Investigating the Role
of Informal Online Communities of Practice (CoPs)
in Professional Learning:
The Experience of Second/Foreign Language Teachers

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Abstract
This study examined Ukrainian language teacher notions, attitudes, feelings, and experiences related to participation in informal online Communities of Practice (CoPs) as an alternative means of professional learning. Findings from samples in Canada and Ukraine indicate opportunities for, and some challenges to, professional learning within virtual (online, Web-based) communities. In addition to traditional data collection methods, the study involved a novel case study analysis of two focus groups (4-6 teachers each), one in Lviv, Ukraine, which was physically co-located, and another in Edmonton, Alberta, conducted using the Adobe Connect online meeting platform. Group members in each city participated in a Repertory Grid activity, the aim of which was for participants to move towards consensus on elements and constructs they felt characterize informal online CoP experiences for professional learning—itself an exercise in community-building (Gaines & Shaw, 2012b). A theoretical framework was developed to guide the investigation, called the “Autonomous Learning Framework for Informal Online CoPs (ALFIO-CoPs),” which helps to elucidate knowledge creation in informal online inquiry communities. The framework was used to address some of the factors which influence the broader informal online CoP experience for personally meaningful professional learning. The Ukrainian language teachers involved in this investigation strongly approved of the informal online CoP for professional learning, some even suggesting that it is the only distinct form of alternative online professional learning, while viewing other online networks and groups as more casual or personal in nature. As professionals, they recognized that emotional self-efficacy, technological self-efficacy, and technological pedagogy are uniquely supported in these communities, owing to such factors as community self-determination, mentorship, apprenticeship, and the ubiquity of the learning experience. Nonetheless, other factors, such as awareness of this form of professional learning, Internet access, time commitment, praxis issues, and professional recognition of the community experience were among the challenges to participation identified by the teachers involved in the study, and which warrant further research.

Keywords: Communities of Practice, online communities, informal learning, social learning, collaborative learning, teacher self-efficacy, second/foreign language
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“Cultivate the habit of being grateful for every good thing that comes to you, and to give thanks continuously. And because all things have contributed to your advancement, you should include all things in your gratitude.” — Ralph Waldo Emerson

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Chapter 1 - Introduction

Preface: Why this study and why now?

"That is what learning is. You suddenly understand something you've understood all your life, but in a new way."

— Doris Lessing

Over the course of undergraduate and graduate work in Ukrainian studies, Slavic languages and literatures, and elementary education, coupled with raising three children, I have developed a special interest in flexible second language learning, defined by the ability of second language teachers to apply new methods as a matter of course (Stepanek, 2015). The process has been fascinating, but not without its challenges. The Ukrainian Canadian community has experienced tremendous change in over four waves of immigration, each wave engendering very different notions of cultural identity, nationalism, language, and education (Lynn, 2014).

What’s more, through the process of cultural assimilation, Ukrainian language learners have become increasingly diverse. Both historically and in the modern era, ethnic Ukrainians in Ukraine have been challenged by both forced and circumstantial language attrition brought about by foreign occupations and regimes (Khrystya, Bondarenko, & Karakash, 2007). The institutionalization of Russian in Ukraine during the Soviet period, which came to mean both ethnic belonging as well as ethnic practice, has had a lasting impact on national development and language policy (Kulyk, 2011). As a result, the process of enacting new language legislation in an independent Ukraine has been rife with division and inconsistency as the country tries to build a new democracy, while subject to ongoing political and economic interference from Russia (L'Nyavskiy, 2016). In the Canadian context, the Ukrainian language ecology has been affected by the political, economic, and psychological impacts of the English-language environment in which it is situated as a minority language (Hudyma, 2011). Nevertheless, Ukrainian has also experienced revival, thanks to Ukraine's Declaration of Independence in 1991 and renewed institutional uptake—on the one hand—and the strong educational institutions and programs which find support in the favourable democratic conditions of Canadian
life—on the other. For all these reasons, Ukrainian language learners do not constitute a uniform group, neither in Ukraine, nor in Canada. As a result, Ukrainian language teachers have had to reflect upon their original notions of what to teach, how to teach it, and what education means today in their classrooms.

Generally, second/foreign language (SL/FL) learning communities no longer find themselves conveniently gathered in large numbers in any one setting. They are everywhere, including places where traditional learning is difficult or disrupted (Kutsyuruba, 2013). Their wide-spread dispersion and differentiation requires a paradigm shift in the thinking of second language teachers about how learning occurs, and what constitutes a learning space (Kutsyuruba, 2013; Schwieter, 2013). Recognizing the fact that in 2017 we have at our disposal unheard-of pedagogical opportunities presented by new and emerging digital technologies, the need is greater than ever for teachers to understand their role as learners, so that they can be innovative, agile, and engaging facilitators of learning (Ginsburg, 2012). As Columbia University linguist John McWhorter has remarked: “Today, new forces are at play. Languages are transformed by technological advances that transcend borders and redefine how we communicate and with whom” (McWhorter, 2015, n.p.).

Spirited by these realizations, I decided that more focused research investigating the impact of informal online Communities of Practice (CoPs) could provide further insights, not only into learning outside the school environment, but about “boundless learning.” By this I mean teaching and learning in an era of growing uncertainties which involves community-based pedagogic practices for new, borderless learning spaces (Pawson, 2016). In my work, there is, as well, an element of Epictetus’ thought about personal volition and self-education (White, 1983). To this end, I was curious to assess the potential of digital affordances to expand the repertoire of means and domains of learning, and to uncover connections between these mind tools and learner self-efficacy.

It is for these reasons that the study of informal online CoPs —groups with a shared identity around a topic that represent a collective intention to manage a domain of knowledge and to sustain learning about it (Lave & Wenger, 1991), beyond institutional
structures, emerged as an unequivocal choice. It has provided me with an opportunity to gather evidence about the way teaching and learning are informed by learner participation with digital literacies across intersecting global networks, toward ubiquitous interactive knowledge construction.

**Purpose of study**

In this study, I examined Ukrainian language teacher notions, attitudes, feelings, and experiences related to participation in informal online CoPs as an alternative means of professional learning. I investigated findings from samples in Canada and Ukraine for indications of opportunities for, and challenges to, professional practice development within virtual (online, Web-based) communities. In order to assess the potential of online spaces for active and ongoing professional learning, I conducted a novel case study of two focus groups (4-6 teachers each), one in Lviv, Ukraine, which was physically co-located, and another in Edmonton, Alberta, which took place in the *Adobe Connect* online meeting platform. Group members in each city participated in a Repertory Grid (Rep Grid) activity (described later), the aim of which was for participants to move towards consensus on elements and constructs they felt characterize informal online CoP experiences for professional learning—itself an exercise in community-building (Gaines & Shaw, 2012b). A theoretical framework was developed to guide the investigation (which will be described later), called the “Autonomous Learning Framework for Informal Online CoPs (ALFIO-CoPs),” which helps to elucidate knowledge creation in informal online inquiry communities. The framework attempts to address some aspects of the broader informal online CoP experience for personally meaningful professional learning.

The technologies of Web 2.0 have proven to be transformative in education, and, more specifically, in foreign language learning (Harrison & Thomas, 2009). Introduced in 2004, the term “Web 2.0” refers to the transition from Web 1.0, which was characterized as a Web for reading only, to a Web for reading and writing (McManus, 2005). In addition, Web 2.0 represents a platform for innovative technologies and a space for users to create and share content (Cormode & Krishnamurthy, 2008). It includes social networks (Facebook, Twitter, etc.), collaborative knowledge development tools...
INVESTIGATING THE ROLE OF INFORMAL ONLINE COPs IN PROFESSIONAL LEARNING

(podcasts, videocasts, blogs, microblogs), and content curation platforms such as Wikis (Dede, 2008). Knowledge is decentralized, accessible, and co-constructed by and among a wide range of users. From a practical standpoint, Web 2.0 has enabled participatory and distributed practices within Web spaces which give learners more choice (Lankshear & Knobel, 2006). Other researchers have referred to Web 2.0 as relationship technologies and social digital technologies (Greenhow, Robelia, & Hughes, 2009). As such, these technologies permit both teachers and students to create and participate in multi-platform collaborative learning environments. These environments have been shown to promote active and creative language development (Bonwell & Eison, 1991; Wang & Vasquez, 2012). In fact, the use of information and communication technology (ICT) in language learning is well established; evidence indicates that it increases the breadth of access and exposure to linguistic and cultural materials, authentic language learning interactions, and ongoing meaningful feedback (Zhao, 2003).

However, the introduction and acceptance of ICT has not been easy, owing to persistent issues related to teacher self-efficacy (the belief in one's ability to accomplish a task) (Bandura, 1977) concerning the adoption of technology and the development of technological pedagogy (Hur & Brush, 2009; Kyonghye & You-Kyung, 2013; Murugaiah et al., 2010; Pino-Silva & Mayora, 2010; Wesely, 2013). This is particularly significant, since a teacher’s sense of self-efficacy has been shown to influence the teacher’s actions, and student outcomes (Beck, 2014; Chacón, 2005). For these reasons, the finding that teacher collaboration is an effective intervention in the improvement of teacher self-efficacy is promising and bears importance for this study (Henson, 2001; Kyongye & You, 2013; Mann, 2005). A number of studies show that teacher collaboration, and especially, readiness to experiment with new skills and diverse technologies for collaboration, contributes to improved teaching practice, increased self-efficacy, enhanced collective efficacy within a teacher community, and greater commitment to continuous professional improvement (Henson, 2001; Kyongye & You-Kyung, 2013; Mann, 2005).

