and consumers. Listservs are moderated by an elected member of the group, and all group members can post within that group. Most groups use their listserv to share educational activities of interest to the group or share, discuss and reflect upon topics and practices that relate to the group. Some listservs, such as the Interpreting Services Managers Group and Legal Interpreter Member Section, are also used as sounding boards to discuss best practices. In addition, moderators often send out surveys and questionnaires to collect data from a specific demographic (Ryan Butts, personal communication, April 18, 2018).

In response to a variety of issues within interpreting and interpreter education, the use of communities of practice have surfaced in the literature. Specifically, there have been references to social learning structures in various efforts to address the graduation-to-certification and work-

readiness gaps through pre-service, in-service, and mentoring programs, as well as efforts to promote the shift of interpreting from a technical focus to that of a practice profession inclusive of supervision and case conferencing (Bowen-Bailey et al., 2012; Curtis, 2017; Dean & Pollard, 2009; Hetherington, 2012; Johnson & Witter-Merithew, 2004; Lieberman, 2000; Miner, 2016; Moore, 2008; Shaffer & Watson, 2004; Smith, Cancel, & Maroney, 2012).

The gap in readiness between completion of an interpreter education program, entry to work, and certification, has been discussed in the literature for more than two decades (Cogen & Cokely, 2016; Godfrey, 2011; Patrie, 1994; Ruiz, 2013; Stauffer, 1994; Volk, 2014; Witter-Merithew & Johnson, 2004). Recognition of this gap has been tied to a range of factors, inclusive of the dramatic shift in how interpreters are recruited, vetted, and inducted into practice. Prior to the 1970s, sign language interpreters entered the profession by invitation from the Deaf community (Cokely, 2005; Godfrey, 2011; Mathers & Witter-Merithew, 2014; Shaw, 2014). Deaf community members often identified someone with potential, typically a person with Deaf parents or someone with regular contact with the Deaf community and encourage this person to start interpreting. With the emergence of interpreter education programs, however, members of the Deaf community have become less and less involved in the vetting process (Cokely, 2005).

Currently, recruitment of new students typically begins in ASL courses comprised of individuals who may have had little to no interaction with Deaf people prior to learning ASL. This absence of prior relationships with Deaf people means individuals entering interpreting do so with a lack of language and cultural competence, as well as fewer opportunities to engage with Deaf community members to develop deep connections and ASL proficiency. As a result, the gap in readiness has widened over the last decade. Curtis (2017) stated that the problem exists for various reasons:

- Sign language interpreting is a relatively young field which has not yet reached a fully professionalized state.
- Issues in the profession in the areas of interpreter education include ethics, decision-making, standards.
- The work negatively influences the well-being of practitioners. (pp. 3-4)

There have been efforts to address the readiness-to-work gap, but the struggle still exists. Godfrey (2011) Witter-Merithew and Johnson (2005) reiterated the now-familiar lament from stakeholders regarding the continued existence of the gap between completion of a program and readiness for competent practice as evidenced by interpreting credentials. In three major independent initiatives, researchers have attempted to lessen the readiness-to-credential gap. In the 1980s, the field began to expand the condensed skills-focused training from primarily two-year programs housed in community colleges and vocational training centers to broad-based, liberal-arts, four-year degree programs (Johnson & Witter-Merithew, 2004). The understanding was that a longer period of training would yield more competent graduates, thereby decreasing the readiness-to-credential gap. The Conference of Interpreter Educators (CIT) developed national standards for interpreter education. These national standards were introduced to be used for the development of education and self- analysis of post-secondary interpreter education programs. These standards were adopted by the Commission on Collegiate Interpreter Education (CCIE) when official accreditation of programs began in 2007.

Witter-Merithew and Johnson (2005) met with stakeholders in interpreting and interpreter education to identify entry-to-practice competencies and to develop a detailed list and explanation of each one. However, despite the move to four-year programs, the adoption of recognized standards for interpreter education, and the establishment of entry-to-practice

competencies, there remains debate about how to properly educate interpreting students so that they emerge from interpreter education programs as competent practitioners.

The readiness-to-work gap is also a result of, in part, practices within interpreter education programs that are less than effective, such as insufficient access to authentic and supervised work experience. Many interpreter education programs offer practicum and/or internship courses within their curricula scope and sequence of learning. Most programs exist in two-year community colleges where the time to master both language and interpreting skills is insufficient to allow for meaningful application in the world of work (Stauffer et al., 2008; Witter-Merithew & Johnson, 2005). Also, the structure of fieldwork experiences varies greatly. Insight into this reality was provided by Geier (2016) in her dissertation that focused on the assessment of internship experiences of students in one four-year baccalaureate program offered at a private university in the Midwest. Only 70% of students reported having some kind of fieldwork, and 15% reported that the only interpreting practice they had was performed in the classroom. Respondents in another study stated that real-life experiences were considerably different than what they learned from their professors (Meadows, 2013). Humphrey (2015) reported similar findings among students who graduated from a two-year postsecondary interpreting program. A survey revealed that only 50% of the students had any experience interpreting in real-world settings, with the other 50% practicing only using audio or videotapes. Mikkelson (2013) also reported a disconnect between what was taught in the classroom and the actual requirements of professional assignments. Students who did not have an effective internship felt unprepared for their first professional assignments (Meadows, 2013).

Leveraging the potential and benefit of communities of practice within the field of interpreting and interpreter education requires an understanding of the theoretical foundation

upon which communities of practice are based and how such communities operate and are formed, structured, and sustained. Furthermore, it is necessary to appreciate the factors and practices that facilitate the success or contribute to the failure of such communities.

Developing Communities of Practice

Seven Principles for Cultivating Communities of Practice

Wenger et al. (2002) identified seven principles associated with cultivating social learning systems such as communities of practice: 1) designing for evolution, 2) opening a dialogue between inside and outside perspectives, 3) inviting different levels of participation, 4) developing both public and private community spaces, 5) focusing on value, 6) combining familiarity and excitement, and 7) creating a rhythm for the community. These principles focus on design and are not intended as a recipe, but rather a framework.

Designing for Evolution: In considering the first principle, designing for evolution, the authors encouraged a design or structure that optimized the opportunity for growth over time (Wenger et al., 2002). The structure might include basic elements like setting a regular schedule for meetings, defining where and how meetings take place, and determining basic goals to be achieved during those meetings. In considering the literature from the field of sign language, the design of mentoring relationships provides illustration of this principle. For instance, in the Shaffer and Watson article (2004), participants in the mentorship program engaged in one-on-one three-hour, weekly mentoring sessions, both face-to-face and virtually. In addition, workshops were hosted every other week that brought together all program participants for discussion, reflection, goal setting, and orientation to various strategies for use in the mentoring process. These elements of design proved effective in meeting the needs of a range of participants.

Opening a Dialogue between Inside and Outside Perspectives: The second principle, opening a dialogue between inside and outside perspectives, recognized it is essential to include the insiders within the community in defining its overall direction, while also recognizing that good community design brings information from outside the community into the dialogue. Sometimes this involves educating community members about the role of communities in other organizations. It might mean bringing an 'outsider' into a dialogue with the community leader and core members as they design the community—individuals with expertise regarding community building. (Wenger et al., 2002, pp. 54-55)

This is a common practice in many institutions of higher education, where individuals with instructional design expertise work with teachers and students in building communities of practice—particularly in the design of online program delivery. Johnson and Witter-Merithew (2004), Witter-Merithew et al. (2001), and Witter-Merithew et al. (2002) provide illustrations of utilizing instructional design experts in collaboration with content experts to deliver in-service programs to interpreters working in K-12 educational settings. Opening dialogue can also involve utilizing the expertise of guest speakers, such as individuals from fields related to interpreting such as Deaf Education, Deaf Studies, and ASL (Witter-Merithew et al., 2002; Johnson & Witter-Merithew, 2004).

Another example of this principle is evident in the RID Member Section listservs, particularly those with members who are interpreting practitioners and have or have had different careers that hold important information for the communities. Examples include the community of legal interpreters who are also attorneys, or educational interpreters, whom are also teachers, as well as interpreter communities who also have researchers and those who are linguists.

Inviting Different Levels of Participation: The third principle involves inviting different levels of participation from within the community. People participate in communities for different reasons and at different levels of engagement—some because the community directly provides value, some for the personal connection, and others for the opportunity to improve their skills and knowledge or engage in collaborative discussion and reflection. The application of this principle is evident in the listservs RID implements for its member sections (Ryan Butts, personal communication, April 18, 2018).

Wenger et al. (2002) offered important insight into the principle of levels of engagement. Alive communities, whether planned or spontaneous, have a "coordinator' who organizes events and connects community. But others in the community also take on leadership roles. We commonly see three main levels of community participation. The first is a small core group of people who actively participate in discussions, even debates, in the public community forum. They often take on community projects, identify topics for the community to address, and move the community along its learning agenda. This group is the heart of the community. As the community matures, this core group takes on much of the community's leadership, its members becoming auxiliaries to the community coordinator. But this group is usually rather small, only 10-15% of the whole community. At the next level outside this core is the active group. These members attend meetings regularly and participate occasionally in the community forums, but without the regularity or intensity of the core group. The active group is also quite small, another 15-20% of the community (Wenger, 2002, p. 55).

A large portion of community members are peripheral and rarely participate. Some remain peripheral because they feel that their observations are not appropriate for the whole or carry no authority. Others do not have the time to contribute more actively. In a traditional

meeting or team, such half-hearted involvement is discouraged, but these peripheral activities are an essential dimension of communities of practice. Indeed, the people on the sidelines often are not as passive as they seem. Similar to people sitting at a cafe watching the activity on the street, they gain their own insights from the discussions and put them to good use (Wenger, 2002, p. 56).