Related research dating back to the 1990s in the field of TESOL (Teachers of English to Speakers of Other Languages) demonstrates that informal teacher study groups
support and enhance professional learning (Bailey, Curtis, & Nunan, 1998), since teachers’ knowledge and practice construction are not only individual, but social (Nishino, 2012). In the past, some teacher-participants have expressed misgivings about such groups, due to the fact that participation was mandated, and the nature and purpose of the gatherings were unclear (Dufour, 2007). Research results indicate that a productive professional community for learning represents a self-directed collaborative effort to build shared knowledge regarding effective teacher practices (DuFour, 2007). Likewise, research attests to the fact that the discomfort and dissonance which arise as people are asked to act in new ways, by, for example, participating in informal professional learning communities, eventually help to build persistence, resilience, flexibility, knowledge, and skills, while participants overcome initial resistance through interaction and reflection (DuFour, 2007). What’s more, it is the “cumulative process” (DuFour, 2007, p. 7) of such communities which actualizes their ultimate value (i.e., creating collective capacity). It is not surprising, therefore, that, in some cases, research findings attribute the success of such communities to their focus on members being learners first (DuFour, 2007).

The question of the role of online communities in meeting the informal and ongoing learning needs of professionals is indeed important, given that digital spaces extend the location and timeframes for learning. In a study of the experiences of participants in a workplace online CoP, it was shown that more experienced practitioners “gained new insights into their own professional identities and the meaning of their work” (Gray, 2004, p. 20). Meanwhile, peripheral “lurking” (background observation) by individuals new to such communities allowed them to become accustomed to the skills and culture of the environment, refine their individual professional presence, and eventually contribute to the identity of the collective (Gray, 2004). Hence, all participation in such communities, even in the background, demonstrates “authentic learning” (Lave & Wenger, 1991; O’Donnell & Tobbell, 2007). This means learning predicated on “real world” tasks where real-life problems are identified, analyzed, and resolved (Herrington, Oliver, & Reeves, 2003; Hong & Sullivan, 2009). Furthermore, in her framework, Pahomov (2014) noted that this kind of learning is structured around five core community values: inquiry, research, collaboration, presentation, and reflection.
In Gray’s (2004) workplace learning study, both engaged and peripheral participants indicated the importance of their involvement in reducing the sense of isolation attributable to job function or geographic location. As a self-organized system for informal learning, the studied CoP showed that learner interactions consisting of shared experiences, stories, successful approaches, and ways to solve problems, distinguished this form of learning, because the participants “voluntarily learn[ed] together about practices that matter to them” (Gray, 2004, p. 23, emphasis added). Gray (2004) further noted that CoPs, therefore, cannot be mandated into existence: “they exist only as long as participation has value to their members” (p. 23). In addition, Gray (2004) observed that CoPs provide a unique opportunity to learn “not only how to do, but how to be” (p. 23). Thus, CoPs are an important means of learner enculturation. In addition, CoPs are in keeping with andragogy, which defines the motivational aspects of adult learning as previous experience, relevant problems rather than content, and the active involvement of the learner in the learning process (Knowles, 1985).

Research questions

For the above-outlined reasons, in the current research I sought to explore language teacher perceptions of learning in informal online CoPs, to come to a better understanding of the factors which might influence valuable professional learning for them. The goal of the research was to determine the impact of participation in these communities in three important areas identified by earlier research: emotional support (confidence), technological self-efficacy (shared repertoire), and technological pedagogy (mentorship). In particular, the following research questions guided my study:

1. What factors influence professional learning experiences for Ukrainian language teachers engaged in informal online CoPs?

2. What differentiates informal online CoPs from other forms of professional learning for Ukrainian language teachers?

3. What are some key challenges faced by Ukrainian language teachers to participating in informal online CoPs for the purposes of professional learning?
Previous studies have noted that more investigation is needed into the learning conditions and professional value of teacher collaboration in informal online environments, with very little research having been conducted thus far on the informal online learning experiences and challenges faced by geographically-distributed language teachers.
Chapter 2 - Literature review and theoretical framework

Introduction

Research to date on teacher involvement in informal online CoPs for professional learning is limited (Amin & Roberts, 2008), and, for second/foreign language teachers, there is less still (Fraga-Cañadas, 2011). This is due to the relative novelty of informal virtual communities as a professional learning option, their diversity, and in the second/foreign language field, their modest number. Nevertheless, owing to increasing interest in teacher collaboration for continuous learning, the range of investigations about CoPs is growing, and the results are encouraging. The current study addresses several of these important findings and discusses certain remaining gaps in the research warranting further examination.

Informal learning in online CoPs

CoPs have proven to be valuable professional learning environments for practitioners (Omvidar, Kislov, & Wenger-Trayner, 2014). They have been shown to successfully challenge cognitivist theory about learning as strictly an individual process, and demonstrate the relevance of joint participation in shared practices (Omvidar, Kislov, & Wenger-Trayner, 2014). This is especially true of communities which form spontaneously, and which require little formalization (Brown & Duguid, 1991; Lave & Wenger, 1991; Omvidar, Kislov, & Wenger-Trayner, 2014). Investigations suggest that the reason for this is the complex, interconnected environment represented by these practice settings, in which the notion of knowledgeability is characterized by multiple sources of accountability (Cranefield & Yoong, 2009; Omvidar, Kislov, & Wenger-Trayner, 2014; Treleaven, Sykes, & Ormiston, 2012).

As the current study is concerned with informal online CoPs, an understanding of what is meant by informality in these communities is helpful. Expanding on prior research concerned with the typology of online CoPs, Hara, Shachaf, and Stoerger (2009) have introduced the category of “open online Communities of Practice that are not constrained by any organizational context” (p. 740). These researchers maintain that this category is the most conducive to interaction on an ongoing basis. Furthermore, their
revised typology study identified certain elements of open (informal), online CoP settings, which distinguish them from organizationally-based or mandated ones. For example, according to these authors, open CoPs are free from any factors which limit innovation in thought, communication, or practice. These conclusions have been substantiated by subsequent research, which has determined that open, Web-based communities are beneficial global virtual learning spaces, because they support self-directed professional curiosity (King, 2011). Self-direction for life-long learning has been shown to be fundamental to success in adult education (Merriam, 2001). It derives from the Self-Directed Learning (SDL) model introduced to distinguish adult learning from child learning (Tough, 1967, 1971). This concept has continued to evolve to include a focus on the quality of the learning experience and specifically how adult learners manage their self-directed learning. This development is known as Self-Regulated Learning (SRL) (Zimmerman, 1989, 2000; Zimmerman & Campillo, 2003; and Zimmerman & Moyan, 2009), and is considered in the framework constructed for the current study.

As a result, the more recent spread of informal virtual CoPs, in which teachers can share their pedagogical knowledge online (Dede et al., 2009; Rogers, 2000; Stevens, 2006; Tseng & Kuo, 2014), is viewed as a significant development because of increased opportunities for teacher interaction and learning unhampered by issues of time or place (Lord & Lomicka, 2008). Through virtual teachers’ networks, which Stoll and Louis (2007) have termed “professional learning communities,” educational professionals can acquire new practices and generate new knowledge (Harris & Jones, 2010). According to Fox (2005), informal online CoPs are a new form of “imagined community” (p. 108), whose interactions range from novice to expert, allowing for both improved individual and social learning (Lave & Wenger, 1991). What’s more, these communities reflect the concept of “knowing how to be in practice” (Brown & Duguid, 2002), which underlies participants’ professional identity development (Gannon-Leary & Fontainha, 2007). The work of Johnson (2005), who studied the experiences of virtual, distributed CoPs for English as a Foreign Language (EFL) and English as a Second Language (ESL) teachers, revealed that a key feature of these CoPs is the transfer of implicit or tacit knowledge.
gained through frequent, informal, non-verbal exchange. This finding is especially relevant to the Ukrainian language teachers who participated in this study.

Teacher-researchers note that professional Twitter communities, for example, continue to grow, owing to the ability of members to attribute shared meaning to situations arising in these communities, and to negotiate common experiences among fellow teachers in any country (McLeay, 2008). This results in mutual stewardship of the community (Kaulbeck & Bergholdt, 2008). More contemporary research focusing on Facebook groups indicates that individual language teachers are initiating reciprocal, highly-motivated language learning and teaching communities through diverse applications, such as Skype, iChat, and Google Talk (Eamer, 2013). This research also concludes that the existence, success, and increasing number of these self-organized CoPs for language teachers suggests that those teachers who have resisted the use of online, synchronous (face-to-face) language learning are likely soon to find their skill set obsolete (Eamer, 2013). A cursory search of social media reveals various examples of informal CoPs which have arisen in response to the need of language teachers to build upon skills and resources in an ongoing, collaborative manner. These groups include Telecollaboration for Intercultural Language Acquisition (TILA), Interactive Teaching in Languages with Technology (ITilT2), the Distance Learning Online Community eGroup of the ACTFL, EUROCALL Facebook, and the ELT Professionals Around The World group in LinkedIn, among others.

**Informal vs. formal online professional learning communities**

Teachers have reported that traditional school administration or school board-assigned collaboration for professional development (PD) has little impact on both teaching and learning (Kyonghye & You-Kyung, 2013; Risner, 2009; Saville, 2013). As part of the ongoing debate on this issue, Noddings (2003) meaningfully argues that teaching is a "relational practice" (p. 248), and not simply a profession. This is because there is something to be gained by understanding this notion as an activity, one in need of constant refinement: "[n]ot only must teacher[s] acquire and continually extend [their] store of broad cultural knowledge, [they] must also be committed to establishing and maintaining relations of care and trust" (Noddings, 2003, p. 250). Similarly, in the
discourse to operationalize a definition, learning has been described as transformative changes in thinking which result from experience (Mezirow, 2000). Within the context of these understandings of teaching and learning, self-organized, online CoPs have been reported to offer otherwise unavailable resources (Kyonghye & You-Kyung, 2013; Risner, 2009; Saville, 2013). Teachers have also declared that online learning communities provide varied experiences, and a broad range of geographical and pedagogical representation (Vescio, Ross, & Adams, 2008). Teachers have noted as well that this array of contexts, as compared to their daily professional milieux, allows the widest access to pedagogical partnerships (Ernest et al., 2013; Hur & Brush, 2009; Lord & Lomicka, 2008; Murphy & Laferrière, 2003; Risner, 2009; Saville, 2013; Tseng & Kuo, 2014; Vescio et al., 2008; Wesely, 2013). In addition, it has been documented that participation and experience gained in virtual learning communities build personalized, contextualized knowledge which informs action. In turn, the action within the individual teacher’s practice contributes knowledge back into the community (Murphy & Laferrière, 2003; Murugaiah et al., 2010; Saville, 2013; Sing, 2006). Evidence of this can be found, for example, in the interactions of the over 4300 members of the Ontario Teachers Resources and Idea Sharing Facebook community. A case in point is their discussion about how adult learning approaches, such as identifying common themes across various disciplines, can be applied with elementary students to help develop expertise throughout the learning community.