Lave and Wenger (1991) found that novices learned a great deal through "legitimate peripheral participation”—that is, by participating peripherally in a practice with opportunities to learn from more experienced practitioners. Creating opportunities for practitioners who are at varying intersections of experience and competence has the potential for strengthening the vibrancy of a community of practice—even when the level of engagement among the participants differs.

Developing Both Public and Private Community Spaces: The fourth principle relates to the community developing both public and private community spaces for connecting. Public community events serve a ritualistic as well as a substantive purpose. Through such events, people can tangibly experience being part of the community and see who else participates. They can appreciate the level of expertise the community brings to a technical or professional discussion, how it rallies around key principles, and the influence it has in the broader field or organization within which the community functions (Wenger et al., 2002). Considering again programs that are housed within institutions of higher education, it is typical that the learning management system utilized for delivering online courses includes ways in which community members can also connect privately through email or private messaging. Facebook is similar in that the network established by each individual can see all public posts, and the option of private

messaging is available for connecting individually both within and external to an individual's network.

Focusing on Value: The fifth principle concerns focusing on value. Value is key to community life because participation in most communities is voluntary. But the full value of a community is often not apparent when it is first formed. Moreover, the source of value often changes over the life of the community. Frequently, early value mostly comes from focusing on the current problems and needs of community members. As the community grows, developing a systematic body of knowledge that can be easily accessed becomes more important. (Wenger et al., 2002, pp. 60-61)

This principle is also evident in the evolving nature of the communities of practice developed by interpreter educators, researchers, practitioners, and administrators connected through the network of federally funded interpreter education centers. For example, between 2000-2016 this network was known as the National Consortium of Interpreter Education Centers (NCIEC). The directors of the funded centers met regularly to define and review their work as well as problem-solve common issues. In addition, the work of these centers involved a wide range of practitioner and field-based experts and consultants to work collaboratively within a community of practice to develop and evaluate resources, materials, curriculum, and publications. Ultimately, it has been "the systematic body of knowledge that can be easily accessed" (Wenger et al., 2002, p. 61) that has proven most useful to the field at large.
Other types of value were also reported in the literature. For example, Witter-Merithew et al. (2002) and Wiesman and Forestal (2006) discussed mentorship within programs where novices benefited from the mentoring relationships and the mentors also experienced the benefit of working with other mentors. Mentors connected by engaging with their own community of

practice with the value of providing support and encouragement for their common work. This same value was identified by Smith et al. (2012), who discussed the benefit mentors and supervisors gained by meeting together, outside the space of the practitioners they were supporting, and discussing their unique needs and how to improve their practice.

Combining Familiarity and Excitement: The sixth principle focuses on combining familiarity and excitement. As communities mature, they often settle into regular patterns of meetings, projects, and other ongoing activities. This was certainly the case with the community of practice that existed for nearly 16 years within the NCIEC. The familiarity of regular events created a comfort level that invited candid discussions. Ideally, the community of practice becomes a place where members have the freedom to ask for advice, share opinions, and try out their new ideas without judgment. They are places where members can find the latest tools, exchange technical or professional current topics, or just chat about whatever was on their mind (Wenger et al., 2002). Effective communities of practice should also supply divergent thinking and activity—topics and subjects that are pioneering or controversial enough to challenge normal ways of thinking and promote innovation. Members should see their community of practice as a place to think, reflect, and consider ideas for possible further development.

Creating a Rhythm for the Community: The seventh and final principle relates to creating a rhythm for the community.

> A combination of whole-community and small-group gatherings creates a balance between the thrill of exposure to many different ideas and the comfort of more intimate relationships. A mix of idea-sharing forums and tool-building projects fosters both casual connections and directed community action. There is no right beat for all communities,

> and the beat is likely to change as the community evolves. But finding the right rhythm at each stage is key to a community's development. (Wenger et al., 2002, pp. 62-63)

Within the RID Member Section listservs, there is often an increase in excitement and activity prior to, during, and immediately after a new product is introduced or there has been some training event—like a regional or national conference or a specialty conference (Ryan Butts, personal communication, April 18, 2018). Those unable to attend want exposure to the highlights and new information that was presented. Those able to attend want to reflect upon and discuss the highlights that had an impact on them.

Similarly, within StreetLeverage, a website for interpreters, there are numerous characteristics of a community of practice, and therefore there is a predictable rhythm to the community. When a new article is introduced, engagement peaks as dialogue occurs between the article author(s) and community members. Likewise, when a new video is posted, engagement peaks. "At the heart of a community is a web of enduring relationships among members, but the tempo of their interactions is greatly influenced by the rhythm of community events" (Wenger et al., 2002, p. 63). Ebbs and flows within long-term communities of practice are normal, and ideally activities are paced in a manner that allows for periods of high activity followed by periodic ebbs filled with familiar activities.