Results from a study of the first two years of a virtual teacher CoP in Brazil concluded that teachers require “plentiful time and support for reflection and interactions with other teachers” (El-Hani & Greca, 2012, p. 1328), that traditional, institutionally-based professional development does not provide sufficient opportunities for this, and, what’s more, is frequently disconnected from teachers’ practice (El-Hani & Greca, 2012). Teacher-learners require a persistent, sustained social network for sharing and developing an overlapping knowledge base (Barab et al., 2002). According to Barab et al. (2002), CoPs involve praxis (the application of theory-informed knowledge and skills) in a way that other learning groups do not. What this means is that learning in the CoP comprises “social processes, resituating or recontextualizing (and not only translating or transposing) the meaning of formal descriptions and prescriptions, while carrying out a
given task” (El-Hani & Greca, 2012, p. 1331). These findings are in concert with the ideas of Richard Sagor (2010), founder of the Institute for the Study of Inquiry in Education, according to whom being a professional means being a learner. Becoming more professional as a teacher requires interacting with other teachers about practice, engaging with the research—becoming a teacher-researcher—and contributing new knowledge in the field of teaching (van Oostveen, 2005).

Investigating the ways in which we share our learning so as to facilitate growth in learning, Tseng and Kuo (2014) explored the conditions in which non-formal learning can be optimized. They concluded that members of open, online knowledge communities better regulate their “internal motivation, external demands, interpersonal relationships, help-seeking strategies, as well as confidence of capability in utilizing social resources and performing knowledge sharing tasks” (p. 1043). This was due to the strong sense of community characterized by emotional attachment and empathy in non-mandated online CoPs. Sharratt and Usoro (2003) referenced earlier research which stated that informal and spontaneous knowledge sharing is particularly necessary to generate creative solutions. Among these earlier researchers, Davenport and Prusak (1998) concluded that in such learning communities, “ideas breed new ideas and shared knowledge stays with the giver while it enriches the receiver; only new knowledge resources have unlimited potential for growth” (pp.16-17). Furthermore, researchers have remarked that conversations in online learning communities not only reshuffle the mental deck, but create entirely new cards (Sharratt & Usoro, 2003; Zeldin, 1998). In other words, CoP members are able to take full advantage of both individual cognitive and social capital factors (Tseng & Kuo, 2014). This, in turn, leads to “knowledge preserved, shared, learned, created, and utilized into the collective intelligence” (Tseng & Kuo, 2014, p. 1044). In keeping with the evolution of theories about learning and cognition, scholars of constructivism and situated learning have further emphasized the social nature of meaning-making and the critical importance of interactive reciprocity to the social construction of new knowledge (Barab & Duffy, 2000; Cox, 2005; Johnson, 2001; Lai, Pratt, Anderson, & Stigter, 2006). Moreover, a recent review of the literature shows that research supports the fact that collective intelligence is built through the affordances and experiences of collaborative, Web-based, informal online CoPs (Macià & García, 2016).
Informal online communities for learning have been called an answer to the increasing need for rapid knowledge growth and life-long learning in diverse fields (Ala-Mutka, 2010; Conlon, 2004; Gray, 2004; Tseng & Kuo, 2014). Scholars have remarked that the critical ability of self-regulation, essential for investing effort in learning, improving self-efficacy, and adopting learning goals, is best fostered in informal CoPs, where opportunities to collaborate and mentor are virtually unlimited (Ala-Mutka, 2010; Conlon, 2004; Gray, 2004; Tseng & Kuo, 2014). Self-regulated learning in informal settings is characterized by a metacognitive process comprised of the observation of one’s performance, comparison of one’s performance to the others in the community, and reflection upon the perceived difference in order to exercise change in thinking. The informal online CoP ecosystem features overlapping roles, responsibilities, and sub-communities, all of which reinforce one another (Cranefield & Yoong, 2009).

In her recent mixed methods study of teachers’ digital practices and the shifting spaces of teacher relationships, Homan (2014) remarked that the line between teachers’ personal and professional digital lives has become considerably less defined as teachers take advantage of diverse networks, such as Facebook, Twitter, Google+, and Goodreads, to seek advice, express opinions on issues of importance to them, collaborate on new approaches, and build collegiality. Earlier research has already acknowledged the positive contribution of teachers’ digital literacy experiences to the formation of student literacies (Jewitt, 2008; Jones, 2006; Martin, 2005). However, most of this research has been limited to school-based or professionally-mandated learning networks, which does not address the rich and flowing experiences of informal digital conversations in social, network-based communities, and how they shape local practices (Homan, 2014; Tyner, 2014). In Reassembling the Social, Latour (2007) observes that digital literacy practices in these informal communities are simultaneously local and global. This is in line with Self-Determined Learning theory (Blaschke, 2012), which states that these communities are characterized by dynamic commonalities (Hase & Kenyan, 2013). Other research suggests that personal professional knowledge is, in fact, poly-contextual, and becomes embedded in complex online environments (Cranefield & Yoong, 2009).
Advantages of participation in informal online CoPs for learning

Numerous recent studies have revealed the effectiveness of informal learning communities in teacher education (Chang, Chen, & Li, 2008; Cho, 2016; Clarke, 2009; Darling-Hammond & Richardson, 2009; Jimenez-Silva & Olson, 2012; Lieberman & Miller, 2008). In relation to the study of second language/foreign language (SL/FL) teacher experiences, scholarship also suggests that online settings permit teachers, otherwise unable to interact, to unite, reduce the sense of isolation experienced by working in a minority discipline, share ideas about current practice, and identify and develop future goals for their field (Ernest et al., 2013; Risner, 2009; Wu et al., 2014). Faculty-level language teachers have also reported the ability to apply the learning gained in an informal online CoPs in their daily work (Risner, 2009). In addition, these teachers have remarked on positive feedback from school-based colleagues and administrators relating to their implementation initiatives (Risner, 2009). A recent netnographic study (research into social interaction in contemporary digital contexts), which investigated a CoP of world language teachers using Twitter, concluded that deep and meaningful learning can be achieved in untethered, self-sustaining, situated, cyber learning spaces (Wesely, 2013).

In addition, it has been reported that technological opportunities for online teaching and learning found in virtual CoPs have been successfully applied to the development of methods to curb first language use during second language study (Murugaiah et al., 2010; Paraiso, 2012; Pino-Silva & Mayora, 2010; Wesely, 2013). One investigation showed that online teacher communities provided a means to practice and maintain the second/foreign language, reducing language attrition among professionals themselves (Pino-Silva & Mayora, 2010). Also, Ernest et al. (2013) reported that language teachers actively engaged in an online CoP learned to deal more effectively with specific linguistic aspects of online language learning by planning and managing the collaboration, designing appropriate activities together, developing instructional plans in partnership with other participants, and acting as moderators and mentors. As a result, these teachers remarked that they welcomed the opportunity to continue participating in teacher-organized virtual learning communities. In line with situated learning theory,
whereby learning takes place through informal social relationships, within a cultural milieu, and by connecting prior knowledge to new contexts (Lave & Wenger, 1991), new research continues to show that communicative interaction in computer-mediated, informal online CoPs supports the creative development of culturally and linguistically diverse teachers, allowing them to use and improve the languages in which they teach (Cho, 2016). In fact, Cho (2016) reports that research interest has been rising steadily concerning how teachers position themselves in an online community and, additionally, how they use language as a means to build their community affiliation and social identity. A recent literature review attests to the importance of community intentionality, in this case, linguistic intentionality (Macià & García, 2016).

The need for alternatives in ongoing professional learning stems from that fact that the language teaching field is consistently being updated (Alhamami, 2013). Researchers argue that the difference between social media as professional learning tools and traditional professional learning tools is that social media give teachers continuous communities to participate in, the chance to help others in their field, find solutions to their problems, and potentially improve their teaching language careers (Alhamami, 2013). Although, to date, relatively little attention has been paid to the professional learning opportunities for teachers and other professionals using social network sites (SNS), analysis of their potential as technology-enhanced learning environments for communities of practitioners has recently emerged (Gunawardena et al., 2009). For example, some evidence suggests that the online platform of Facebook is an important emerging phenomenon in informal professional learning communities (Bodell & Hook, 2011; Macià & García, 2016; Manca & Ranieri, 2016) Social network sites, as informal online communities for teacher professional development, have been called unique and valuable, owing to the improvised and changing experiences that take place there (Gunawardena et al., 2009; Macià & García, 2016; Manca & Ranieri, 2016).

Researchers have also analyzed the post knowledge-sharing evaluation processes of online CoPs members. Findings indicate that members “make judgments about their knowledge-sharing behaviors by comparing their normative expectations of reciprocity and capability of helping other members with their actual experiences” (Cheung, Lee, &
Lee, 2013, p. 1357). Satisfaction and knowledge self-efficacy further affect members’ intentions to continue sharing knowledge in the online learning ecosystem (Cheung, Lee, & Lee, 2013). Researchers have noted that the intention to continue sharing knowledge in online CoPs is predicated on a “voluntary act of making information available to others” for their consideration (Davenport & Prusak, 1997, p. 87), serving as further evidence of the suitability of informal CoPs for ongoing learning. Community members have commented on the valuable opportunities to form greater connections between professionals, enabling sustained collaborative problem solving (Lai, Pratt, Anderson, & Stigter, 2006; Swift, 2014).