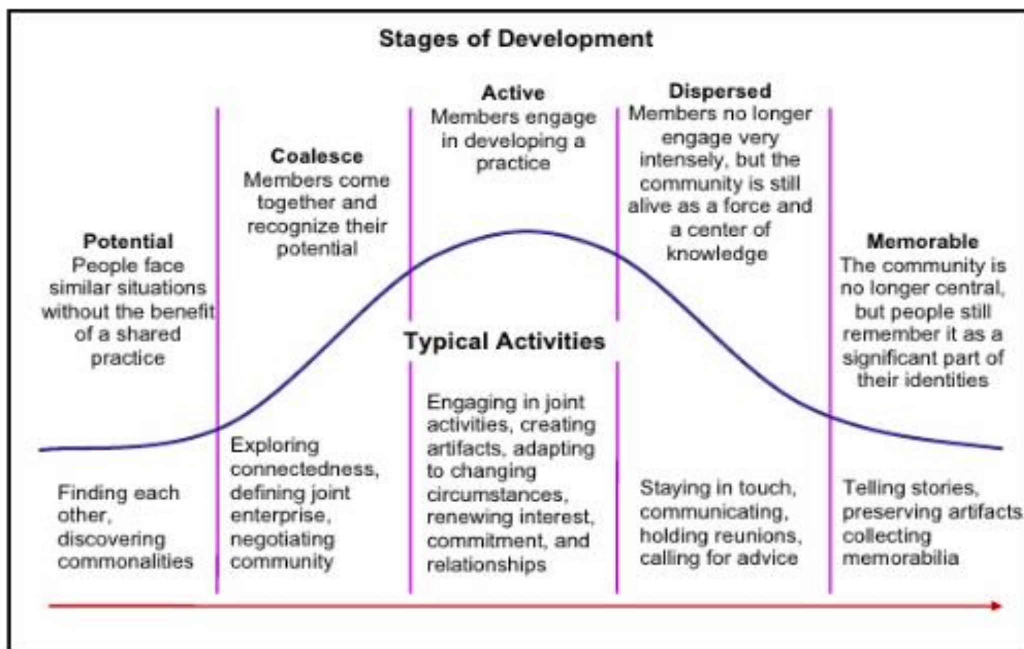
Stages of Development in Cultivating Communities of Practice

Wenger (2015) defined five stages of a community of practice: potential, coalescing, maturing, stewardship, and legacy. A developmental model with a stage sequence is useful in providing some direction, but such a model cannot be taken too literally. Rather, it must be considered indicative rather than prescriptive since each stage and sequence are merely typical with wide variations. Just as many of us still experience adolescence at 50 years of age or some

children mature quickly to deal with dramatic circumstances, communities vary widely in their developmental sequences. Some communities go through stages very quickly, and others spend much time in the same stage. Still, having a sense of stages and associated issues helps you foresee problems you are likely to face, understand the changing needs of the community, and take appropriate action. It helps you be patient when a community needs to deal with its development in its own time and prod appropriately when it is ready to move on (p. 1). See Figure 1 for a representation of the five stages of development.

Figure 1

The Five Stages of the Development of a Community of Practice



Etienne Wenger, Communities of practice learning as a social system, Systems Thinker, June 1998.

Best Practices in Cultivating Communities of Practice

Various authors have acknowledged that common barriers to forging and sustaining relationships within communities of practice include time restraints, lack of trust, lack of value, lack of competency in using technology and other community of practice tools, and size and

reach of the community (Huerta & Hansen, 2013; Lieberman, 2000; Probst & Borzillo, 2008; Sharratt & Usoro, 2003). Accordingly, relationship requires engagement, and quality engagement needs the application of innovative best practices.

Huerta and Hansen (2013) emphasized the importance of defining, through collaboration, a community's goals to create buy-in from its members. In addition, collecting evaluation data is important for adjustments in the community of practice based on input and feedback from members. Huerta and Hansen provided a useful set of best practices for learning community assessment planning: 1) articulating agreed-upon learning community program goals, 2) identifying the purpose of assessment (i.e., summative or formative), 3) employing qualitative and quantitative assessment methods for assessing the most critical outcomes for administrative and instructional team-member decision-making processes, 4) employing indirect and direct measures of community learning, and 5) ensuring assessment results are used and that community decision-makers are equipped with the information required to create high-quality learning experiences to meet the diverse needs of all the members.

Probst and Borzillo (2008) advocated for regularly providing the community of practice with external expertise as one strategy for engagement and sustaining relationships between members and the community. "Organizing regular and ad hoc meetings with external experts around new exciting topics may bring an increasing number of motivated members to meetings. These interactions between motivated people stimulate creativity, engagement and connection, and generate new perceptions and ideas for developing innovative practice" (Probst & Borzillo, 2008, p. 341).

Probst and Borzillo (2008) also identified five reasons communities of practice most frequently fail: 1) lack of a core group, 2) low level of one-on-one interaction between members

of the community, 3) rigidity of competences, 4) lack of identification with the community, and 5) practice intangibility. They detailed each factor and offered insight into ways to mitigate them to strengthen relationships within a community—the relationship with each other, with the practice, with new knowledge, and with information. Any activities utilized by a community to provide opportunities for formation of relationships at these levels is time well invested.

Agrifoglio (2015) emphasized that interpersonal relationships are the foundation upon which community evolves. “A community is a place in which people help each other augment their knowledge about a specific practice. Social relationships, especially if kept up regularly, enable discussion and debate among community members on issues within a domain, fostering ideas and developing a sense of belonging and commitment. The social dimension, thus, is a necessary condition to build a community of practice” (p. 2).

To build a community of practice, as Wenger et al. (2002) described, the interactions among members must have some continuity. For example, people who meet sporadically to discuss a particular topic do not constitute a community of practice. To build a community, the interactions must be regular, thus enabling members to develop a shared understanding of their domain and approach to their practice.

The role of social relationships within communities of practice has also been explored by other research (e.g. Lesser & Prusak, 1999). Based on social capital theory, “Communities of Practice are valuable … because they contribute to the development of social capital, which in turn is a necessary condition for knowledge creation, sharing and use” (Lesser & Prusak, 1999, p. 2). According to Nahapiet and Ghoshal (1998), social capital is the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit.

Nicodemus et al. (2015) reported on the use of storied narratives provided by experienced interpreters through interactions with novice practitioners as one unique application of relationship building that can begin early in the scope and sequence of an interpreter education program. Nicodemus and colleagues explained,

> After years of working in the community, these interpreter-teachers had become rich repositories of narratives about their professional experiences. Stories were a valuable commodity in the budding years of interpreter education in the United States. Few teaching materials were available. Research on interpreter pedagogy had not yet begun. Further, distinct courses on topics such as ethics, decision making, and professional practice were rarely offered, so teachers sandwiched stories about these topics in between rounds of interpreting practice. (p. 56)
>
> As interpreter education matures as a profession, teachers are calling attention to the constraints of conventional pedagogies in the preparation of interpreters. Narrative pedagogy provides a viable approach for interpreter educators to think anew about the classroom experience that they co-create with students. When they enact narrative pedagogy, teachers work with students to interpret shared experiences and discuss the art of interpreting. Stories can reveal authentic challenges in interpretation and lead to possible solutions for problems that may have otherwise been left for individual interpreters to resolve on the job. The power of narratives is that they point to the ambiguous nature of truth and suggest that truth can be analyzed in the historical and sociocultural constraints in which interpreters practice. Further, a narrative approach contextualizes knowledge and values and builds upon the other teaching methods. Narratives also afford opportunities for students to practice reflection, as well as to

describe and critically analyze episodes of their own emerging practice. Just as important, the use of narrative pedagogy enriches our own teaching and interpreting practice as we experience stories with our students. (p. 60).

This type of early introduction of relationship and community building into interpreter education programs can lay the foundation for expanding a social learning framework to include more structured use of communities of practice. This also ties into what Wenger et al. (2002) identified as another crucial element for cultivating a community of practice: the *practice* itself. Communities of practice framed within a practice profession orientation are comprised of practitioners who together develop and share a common repertoire of resources. Cultivating learning through interaction and relationships among members—around issues and topics important to their practice—builds the foundation needed to move a community of practice forward.

Communities of Practice in the Online Environment

Johnson (2001) stated the greatest problem with virtual communities is withdrawing or attrition. This problem can be reduced somewhat through good facilitation techniques and adequate scaffolding, especially in cases of online communication techniques and technical support. This perspective is shared by Winston (2006), who introduced eight categories of questions to incorporate into online learning for fostering greater critical thinking and engagement by program participants. Winston also emphasized the benefit of asynchronous discussion within online communities—a reality that allows learners time to think, reflect, and construct responses before posting. Using clearly articulated expectations and rubrics that define the quality and quantity standards for posts, Winston demonstrated how good facilitation techniques encourage continuity of participation in the community's social learning structure.

Finally, Winston offered examples of learning activities well suited to online learning—inclusive of collaborated activities, self-assessment, and peer review.

The Field of Healthcare

Attention to effective online learning strategies has also been discussed in the healthcare field. Mairs et al. (2013) discussed the reality that knowledge translation is becoming a critical component of the healthcare field, and online technologies are emerging as a key facilitator of efficient and timely knowledge exchange. Mairs et al. further asserted that through online technologies, stakeholders can share health knowledge regardless of geographical constraints, thus encouraging the advancement of knowledge in health and other fields.

Additional studies of online learning in the healthcare field shared a variety of observations about effectiveness of communities of practice. Mairs et al. (2013) indicated that health interventions and practices often lagged the available research, and the need for timely translation of new health knowledge into practice was becoming increasingly important. Mairs and colleagues conducted a review that indicated online strategies were diverse, yet all were applicable in facilitating online health-related knowledge translation. The method of knowledge sharing ranged from use of wikis, discussion forums, blogs, and social media to data/knowledge management tools, virtual communities of practice, and conferencing technology—all of which encouraged online healthcare communication and knowledge translation. The conclusion was that online technologies were a key facilitator of health-related knowledge translation.