In addition, investigations have shown that mentoring, as the opportunity for less experienced members to learn from interacting with those of greater experience, and with one another, results in meaningful learning for all (Ardichvili, 2008). Online discussion can help the peripheral learner or “silent student” feel “less threatened” to speak up (English, 2007, p. 59). This body of research suggests that knowledgeable others have a positive effect on confidence/trustfulness, which in turn has strong potential to increase and diversify community participation. As a result, informal online CoPs are one of the few spaces in which peripheral participants have the freedom to develop their confidence and involvement over time (Macià & Garcia, 2016).

Drawing on previous research, Swift (2014) has pointed out that peripheral learners can become involved gradually, without worry of being ‘found out,’ and that this sense of security is of integral importance. These studies have also suggested that the ability to lurk is, in fact, vital, as it provides peripheral members with the conditions in which to build self-assurance and familiarity, so that they can move from a passive to active stance on their own (Swift, 2014). A noteworthy example is the Language Teaching Professionals Facebook Group, which was originally founded by a teacher who spent years providing language teachers and students of English in Japan with traditional, professional support. It has now grown to nearly 430,000 members, and has an active presence on Twitter, LinkedIn, and Google+. Interactions and blogs speak frequently of the motivation, research support, educational pedagogy, and psychology assistance.
members have gained in this community, and, most importantly, the security to express new ideas and solicit feedback.

It is worth noting that a distinction has been made between virtual CoPs and virtual teams along the lines of groups which are informal (voluntary, open) vs. mandated (institutionally-embedded). CoPs have been further distinguished by the common interests of their members, unlike virtual teams, which typically have prescribed performance goals (Ardichvili, 2008). Thus, the non-hierarchical nature of informal online CoPs, where decision-making is shared equally throughout the group, makes them more likely to serve as an ecology of ongoing learning for all participants, precluding their abandonment over time. Research has made an equally compelling point about the implications of the digital space for learning interactions. The technology used for online CoPs is an important factor in the community’s identity, character, and patterns of behaviour (Ardichvili, 2008; Josten et al., 2013). Evidence suggests that the online CoP experience (in contrast to the virtual team experience) is flexible, co-created, and ever-evolving, allowing for the uniqueness of the individual to find common ground with the distinctiveness of the community (Ardichvili, 2008).

A study in recent times, extending research about the idea of online CoPs as spaces to form greater connections among teachers, has found that these poly-contextual communities feature opportunities for knowledge development, strengthening social ties, and building social capital through engagement (Swift, 2014). According to Swift (2014), since physical face-to-face meetings are often time-consuming and difficult to organize, online CoPs offer an alternative whose experience is virtually the same, but with incentives and conveniences unavailable in traditional face-to-face interactions (Swift, 2014). Moreover, evidence suggests that the possibility to interact asynchronously (that is, not simultaneously) is highly valued and is a chief attraction of these communities (Macià & García, 2016). This characteristic of informal online CoPs has been called “networked individualism,” a hybrid professional identity deriving its strength from the balance of the two component concepts (Myers, 2013, p. 33).
A recent case study of the impact of teachers’ digital interactions on classroom pedagogy indicates that improvements to teacher digital literacy resulted in improved teacher-student relations, as the pace of learning for each group, while using digital tools, came closer into line (Homan, 2014). Homan (2014) posited that the informal relationships in online venues, where teachers create linkages with colleagues, “play a significant role in their adoption of particular practices” (Homan, 2014, p. 327). In addition, Homan (2014) remarked that teachers’ online presence and connections gave them access to resources that teachers who do not utilize such online communities may not be able to easily reach, if at all. The ability of the informal online CoP to build pedagogical capacity, and ultimately enhance student outcomes, is supported by other research, as well (Holmes, 2013; Jones & Dexter, 2014).

In this section, I have provided an overview of what is known about informal online CoPs for professional learning. In the following section, I present some of the gaps in our knowledge about these communities, which this study aims to address.

**Research gaps**

**Introduction.** Relevant research conducted thus far has been restricted to relatively small samples of teachers in Web-based, computer-mediated, informal learning communities (and still smaller samples involving language teachers), resulting in the call for more extensive study of self-organized online CoPs (Hur & Brush, 2009; Lord & Lomicka, 2008). Also, to date, little empirical research on the professional use of social network sites has been conducted, particularly with reference to groups of teachers on Facebook (Ranieri, Manca, & Fini, 2012), and no studies have been found focusing on teachers’ online social networks on a large scale. To this point, investigations have been limited to small samples or particular geographic locations (Homan, 2014). The current case study focuses on the role of informal online CoPs in the professional learning of SL/FL (Ukrainian language) teachers. In the following five sections, I will discuss five gaps in the extant research in need of further study, namely: 1. Learning conditions in online environments for SL/FL teachers, 2. Challenges faced by SL/FL teachers to participation in informal online CoPs, 3. Emotional support afforded by informal online
CoPs, 4. Teacher technological self-efficacy, and 5. Creating cohesive technological pedagogies in online learning environments.

**Learning conditions in online environments for SL/FL teachers.**

As previously discussed, in the area of SL/FL education, existing research is limited regarding the learning conditions of teacher collaboration in online environments (Ernest et al., 2013; Kyonghye & You-Kyung, 2013), as well as the professional value of these online communities to teacher-learners (Lord & Lomicka, 2008; Pino-Silva & Mayora, 2010). Moreover, there is a dearth of research concerning informal online teacher CoPs (Hur & Brush, 2009; Wesely, 2013) and those involving geographically distributed language teachers, in particular (Ernest et al., 2013; Wesely, 2013).

**Challenges faced by teachers to participation in informal online CoPs.**

A second area in need of more research involves the challenges faced by teachers to participation in informal online CoPs. Among these are eliciting and sustaining reciprocity in tasks in terms of balancing the commitment of all participants (Ernest et al., 2013; Hur & Brush, 2009). In this regard, earlier research has pointed out that reciprocity is an important component of trust and equity in these learning environments, where cooperative reciprocal endeavours can have a positive impact, even when relational ties between individuals are weak—that is, relationships based mainly on information exchange (Johnson, 2005; Preece, 2000). In this regard, teachers have reported a greater need for mentorship (Harrison & Thomas, 2009; Kulavuz-Onal, 2013), since the structure of an online community can differ from that of the school, or be less familiar to participants. More specifically, some teachers have remarked on group formation, structure, online navigation, and the etiquette of online interactions, as basic areas where they lack certainty, and seek guidance (Ernest et al., 2013).

More evidence is needed about how teachers negotiate reciprocity and mentorship in virtual communities, and with what degree of success. In this regard, it is worth recalling Lave and Wenger’s (2002) observation that, eventually, all learners must participate in some kind of CoP (that is, a situated learning environment), and that the acquisition of skills and construction of knowledge which lead to feelings of success take
place as newcomers move from the periphery to the centre. While many of today’s teachers may be confident using technology and social media for their own purposes, fewer are comfortable with their potential in professional practice (Madge et al., 2009). This speaks to the important connection between mentorship and apprenticeship in these communities (Lave & Wenger, 2002).

**Emotional support afforded by informal online CoPs.**

A third area requiring further investigation is that of the emotional support afforded by informal online CoPs (Hur & Brush, 2009; Kyonghye & You-Kyung, 2013; Lord & Lomicka, 2008; Wu et al., 2014). Research is inadequate concerning the emotional support provided by asynchronous communication in online CoPs. Some initial findings about asynchronous interaction in virtual learning groups indicate that this type of discussion encourages qualitative feedback, offers unrestricted opportunity for reflection and response, and contributes to increased cognitive engagement levels over time (Guo et al., 2014). Other research has also shown that this connection helps to overcome the challenge of participant disengagement relating to self-confidence issues, such as fear of criticism, perception of self-efficacy, etc. (Macià & García, 2016).

The current study examined the various ways in which teacher-learners’ needs for emotional sharing and improved self-esteem might be supported by participation in informal online CoPs. In the past, some teachers have indicated that sharing both positive and negative emotions related to teaching is valuable, since it encourages the generation of various possible solutions and opportunities for further follow-up from fellow participants (Hur & Brush, 2009). Others have reported improved self-esteem and self-confidence from the ability to cultivate additional sub-interests online with like-minded professionals (Kyonghye & You-Kyung, 2013). Research has also found that the sense of loneliness teachers often feel within teacher culture can be ameliorated through collaborative professional learning over an extended period (Duncan-Howell, 2010). This echoes the earlier thoughts of Shulman (1993), who stated that teachers often experience “pedagogical solitude” in the classroom (p.11), whereas outside of it, they are active members of vital gatherings, such as communities for the purposes of conversation, evaluation, and other shared tasks (Shulman, 1993). Findings from a study examining
experiences in three online communities for teachers have shown that members joined and remained in their communities for “professional requirements and emotional support” (Duncan-Howell, 2010, p. 338). Similarly, analysis of a study of participants’ experiences in an online CoP for novice teachers bore out the fact that their emotional needs were met in the community before they were met in the classroom context (Bell-Robertson, 2014). Finally, research evidence suggests that informal online CoPs provide particular socialization opportunities for women (Myers, 2013). However, a more comprehensive understanding is needed about the kinds of emotional support that are provided, and how they are generated in informal online learning groups.

**Teacher technological self-efficacy.**

The fourth area identified for study pertains to teacher technological self-efficacy. Bandura (1977) described self-efficacy as made up of mastery experiences (learning by doing), vicarious experiences (learning from modelling), social persuasion (learning with others), and physiological state (mindset). To this end, some teachers in online CoPs have stated that they valued the opportunity to try and test diverse digital tools, which they could subsequently use with their students (Lord & Lomicka, 2008). Others reported that through the online environment, they could gain technological skills which allowed them to assist fellow teachers with less digital exposure by serving as a mentor, offering guidance, and providing practice opportunities in online, tool-based interactions (Wu et al., 2014). Murugaiah et al. (2010) found that some teachers began to develop their own distinct style of using and integrating Internet technologies while engaged in an online CoP. In addition, a study examining how the Community of Inquiry (CoI) framework (Garrison, Anderson, & Archer, 2000) might be enhanced in new environments found that a positive relationship existed between the concept of an inquiry community and elements of learning presence, such as online learner self-regulation, and that this impacts learner technological self-efficacy in technology-mediated environments (Shea & Bidjerano, 2010). Subsequent studies have demonstrated that an inquiry stance on the part of the community has direct bearing on teacher technological self-efficacy (Macià & García, 2016).
Research also indicates that informal, online, teacher-led CoPs are distinguished by their ability to establish a culture of technology integration, modeling, and leadership, founded upon mutual mentoring (Bond, 2004; Cornu, 2004; Duncan-Howell, 2010; Kopcha, 2010; Matei, 2005). Studies have shown that teachers need to acquire basic technology skills before they can develop and apply student-centred practices using technology, and that ongoing professional learning opportunities are an important contributing factor (Dillenbourg, Schneider, & Synteta, 2002; Ertmer, 2001; Hew & Brush, 2007; Kopcha, 2010; Snoeyink & Ertmer 2001-2002). In their review of the literature, Ertmer and Ottenbreit-Leftwich (2010) discuss how the factors of teacher knowledge, confidence, beliefs, and culture affect teacher technological self-efficacy. These researchers concluded that working with knowledgeable peers by participating in online professional practice communities is a key element in building technological self-efficacy. The researchers stated that these communities offer potentially transformative exposure to, and interaction with, "successful others" (p. 269). Other researchers also discuss technological awakenings and transformations unique to these engagement contexts (Cranefield & Yoong, 2009). Nevertheless, more investigation is needed on how active participation in these online, informal practice communities can encourage teachers to be inquisitive and resourceful, both in their learning and their application of digital tools.

Creating cohesive technological pedagogies in online learning environments.

One more area requiring further study is how teachers create their own cohesive pedagogical approaches in the Internet environment, one which has been referred to as “orderly anarchy” (Newhagen & Rafaeli, 1996, p. 2), given that online settings can be seen to differ from physical classroom experiences (Kulavuz-Onal, 2013; Lord & Lomicka, 2008; Murphy & Laferrière, 2003). In particular, Lock (2006) has remarked on the need for specific pedagogical frameworks that foster a learning culture in Web-based environments. In order to come to terms with what these spaces mean to learners, as well as to compare them to the physical classroom, Dillenbourg, Schneider, and Synteta (2002) devised a list of characteristics of virtual learning environments. These researchers have proposed that the online space is distinctive because it is an explicitly represented
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informational-social expanse, which can range from text-only environments to 3D immersive worlds. In these environments, learners are not simply engaged participants, but also actors, since they co-construct the virtual space (Dillenbourg, Schneider, & Synteta, 2002). However, according to these same researchers, there are also similarities between the two types of learning environments that need to be kept in mind when considering pedagogy. For example, both are designed information spaces; both are social spaces in which educational interactions occur, “turning spaces into places” (p. 3); each can enrich the learning experience of the other; and each has the capacity to integrate multiple technologies and multiple pedagogical approaches (Dillenbourg, Schneider, & Synteta, 2002).

Diverse studies have shown that teachers’ decisions to adopt a technology-based pedagogical stance is influenced by how they find that their peers react to, use, and accept new technology (Ertmer, 2005; Hu, Clark, & Ma, 2003; Kopcha, 2010; Zhao & Frank, 2003). Other studies have suggested that a professional learning experience which supports and promotes technology adoption and the subsequent application of new teaching practices is one that encourages risk-taking, immerses participants in the use of technology, and provides ongoing support (Clark, 2006; Ertmer, 2005; Finley & Hartman, 2004; Kopcha, 2010; Vanatta & Fordham, 2004). In fact, it has been suggested that change in pedagogical beliefs about teaching and learning is directly affected by engagement in activities that explicate and challenge these beliefs (Ertmer & Ottenbreit-Leftwich, 2010). Strategies such as methodological experimentation in Web-based CoPs during the teacher induction period appear to have a positive effect on pedagogical approaches related to technology for professional teaching (Ertmer & Ottenbreit-Leftwich, 2010). Additional research is needed to understand the ways in which informal online CoP can provide these integrative pedagogical learning experiences.

Autonomous Learning Framework for Informal Online CoPs (ALFIO-CoPs).

In order to address the aforementioned research gaps, along with the research questions guiding this study, a research framework was developed. The purpose of this framework is to explain the meaning, nature, and challenges associated with informal
online CoPs for professional learning by bringing together relevant theoretical assumptions, existing knowledge, and new understandings derived from the data.

Educational researchers are interested in “how things are” (what the facts are, how those who are involved feel about particular things), and in this sense, they are interested to understand what they are presented with. In some areas, this implies descriptions or reconstructions of the participants’ experiences, in others, being able to make predictions. It is clear that this presupposes a particular conceptual framework or at least a set of concepts in order to make sense of the multitude of ideas one is confronted with (Smeyers, 2008). Theoretical frameworks help explain complex, inter-related, and multifaceted theoretical phenomena (Swanson & Chermack, 2013). In particular, a theoretical framework helps explain the many connections and interactions among the dependent and independent variables that may be influencing, or affecting, a phenomenon (Corvellec, 2013). As such, a theoretical framework may help researchers identify research questions, research assumptions, a study’s theoretical limits, and its scope (Jaccard & Jacoby, 2010).

Following my review of the relevant literature, I constructed a theoretical framework to help anchor and guide the current study, and by so doing to address its research questions relating to the potential influencing factors, differentiation attributes, and challenges to participation in informal online CoPs for professional learning. This framework, called the Autonomous Learning Framework for Informal Online CoPs (ALFIO-CoPs) (Figure 3) involves the creation and activation of knowledge as the manifestation of learner presence in informal online inquiry communities, as well as resulting from mutually-valuable involvement in socially-constructed learning. The framework proceeds from the four human-computer-human-interaction (HCHI) orders of The General Technology Competency and Use (GTCU) Framework (Desjardins 2001, 2005), collaboration and reflection central to the Community of Inquiry (CoI) Model (Garrison, Anderson, & Archer, 2000), the key principles of Personalized Collaborative Learning (PCL) in online learning environments (Mamat & Yusof, 2013), and collaboration, reflection, and promotion of deeper learning inherent in the Self-Regulated Learning (SRL) Model (Zimmerman, 2001).
As my review of previous literature has shown, teachers have reported that activities aimed at professional learning are successful when these activities meet their needs and motivations as learners—including skills development—to address “the changing landscape of technology and the social needs of the digital learner” (Arnell, 2014, p. 37). The ALFIO-CoPs framework attempts to address some aspects of the broader informal online CoP experience for personally meaningful professional learning as a reflection of heutagogy in learning, according to which it is important that learners acquire both competencies and capabilities (Blashchke, 2012). To do so, the framework features key elements of Wenger’s (1998) definition of CoP as adapted to online environments, where these elements have the potential to be augmented by the greater opportunity for community continuity (Moule, 2006), resulting in a personally meaningful professional learning experience for all participants. According to my research framework, the key elements of personally meaningful professional learning and the indicators related to them are, as follows: emotional support (confidence), technological self-efficacy (shared repertoire), and technological pedagogy (mentorship).

The General Technology Competency and Use (GTCU) Framework. Following an extensive review of relevant literature and keen observations of practice in ICT, Desjardins, Lacasse, and Bélair (2001) developed the GTCU Framework on the basis of Human Computer Human Interaction (HCHI) theory. The GTCU Framework posits four orders of competency required for, and cultivated in, online learning communities. These four orders are: the Technical (T) order (conceptual and procedural competence in the use of computers to support learning), the Informational (I) order (competence in accessing and using information obtained using computers), the Social (S) order (competence in safe, respectful and supportive individual and group interaction via ICT), and the Epistemological (E) order (competence in solving problems, testing ideas, or innovating via cognitive partnership facilitated by ICT (Desjardins, Lacasse, & Bélair, 2001) (Figure 1).
More recent research has extended the collaborative learning premises of the GTCU Framework by providing additional findings on knowledge-building in, for example, Collaborative Online Learning Environments, COLE (Desjardins & van Oostveen, 2008). In addressing the fundamental nature of learning, Desjardins and van Oostveen (2008), and others, have concluded that knowledge is created, or constructed, socially, in keeping with Wenger’s (1999) “learning as social participation” framework, but not necessarily institutionally (Desjardins & van Oostveen, 2008). In terms of CoPs for professional learning, these authors have stated that an optimal online learning experience for teachers can have a profound impact on their personal theories (and assumptions) about learning (Desjardins & van Oostveen, 2008). The same researchers reference Papert’s (1980) notion of a “microworld”, a space where minds are gathered for learning to take place. In these spaces, learning is not merely content or information; it “happens” (Desjardins & van Oostveen, 2008, p. XX).

In his seminal work, *Mindstorms*, Papert (1980) remarked on the universality of the computer as an interactional tool, and specifically, its “simulative” ability. He noted that computers are instruments by means of which learners can express otherwise unattainable creativity (Papert, 1980). Furthermore, in discussing computer-mediated environments for learning, Papert (1980) referred to them as “microworlds”, and simultaneously as “incubators for knowledge” (p 120). He concluded that microworlds
provide a context for the creation of transitional theories, as the learner moves from preconceptions to the construction of new knowledge (Papert, 1980).