Cassidy (2011) presented a brief discussion of social learning theories, the communities of practice framework, and related concepts. Examples of current online communities of practice used as a means for knowledge construction in various professional disciplines were presented in building a case for the fit between online communities of practice and the needs of nurses in

mental health. Nurses providing mental healthcare in rural areas have documented their needs for interdisciplinary teamwork, access to a collaborative learning environment, and ongoing contact with expert resources. Online communities of practice could potentially address a multitude of concerns identified by nurses practicing mental healthcare in rural areas.

Lees and Meyer (2011) used Wenger's theory of communities of practice, particularly his learning design framework, to describe and evaluate the pedagogy of an interprofessional continuing professional development program for health, education, and social care professionals. They presented findings from 27 post-intervention interviews conducted one year after the program. Key pedagogic features of small group working, action planning, facilitation, continued independent learning, and a safe learning environment were found to provide facilities for “engagement,” “imagination,” and “alignment” (Wenger, 1998), with the use of task-focused small group work especially appreciated by participants. Problems of falling attendance and marginalization were discussed, cultivating in the suggestion that careful selection of delegates and provision of sufficient organizational support might mitigate such problems.

Barnett et al. (2012) asserted that good general practice training was essential to sustain a qualified workforce of doctors; however, training was hampered by stressors, including professional, structural, and social isolation. General practice trainees could be under more pressure than fully registered general practitioners. Isolation could cause doctors to reduce hours and move away from rural practice. Virtual communities of practice in business have been shown to be effective in improving knowledge sharing, thus reducing professional and structural isolation. Barnett and colleagues recommended such an approach should be used with general practitioners.

Barnett et al. (2014) recognized general practitioner training in Australia could be professionally isolating, with trainees spread across large geographic areas, leading to problems with rural workforce retention. Barnett and colleagues used a seven-step process to establish and track the progress of using virtual communities of practice for general practitioners. The seven-step process used to initiate and guide the community followed established literature from the fields of situated learning and communities of practice. The study's results revealed that this framework for implementation of an online community helped overcome isolation and improved connectedness through an online knowledge-sharing community. Time and technology were identified as barriers that may be overcome by training, technology, and valuable content. It was evident that trust was built online, allowing for open and deep conversations of care concerns and practices.

Barwick et al. (2009) reported on a study that examined benefits of online communities of practice in the context of Ontario's children's mental health sector where organizations were mandated to adopt a standardized outcome measure to monitor client response to treatment. Participants in the online communities demonstrated greater use of a reporting tool in practice and better content knowledge. Barwick and colleagues perceived that communities of practice present a promising model for translating care-based knowledge in children's mental health and deserve further study.

Fung-Kee-Fung et al. (2009) discussed seven online collaborative initiatives serving surgeons. The online discussions and collaboration that occurred among the surgeons within the communities of practice led to changes in clinical care processes and improvements in clinical outcomes. Significant improvements in clinical outcomes such as decreases in mortality rates, lower duration of postoperative intubations, and fewer surgical-site infections, were reported.

Quality improvement process measures were also reported as increasing across all the collaborative initiatives. Success factors included: 1) establishment of trust among health professionals and health institutions; 2) availability of accurate, complete, and relevant data; 3) clinical leadership; 4) institutional commitment; and 5) infrastructure and methodological support for quality management. A community of practice framework incorporating the success elements described in this systematic review of the literature about online communities of practice involving healthcare professionals can be used as a valuable model for collaboration among surgeons and healthcare organizations to improve quality of care and foster continuing professional development.

Practice teachers and academics have a role in developing knowledge and promoting evidence-based practice with their students in supportive and creative learning environments. Recent advances in technology are enabling communities of practice to be developed online and may present a valuable opportunity to form greater connections between educators. To explore this idea, Swift (2014) conducted a systematic appraisal of published evidence relating to the impact of using an online community of practice to develop knowledge among healthcare educators. The findings revealed that online communities of practice offered a polycontextual environment that enhanced knowledge development, strengthened social ties, and built social capital. Communities that supported tacit knowledge development, information sharing, and problem solving were most valued, and existing information and communication technology tools were used to promote usability and accessibility. Swift stated, "Recognizing the value of tacit knowledge and using technology for educational development within workload hours will require a shift in cultural thinking at both an individual and organizational level" (p. 30).

Finally, Mancini & Miner (2013) offered reflections and lessons learned from a three-year university-community partnership that used participatory action research methods to develop and evaluate a model for learning and change. Online communities of practice were used to facilitate the translation of recovery-oriented and evidence-based programs into everyday practice at a community mental health agency. Four lessons were drawn from this project. First, the processes of learning and organizational change were complex, slow, and multifaceted. Second, development of leaders and champions was vital to sustained implementation in an era of restricted resources. Third, it was important to have the agency's values, mission, policies, and procedures aligned with the principles and practices of recovery and integrated treatment. And fourth, effective learning of evidence-based practices was influenced by organizational culture and climate. These important lessons need to be explored within the fields of interpreting and interpreter education, where evidenced-based applications of communities of practice and their effectiveness are limited.