Taking this further, Jonassen, Carr, and Yueh (1998) described computers as “mindtools” (p. 24), meaning that they serve as intellectual partners, supporting the engagement of learners in critical thinking. Making reference to microworlds, they added that these spaces made accessible via computers (and more recently, by other forms of digital technology) offer opportunities for exploratory and discovery learning entirely in the hands of learners, who navigate, manipulate, test, and innovate through interaction with other learners (Jonassen, Carr, & Yueh, 1998). As a result, computer-mediated online learning microworlds are active, serving at once as a place of learning and the act of learning itself. Hase and Kenyan (2015) cite the growing need and promise of professional learning models which blur the distinction between formal and informal learning, where technophobia is irrelevant, and where learning is squarely in the hands of the learner.

In recent years, important investigations of digital competency have further aligned the GTCU to learning communities in the digital era. Based on a study applying an updated framework among users of digital environments, Eshet-Alkalai (2004) observed that Human-Computer-Interaction (HCI) competencies are key to full functioning in knowledge-based society. His updated interpretation includes photo-visual literacy (the art of reading visual representations for communication), reproduction literacy (creative recycling of existing knowledge), branching or hypermedia literacy (non-linear thinking), information (critical) literacy, and socio-emotional (negotiational) literacy. In addition, the research of Van Deursen and Van Dijk (2009) has advanced the competency orders taxonomy characterizing computer-mediated online communities. Their findings show that successful navigation by individuals within an information and knowledge-based society requires consistent refinement of these competencies through collaboration. Also, Gaines & Shaw (2012b) have concluded that interactivity which supports the exploration of meaning is one of the most important capabilities of computer technology. Moreover, a Delphi study examining experts’ ideas on what it means to be digitally competent today assembled concepts which further evolve the GTCU, namely,
that personal development in knowledge, skills, and attitudes is connected to the combination of socialized communication, creative expression, and information management (Janssen et al., 2013).

Hence, informal online CoPs offer valuable spaces for the learning process, a process which involves experimentation with existing ideas simultaneously with the co-creation of new ones. Research suggests that the optimal design of an online environment for learning involves the learner using a simple computer-based interface containing meeting and communication tools, information access and management tools, information production and processing tools, and time management tools (Desjardins & van Oostveen, 2008). Task design, presentation of problems or issues, and participation by learners (including opportunities for reflection and the uptake of constructive criticism) combine to make learning “come about” in these virtual learning communities (Desjardins & van Oostveen, 2008). Research demonstrates that computer-mediated communication (CMC) enhances “social and intellectual connectivities” (Harasim, 1990, p.39) within a CoP. This is because computer-mediated communities exhibit certain characteristics of both written and spoken communication, along with other features unique to the computer medium (Cho, 2016; Collot & Belmore, 1996; Herring, 2013; Yates, 1996).

The GTCU Framework, then, is part of a fitting groundwork for the current deductive study, since scholarship has found that online CoPs represent the co-evolution of technology and learning practices, as each responds to the demands of the other (Haythornthwaite et al., 2007). For example, in reference to promoting active professionals in education through virtual CoPs, researchers have put forward the concept of “Braided Learning,” whereby learning is viewed as a three-dimensional process unfolding by means of “creative, progressive ‘braiding’ of text, opinions, and ideas” (derived from diverse individual and group asynchronous interactions) using the learning tools available in online collaborative environments (Haythornthwaite et al., 2007, n. p.).

**Community of Inquiry (CoI) Model.** Garrison, Anderson, and Archer’s (2000) Community of Inquiry Model (CoI) proposes a conceptual order and tool for computer-
mediated interaction for educational purposes. This model is made up of three elements which they determined to be necessary for learning to occur within the online community: social presence, cognitive presence and teaching presence (Figure 2).

**Figure 2. CoI Model (Garrison, Anderson, & Archer, 2000)**

In their study of computer conferences used for educational purposes, the researchers discovered that computer-mediated communities formed for the purposes of learning (inquiry) are able to construct meaning through the critical thinking involved in sustained communication (Garrison, Anderson, & Archer, 2000). This defines their notion of cognitive presence. The second component of these communities, social presence, is the personal presentation of community participants, that is, their identification in the community as “real people” (Garrison, Anderson, & Archer, 2000). The third component, teaching presence, has a dual function: responsibility for the organization or structure of the community experience, as well as facilitation, a function that is shared among the members of the community in various ways (Garrison, Anderson, & Archer, 2000). In their retrospective study of the CoI model conducted in 2010, originators Garrison, Anderson, and Archer remarked that online inquiry communities are unique, in that they feature dynamic, flexible relationships, and multidimensional interactions involved in ongoing processes of joint community development.

In addition, in a contemporaneous study examining the CoI model for online communities, Shea and Bidjerano (2010) have suggested that these communities not only
instantiate the CoI, but they also exhibit another presence, which the researchers call “learning presence”, characterized by online learner self-efficacy. The strong correlation these researchers found between the CoI model and self-efficacy bears importance for the current study. They concluded that the extent to which learners believe that they can achieve valuable learning, and the effort they are willing to expend to do so, depend on the self-efficacy which they derive from the community experience (Shea & Bidjerano, 2010). Shea and Bidjerano (2010) also noted a significant relationship between teaching presence and self-efficacy, indicating that fully-online learners value facilitative leadership in the community. The researchers concluded that teaching presence expressed through facilitation supports and encourages peripheral learners, assisting them to develop the motivation and metacognition needed to become fully and actively engaged.

**Personalized Collaborative Learning (PCL) Framework.** Discussing their Personalized Collaborative Learning Framework, Mamat and Yusof (2013) state that effective learning in the online community environment requires an adaptive system. They note that the basis for adaptive learning in the community are the interactive features of human-computer interaction, which form the online personal learning environment (Mamat & Yusof, 2013). According to the researchers, for this environment to become a Personally Collaborative Learning (PCL) community, collaborative tasks and a caring approach among all participants are integral. Earlier research on this subject has referred to PCL environments as spaces for ubiquitous learning, where the search for knowledge is easier than in a physically co-located place (El-Bishouty, Ogata, & Yano, 2008). These earlier researchers point to ubiquitous technologies and help from peers as factors which contribute to a user-friendly model for learning in a community. They also note that a personally-meaningful online community features knowledge awareness (self-awareness of the use of knowledge) and collaborative awareness (understanding of knowledge use by others) achieved by means of digital tools (El-Bishouty, Ogata, & Yano, 2008). Finally, according to the authors of the model, the hallmarks of personally collaborative online learning are reflection, critical thinking, and curiosity (Mamat & Yusof, 2013).
**Self-Regulated Learning (SRL) Model.** For a learner to entertain the notion of joining a group, they need to see it as a place to achieve their learning goals. The active and systematic application of thoughts, feelings, and actions geared towards the attainment of personal learning goals is considered learner self-regulation (Schunk & Zimmerman, 1994). The model for Self-Regulated Learning (SRL) developed by Barry Zimmerman (2001) refers to these strategies as “a feedback loop in which learners observe their own performance, compare it to their peers or an expert, and then reflect on the differences between their own performance and the model performance” (Myers, 2003, p. 14). He refers to these phases of learning as forethought, performance, and self-reflection (Zimmerman, 2000) and considers them sources of motivation for self-regulated learning in community settings (Zimmerman, 2011).

The forethought phase involves goal analysis and the desire to improve self-efficacy (Zimmerman, 2005, 2011). In the performance phase, the learner attempts tasks and adjusts performance as needed based on self-observation and comparison to others (Zimmerman, 2005, 2011). Within a social learning environment, including CoPs, feedback is often given and shared between learners and the community establishes the dynamic of how feedback occurs (Zimmerman, 2005, 2011). This essential characteristic of the CoP is important because learners who receive personally valuable feedback are more likely to perform better (Myers, 2013). Self-reflection follows performance and is a form of self-evaluation (Zimmerman, 2005, 2011). In a community setting, the learner compares their performance to a mentor, model or other peer (Zimmerman, 2005). Within informal learning environments, learners participate in this process at regular intervals as needed, generally increasing their frequency of self-evaluation as they become more active (Myers, 2013). Research has begun to show that self-regulated learning as part of initiatives aimed at professional growth leads to improved professional knowledge and skills (Myers, 2013). These experiences can be formal or informal. Research investigation of the SRL model in self-developed online environments has determined that SRL stimulates participants to voluntarily use online tools, interact, self-reflect, guide others and respond to guidance (Vrasidas & Zembylas, 2004). For these reasons, informal learning environments, like online CoPs, are a prime place for self-regulatory learning to occur.
Figure 3. Autonomous Learning Framework for Informal Online CoPs (ALFIO-CoPs)

[Adapted from the GTCU Framework (Desjardins, Lacasse, & Bélair, 2001); CoI Model (Garrison, Anderson, & Archer, 2000); PCL Framework (Mamat & Yusof, 2013); SRL Model (Zimmerman, 2001); and CoP (Wenger, 1998)]
Chapter 3 - Methodology

Research philosophy

Teacher learning is an ongoing and highly complex process whose progression is informed by the changing dynamics of day-to-day teaching. This form of learning involves overlapping social networks in which education is both the means and an end. For these reasons, in the current research study on informal online CoPs for SL/FL teachers I was guided by Vygotskian social constructivism (Vygotsky, 1983). According to Vygotsky (1983), meaning is constructed within a particular culturally-organized context, where technologies and other tools mediate the interactions. Social constructivism refers to the interwoven links between the individual and his or her cultural setting, where new knowledge is built (Vygotsky, 1983). From this viewpoint, anyone directly interacting with the (teacher) learner under circumstances of learning plays a role in the social world of that learner (Liu & Chen, 2010). Hence, in this study I investigated the social relationships among Ukrainian language teachers in learning communities for evidence of participatory knowledge construction (Salomon & Perkins, 1998).

In addition, as a study focusing on the context of a CoP, with the purpose of examining teacher views and interactions, it was also pragmatic in nature. This philosophical blend of constructivist and pragmatist visions is documented in scholarly research and has been termed “constructivism with a dose of pragmatism” (Colliver, 1999, p. 187). While these terms may seem oddly juxtaposed, what Colliver (1999) is referring to are the qualitative methods which have come to be viewed in scholarly research as aligned with constructivist practices, on the one hand, and quantitative methods relating to a modern realist approach, on the other. When applied to a study, this means understandings gained through experience and reflection combined with the assessment of those understandings in terms of their concrete results. In the current study, I examined the learning experiences of Ukrainian language teachers to determine what value, if any, they might attribute to virtual CoPs for professional learning, especially given some of the challenging political, economic, geographic, demographic, and
INVESTIGATING THE ROLE OF INFORMAL ONLINE COPs IN PROFESSIONAL LEARNING

educational conditions of their environments. This real-world practice orientation is the hallmark of a pragmatic inquiry (Creswell, 2014).

**Research rationale and context**

Second/foreign language teachers are a broadly-based and distributed community, owing to the diverse linguistic make-up of different countries around the world and their state policies concerning regional, minority, and non-territorial language education. This is the case in Europe, for example, where these languages are officially recognized in more than half of all European countries (*EACEA-Euridice*, 2012). The Canadian context shares similarities. While formal statistics are not kept about the numbers of English as a Second language (ESL) and French as a Second Language (FSL) students in Canada as a whole, according to the Peel District School Board, 30% of Canadian students are in ESL programs (CBC News, 2011), and the Canadian Parents for French (2006) have reported that some 21% of Canadian students are enrolled in FSL programs. In addition, according to the Canadian Education Association (1991), international or heritage language programs exist in Ontario, Quebec, Manitoba, Alberta, Saskatchewan, and British Columbia, and they account for some 20% of the Canadian population being enrolled in international language learning (Burnaby, 2008; Duff, 2009).

In the current study, I investigated two sample groups of Ukrainian language teachers, one from Canada and one from Ukraine, for the purpose of comparing and contrasting their feelings about and experiences in informal online CoPs for ongoing professional learning. The area of Ukrainian language education is interesting for several reasons. Since the fall of the U.S.S.R. and, more specifically, the declaration of independence by Ukraine in 1991, the three Western provinces of Canada (Manitoba, Saskatchewan, and Alberta), which have a significant population of Ukrainian origin, have signed memoranda of agreement (MOU) for educational, cultural, and economic development with the government of Ukraine (Tavares, 2000). In addition, agreements are in place for Canadian students to participate in language testing for certification from Ukraine (*Ivan Franko National University*, 2015). In Ontario, with over 330,000 individuals of Ukrainian origin, supported by the Canadian Heritage Languages Institute Act (1991), the Ukrainian language is studied in twenty schools and programs (Duff,
2009; Ukrainian Canadian Congress National School Council, 2012). Also, in November 2014, the Canadian Bureau for International Education signed a ground-breaking MOU for cooperation with the Union of Rectors of Higher Educational Institutions of Ukraine (Bezo & Dalkie, 2014). This MOU also extends pre-existing post-secondary level Canadian partnerships with the International Institute of Education, Culture and Diaspora Relations (Lviv Polytechnic National University), the Ukrainian Catholic University in Lviv, and the Ostroh Academy National University (CBIE, 2007). Most recently, the Ukrainian and Canadian governments have been involved in round table discussions about further developing joint programs in higher education (CBIE, 2016).

While Ukraine has undergone a cultural-educational renaissance during the years since its declaration of independence, this has been followed by more recent restriction of, and disruptions to, traditional Ukrainian language education under former President Yanukovych, exacerbated by the even more recent annexation by Russia of Crimea and its ongoing military invasion of Eastern Ukraine. As a result, teachers in Ukraine are beginning to turn to digital tools and environments for educational support, unconstrained by issues of time, place, circumstance, or cost, in an effort to (re)establish meaningful professional collaboration with colleagues locally, across the country, and around the world (Kutsyuruba, 2013; Pochynok, 2015).

**Research approach**

**Quantitative and qualitative research methods.**

Educational research has been largely empirical since the beginning of the 20th century. However, while quantitative methods are still very much used, qualitative research has become increasingly important.

As many scholars will argue, this is because contextualization of theoretical insights is also necessary (Smeyers, 2008). Quantitative research normally looks for a distribution of variables (how many cases there are of some characteristic) and provides explanations about the variables using measurements and statistics (Smeyers, 2008). Quantitative research examines the conditions of an event or situation, and reports the probabilities which arise from the data collected about it (Smeyers, 2008). According to
Creswell (2013), “[quantitative researchers] have assumptions about testing theories deductively, building in protections against bias, controlling for alternative explanations, and being able to generalize and replicate the findings” (p. 3).

While many authors find it difficult to provide a fixed definition of qualitative research methods, applied research methodologists continue to evolve the definition in light of the ever-changing nature of qualitative inquiry:

“Qualitative research begins with assumptions and the use of interpretive/theoretical frameworks that inform the study of research problems addressing the meaning individuals or groups ascribe to a social or human problem. To study this problem, qualitative researchers use an emerging qualitative approach to inquiry, the collection of data in a natural setting sensitive to the people and places under study, and data analysis that is both inductive and deductive and establishes patterns or themes. The final written report or presentation includes the voices of participants, the reflexivity of the researcher, a complex description and interpretation of the problem, and its contribution to the literature or a call for change” (Creswell, 2013, p. 44).

Scholars are fortunate to have both research traditions to call upon when designing their studies. Using a combination of quantitative and qualitative methods can improve an evaluation by ensuring that the limitations of one are balanced by the strengths of the other. In this way, understanding is improved by integrating different ways of knowing.

**Mixed methods research.**

Over time, researchers have come to view quantitative and qualitative approaches as representing two ends of one research spectrum (Creswell, 2013), each lending valuable research findings. The reason being, that if a researcher notices something others do not, there may be no agreed-upon procedure by means of which the issue can be solved. The researcher becomes an interpreter, and so must use and combine such methods, as will help with this interpretation (Smeyers, 2008). As Creswell (2013) explains, this combination of methods, known as mixed methods research, “is an approach to inquiry involving collecting both quantitative and qualitative data, integrating the two forms of data, and using distinct designs that may involve philosophical assumptions and theoretical frameworks. The core assumption of this form of inquiry is
that the combination of qualitative and quantitative approaches provides a more complete understanding of a research problem than either approach alone” (p. 4).

Scholars have remarked that mixed methods research is a paradigm whose time has come (Johnson & Onwuegbuzie, 2004). Studies have shown that drawing on the strengths of both qualitative and quantitative data collection offers richer detail for discussion, conclusions, and further research (Bachman, 2009). In fact, there has been a growing body of research favouring the mixed methods approach in educational research (Caruth, 2013). Scholars reason that a key feature of this approach is its methodological pluralism, which often results in more robust research. Venkatesh et al. (2013) have aptly summarized this plurality of characteristics, as follows: complementarity (obtaining mutual viewpoints about similar experiences); completeness (ensuring total representation of experiences to the extent possible); developmental (building questions from one inquiry tool that arise from the implications of a previous tool); expansion (elaborating on knowledge gained at each point of data gathering); corroboration/confirmation (evaluating the trustworthiness of inferences made); compensation (balancing weakness in any inquiry procedure with the strengths in another); and diversity (obtaining opposing viewpoints of the same experience). For example, while survey and focus group techniques derive from divergent theoretical approaches, there is nothing inherent in the methods themselves that prevents their combination. Survey research provides the material for broad, comparative analysis and the search for social facts (Wolff, Knodel, & Sittitrai, 1993). Also, focus group research serves as a complementary approach when paired with surveys, as it emphasizes the importance of finding the subjective meaning of participants in a social setting (Wolff, Knodel, & Sittitrai, 1993). In such a research design, focus group discussions are used to assess reaction to a pre-survey and to trace more carefully the cognitive and social processes that influenced respondents' comprehension of survey questions and their subsequent responses (Groves, 1989). Meanwhile, post-surveys may be used to gauge changes in thinking following an intervention, such as a focus group. Creswell, et al. (2003) call this quantitative-qualitative design approach "sequential transformative" (p. 224). Thus, it is for these reasons that a mixed methods approach was employed in the current study.
Case study research.

I conducted the current research as a case study of the activity of two Ukrainian teacher groups engaged in a structured focus group activity. The value of a case study in educational research lies in the ability of the researcher to gain as complete a picture as possible of the person(s) or entity(ies) under study (Nath, 2005). In this way, a case study can be illustrative of a particular example of interest in some aspect of education (Nath, 2005), and can also generate questions for future research. A case study also serves as a form of enrichment, by allowing the researcher to follow, in greater depth and with greater focus, the experience of individuals to discern details, identify patterns, and make linkages (Nunan, 1992). Of particular relevance to the current investigation, case study has been shown to permit the researcher to compare and contrast collected data with the reality of the CoP experience (Hamilton, 2011). Details of the case-based examination of the focus group activities are found in the Discussion section of this thesis.

I decided to employ a case-based approach in this study because of the limited research on the experience of teachers (especially language teachers) in informal online CoPs for the purpose of professional learning. According to Johnson (2001), most of the existing literature on these communities, in fact, consists of case studies, and this has helped to create a preliminary body of knowledge about current and complex social phenomena involved in online CoPs. Research also notes that case studies provide an opportunity to make observations of real life events or activities which are not controlled (Yin, 1994). Case studies in the area of professional CoPs for teachers have been shown to contribute informative results about the practices and identity characteristics of such communities (Zhang & Watt, 2008). What’s more, since virtual professional learning groups are a new phenomenon for teachers of Ukrainian, both in Canada and Ukraine, data gathered about actual teacher experiences is invaluable.