The Fields of Interpreting and Interpreter Education

The use of online environments within the fields of interpreting and interpreter education have also been used, although evidenced-based outcomes are scant. Witter-Merithew et al. (2001) described a three-year in-service training program for K-12 interpreters (with a strong online component) and outcomes of the program. The online approach was necessary due to the distribution of students across 11 states within the United States Mountain Plains region. The researchers focused on one aspect of the program—development of self-assessment skills and peer-review skills. Witter-Merithew et al. emphasized the importance of community building among participants to allow for open and candid discussion of self-assessment of interpreting performance and to engage in peer review and feedback. This aspect of the program design was

built around a community of practice framework, and the participants possessed a wide range of varying degrees of language and interpreting competences, as well as years of experience as an interpreting practitioner. Participants in this online program gained an average of one full scale of improvement on the Educational Interpreter Performance Assessment.

Bowen-Bailey et al. (2012) described an in-service training program for K-12 interpreters that included a collaborative learning community component where learners and teachers came together through face-to-face sessions and blended technologies. The program's purpose was to enhance interpreting performance in the public classroom setting. Bowen-Bailey and colleagues discussed the challenges associated with creating a collaborative learning environment "in which the learners can work together to construct meaning" (p. 13). Strategies employed for creating such a learning environment included face-to-face orientation, followed by regular, facilitated online discussion forums and periodic live chats, and a variety of skill development activities—all of which contributed to a community of practice comprised of K-12 interpreter practitioners, teachers, and mentors. The role of technical support in troubleshooting technical problems for the asynchronous portions of the program, coupled with knowledgeable facilitators who worked to be consistently responsive and foster peer-to-peer interaction, were emphasized. This study can serve as an evidenced-based example of how communities of inquiry and practice can be built into online in-service training programs for sign language interpreters, as well as provides a model of peer-to-peer reflective practice.

Hearn and Moore (2006) described a mentor training project implemented through online technologies. The purpose was to provide certified interpreter practitioners with skills and abilities to support interpreter education program students during their internship placements within the community. The goal of the training was to equip the mentors with a common

framework from which to work as mentors via an asynchronous online format. Concurrently, students engaged in an online seminar where they discussed and reflected upon their experiences engaging in mock interpreting for college classes without any actual deaf students. The online format allowed the interpreters/mentors to observe and interact with the students. Thus, mentors not only had the opportunity to read about and discuss the development and growth patterns of the adult students in their online forum, but also to observe the growth in action as students discussed and reflect upon their mock interpreting experiences. Students had the opportunity to develop connections with potential mentors. Hearn and Moore emphasized the value of having a technical support specialist who observed and provided support and feedback as needed. One major benefit was developing a relationship with the mentee. One mentor wrote, “The most beneficial information I learned had to do with what an intricate process building a mentor/mentee relationship really is, and that it doesn’t happen automatically; if left to develop on its own, in fact, the relationship will usually perish” (p. 162).

One of the most innovative examples of a community of practice in an online environment within the field of interpreting is Street Leverage. According to the founder,

> Street Leverage was founded in July of 2011 with the ambition to equip interpreters with resources that educate, inspire, and make sign language interpreting better for everyone. Central to achieving this goal is the curating and publishing of articles, presentations, and interviews that reflect upon the various challenges and current practices within the field. These reflections, predominantly user-generated, are most often submitted via www.streetleverage.com/submissions. Upon completion these articles/presentations/interviews are distributed via social networking platforms and various web channels to foster professional discourse among a wide array of

practitioners, consumers, and industry stakeholders. (Brandon Arthur, personal communication, April 19, 2018).

The discourse that results from the distribution of these articles, presentations, and interviews can be found on StreetLeverage.com, Facebook, and/or Twitter. The authors and presenters, along with the StreetLeverage editorial team, endeavor to ensure the conversations maintain an appropriate level of respect for all participants. The discussions occurring directly on StreetLeverage.com are also moderated. In addition, there are several interpreter discussion groups throughout the country that circulate StreetLeverage content to its members for discussion on a predetermined schedule. There are also interpreter preparation programs using StreetLeverage material as part of their curriculum to encourage students to engage in a review of contemporary thinking and discuss challenges and practices within the field. StreetLeverage also has plans to launch a dedicated educational site to host continuing education opportunities within the field of sign language interpreting while fostering a greater level of professional discourse.

According to current trends, the use of technology is anticipated to expand the reach of communities of practice within interpreting and interpreter education. Curtis (2017) indicated that approximately half of respondents in her study of supervision in sign language interpreting attended their last supervision session in person (48.04%) and half participated online using a webcam (48.04%). Those who participated in an ongoing supervision group currently were more likely to have used a webcam to participate in their most recent session (68.75%), while those in an ongoing supervision group were more likely to have had their most recent session in person (60.53%). These findings suggest increased use of distance technology by formal ongoing supervision groups.

Issues and Concerns in Communities of Practice

There are also reported barriers to cultivating communities of practice. Li et al. (2009) argued that the different interpretations of what constitutes a community of practice make it challenging to apply the concept or take full advantage of the benefits such groups may offer. Furthermore, Li et al. asserted that the tension between satisfying individuals' needs for personal growth and empowerment versus an organization's bottom line is perhaps the most contentious issue that challenges development of communities of practice. Since a community of practice is still an evolving concept, it may be wise to focus on optimizing specific characteristics, such as support for interaction among members, sharing knowledge, and building a sense of belonging. Interventions that facilitate relationship-building among members and promote knowledge exchange may be useful for optimizing the function of these groups.

Wenger (2000) cautioned that communities of practice cannot be romanticized. “They are born from learning, but they can also learn not to learn. They are cradles of the human spirit, but they can also be its cages” (Wenger, 2000, p. 230).Effectiveness and progress must be measured empirically. The need for further study is one of the prevailing issues and concerns raised in the literature about communities of practice that evolve within a social learning system.

Drawing on the work of a variety of scholars, Roberts (2006) documented numerous concerns related to communities of practice, most associated with lack of research on persistent issues and their implications for effectiveness of such social learning systems. The first area of study identified by Roberts was how power and the broader socio-cultural environment impacted the success of communities of practice. Included within the broad socio-cultural environment was the relative weight given to the individual versus the community. Future comparative

investigations of communities of practice within very different socio-cultural environments were recommended.

A second area for research noted by Roberts (2006) concerned the organizational context of communities of practice. Study is needed to determine in which organizational contexts communities of practice would be the most appropriate knowledge management tool? There is also a need for appreciation of interaction among communities of practice between formal organizations (such as institutions of higher education and business) and extra-organizational communities (informally initiated communities that operate outside of organizational boundaries). Furthermore, an understanding of how to leverage both types for collective knowledge and expertise to benefit a community practice would be helpful.

Third, Roberts (2006) asserted that an understanding of the variations in the prevalence and success of communities of practice in organizations of different sizes and in diverse sectors is needed. Roberts also emphasized the importance of organizers of communities of practice developing an appreciation of the variations between communities of practice of disparate sizes and spatial distributions and their implications for achieving desired goals and tasks. Finally, he asserted there is a need to refocus on Lave and Wenger's (1991) original conceptualization of communities of practice as a context for situated learning: whether the evolution of such communities continues to support the goals of participation, identity, and practice, and whether there has been a shift from a focus on community to a focus on practice.

Some of the issues identified by Roberts also surfaced in Amin and Roberts' (2006) article:

> The [communities of practice] approach has begun to attract criticism concerning, for instance, the neglect of power (Contu & Willmott, 2003; Fox, 2000), its failure to take

into account pre-existing conditions such as habitus and social codes (Mutch, 2003), its widespread application within organizational studies beyond its original focus on situated learning (Handley et al., 2006), and the term 'community' itself, which is problematic, embodies positive connotations, and is open to multiple interpretations (Lindkvist, 2005; Roberts, 2006). (p. 4).

The need for further evidenced-based approaches was also discussed in relation to mentorship programs for sign language interpreters. Delk (2013) indicated several issues that must be considered, inclusive of the need for evidenced-based models that indicate what approaches work for who and under what conditions. Whether knowledge transfers from simulated versus situated learning experiences implemented during mentoring also needs to be evidenced.

Despite the issues highlighted in this section, in the next several years, as communities of practice are applied and studied in increasing numbers of organizational contexts—including interpreting and interpreter education—a deeper understanding of the strengths and weaknesses of the approach will be achieved. Notwithstanding its current issues and limitations, the communities of practice approach does provide the fields of interpreting and interpreter education with a means to explore the transfer of tacit knowledge in a social learning context. In addition, given the small size of the interpreting profession, the application of communities of practice framework through a range of technology allows for capacity-building. Educators and practitioners can connect across diverse geographic areas, increasing the interpreting field's ability to leverage its limited resources and be cost=effective in offering access to communities of practice.

Further Research Needed on Communities of Practice

within the Fields of Sign Language Interpreting and Interpreter Education

The potential and contribution of communities of practice grounded in social learning theories are evidenced across the literature from a variety of practice professions, including sign language interpreting and interpreter education. However, the specific benefits of applying the theories of social learning and situated learning have not been sufficiently investigated. There are few evidenced-based studies that mostly involve small numbers of interpreters and interpreter educators. Few studies have been replicated and many questions remain. The promise of advancing the practice of interpreting is great, both for novice practitioners as they are inducted into the field, and for seasoned practitioners in creating greater continuity of practice. The ability of the fields of interpreting and interpreter education to fulfill that promise is currently being delayed by the struggle to fully conceptualize and embrace the work of interpreters as a socially-constructed phenomena grounded in relationships with consumers and one another. As a result, both completion of this conceptualization process, coupled with innovative applications and investigation of those applications of social learning systems like communities of practice, will need to move forward concurrently.

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