In support of the case study approach employed in my study, I collected unobtrusive observations of the structured focus group sessions by means of field notes, once again a long-standing and standard practice in qualitative research (Creswell, 2014). I looked for verbal and non-verbal indications of interest, satisfaction, challenge,
confusion, disinterest, dissatisfaction, comfort and discomfort, as well as mentorship and community-building, in relation to the study research questions.

Participants

To gauge the collaborative learning experiences and attitudes of Ukrainian language teachers, both in Canada and Ukraine, in non-mandated online CoPs, in this study I used a convenience participant sample of 10 (6 from Ukraine and 4 from Canada), comprising current Kindergarten-to-Grade 12 (K-12) teachers from both systems, including both new and experienced classroom teachers. The participants represented bilingual (Ukrainian-English) charter schools in Edmonton, Alberta, Canada, and public schools in Lviv, (Western) Ukraine. The chosen areas of representation are major hubs of Ukrainian language teaching and include both urban and rural schools. The final teacher cohort was selected through email by means of response to a formal request for voluntary participation, which was distributed to a larger population. Every effort was made to balance the ratio of male to female teachers. However, the number of males teaching Ukrainian appears to be smaller as compared to females in both countries, although gender-based statistics in this area are minimal concerning Ukraine (Helgilibrary, 2013; Ministry of Education and Science of Ukraine, 2010), and essentially non-existent for Canada. In Ukraine's case, part of the reason is that the post-Soviet world has been mostly female since WWII, when many men died in battle or left the country to fight, but did not always return (Gao, 2015). The current gender ratio in Ukraine is 86.3 males per 100 females (Gao, 2015). There is a Canadian connection, insofar as the number of male versus female Ukrainian immigrants after WWII was likewise disproportionate for similar reasons (Gao, 2015), although the balance has been restored in more recent years (Isajiw, 2010). Analysis of gender statistics for Canadian-born teachers of Ukrainian is currently unavailable.

Data collection

I used a variety of data collection instruments in this study, which are detailed below. All data gathering was conducted in the participant’s language of choice: either English or Ukrainian. My investigation included pre- and post-surveys, structured focus
group discussions using Repertory Grid exercises (explained below), and audio-visual recordings of group interactions. Survey data were analyzed using Survey Monkey, and Repertory Grid data were analyzed using the RepPlus5 suite of conceptual tools. Qualitative data were analyzed using Transana qualitative analysis software. Remote collection and analysis of the data involved use of state-of-the-art digital affordances at the University of Ontario Institute of Technology Faculty of Education’s Educational Informatics Laboratory (EILab). These technological supports are discussed in the sections below.

Surveys.

Survey research is an approach involving the collection of information from a sample of individuals through their responses to both closed- and open-ended questions. The researcher uses information from the sample to make some inference about the wider population. Survey research is widely used in all fields, because it is versatile, efficient, and generalizable (Denscombe, 1998). Data are collected in a standardized form, usually through a questionnaire. Surveys are designed to provide a snapshot of how things are at a specific time (Denscombe, 1998). They can produce a large amount of data in a short time for a modest cost. The decision to use both closed- and open-ended questions for the current study was based on the fact that a design of this kind is best equipped to capture a range of information, including personal preferences, attitudes, opinions, practices, concerns, behaviours, and aspects of knowledge that might otherwise be missed (Gay & Airasian, 2003). Open-ended questions, as part of a survey or questionnaire, have been reported to encourage candid and open communication (Paolo et al., 2000). In fact, this kind of information-sharing is considered by researchers to be a form of democratic exchange of ideas and beliefs, which is important in qualitative research (Selwyn & Robson, 1998). In addition, many benefits have been identified for researchers using electronic surveys (as were used in this study), including time and cost savings, as well as convenience and greater reach (Manfreda, et al., 2008; Nguyen, 2007).

Surveys are a classic method for collecting data. They are brief, straightforward to formulate and implement, and offer diverse information. The data gathered during an
effective survey provide a unique opportunity to obtain detailed insight. Most importantly, the use of pre- and post-surveys enables the measurement of change-over-time when used to monitor pre-intervention conditions against post-intervention conditions (in this case, the structured focus group activity). This serves as a source of triangulation, or the validation of data through cross verification from the results of different instruments of data collection (Angen, 2000). Since surveys enable the researcher to learn what is important, what participants found valuable, and what they did not, these insights can permit the researcher to see connections with the feelings and needs of the larger population of which the sample is a part (Sue & Ritter, 2007).

In the current study, one pre- and one post-survey were administered via Survey Monkey in Ukrainian and English. Survey Monkey is an online survey instrument that was cost-effective and easily accessible by all participants. Survey Monkey also provided anonymity, which assured an equitable, ethical, and safe environment for participants to share personal views, feelings, and experiences (See Appendix A “Pre-Survey of Second/Foreign Language Teachers (Ukrainian)” and Appendix B “Post-Survey of Second/Foreign Language Teachers (Ukrainian)”). The pre-survey was designed to gather general information about the teacher-participants’ professional learning practices and their opinions about them. The post-survey consisted of four Likert scale questions plus three brief, open-ended questions to allow for greater contextualization. Participants were also provided with an optional “additional comments” section at the end to encourage feedback that may not have been otherwise addressed, along with any other relevant thoughts. The surveys helped to confirm general themes and noteworthy exceptions.

Focus groups.

A focus group is a small group of individuals from a sample of the population who meet with a researcher in a non-threatening environment for a period of time to discuss a selected topic, so as to explore perceptions, attitudes, ideas, feelings, and experiences (Wilson, 1997). According to Gilflores and Alonso (1995), focus groups help to interpret the results brought forth by other data, since they serve as a non-directive
means to elicit information from individuals who may be more likely to share their feelings and experiences in a group situation. Focus groups have become a technique applied in more and more fields of research about human behaviour and experience (Gilflores & Alonso, 1995; Merton, 1987). They are often used in the initial phases of data collection to obtain exploratory data, and are frequently followed by surveys, whose questions can be based on focus group results (Gilflores & Alonso, 1995). Among their common elements, focus groups encourage and utilize group interactions, which is an important contributing factor to the wealth of data which can be derived from them (Wilson, 1997).

In educational research, focus groups serve as a form of group interview during which “research conversations” occur (Moyle, 2006, p. 3). Furthermore, these research conversations are considered to be purposeful (Burgess, 2005) and contextually grounded (Mishler, 1993) professional conversations, which contribute to collaborative meaning-making. While weaknesses of focus groups include the possibility of conversations being sidetracked or dominated by one or more participants, good facilitation is a reliable remedy for this. In addition, with the use of digital technology to overcome issues of time and place, as well any difficulties with recording, focus groups have been shown to be a valuable and conducive forum for participant voice, clarification, challenge, and the acceptance of different viewpoints (Moyle, 2006).

A primary benefit of focus group research is that it involves the participant directly and in a manner favourable to emergent ideas (Bachman, 2009). As a result, the findings from the research will have more credibility with the participant, as well as with others interested in the findings. Focus groups offer the opportunity to comfortably share opinions, perceptions, and knowledge with others. Likewise, such settings serve as a safe place for offering and receiving feedback, and for reflecting upon it (Bachman, 2009). As a result, focus groups generate rich data for qualitative analysis.

Between the pre- and post-surveys, I conducted two structured focus group sessions, one in Ukraine and one in Canada. In my research, I used both physically-collocated and online gatherings to conduct my focus group meetings. These formats
offered the benefit of supporting group discussion in a way that was preferred and easiest for the teacher-participants involved, while at the same time creating opportunities to compare the experiences from both these environments. While in each case the focus groups were structured around a Repertory Grid task (see below), the discussion was free-flowing, which allowed for the disclosure of comparing and contrasting views, controversy, as well as alignments. These kinds of experiences are also known in research as “discovery interviews”, since they are open, flexible, and adaptive (McLeod, 2014). They are also valid, because during the sessions the facilitator can probe for deeper understanding (McLeod, 2014). [See Appendix C Focus Group Questions]

**Repertory Grid (Rep Grid).**

Repertory Grid, or Rep Grid, is a form of interviewing in which “elements” (key characteristics) and “constructs” (ways of thinking about those elements) are elicited from an individual or group, in relation to a certain idea or concept under study. The Repertory Grid elicitation technique is “triadic”, meaning that the elements are compared to one another and also to the constructs (or thinking about them), in order for the individual or group to choose those elements which best represent the idea they are considering (Jankowicz, 2004). The resulting elements are then rated on a Likert Scale in relation to each of the constructs. This technique helps to identify deep-seated perceptions, attitudes, and feelings (Cohen, Manion, & Morrison, 2002) in the process of reaching a final consensus of choices. Note that every construct has two poles, meaning two views of it—one most closely aligned with an element and one least closely aligned with it. This bi-polarity is what defines a construct—it is what makes the idea complete (Jankowicz, 2004). Repertory Grids provide researchers with certain insights into learner perception regarding an experience, even though they may not capture all moments (Bencze et al., 2003; Bencze, et al., 2006; van Oostveen et al., 2010). For this reason, it is common for researchers to complement Repertory Grids with other data assembly techniques, as this helps to link the data to the meanings extracted from it by the researcher (Bencze et al., 2003; Bencze et al., 2006; Maykut and Morehouse, 1994; Saldaña, 2013).
In general, Rep Grid involves a suite of research support tools grounded in personal construct theory (Kelly, 1955), and made up of an array of conceptual representation techniques using conversational constructivist methods (Gaines & Shaw, 2010). These tools are geared to elicit understandings of individual and group psychological and social processes in the form of analytical grids (Gaines & Shaw, 2010). These grid analyses capture and compare both consenting and dissenting perspectives (Gaines & Shaw, 2012a). Broadly, conceptual grid (or matrix) elicitation and analysis is a form of socio-cognitive inquiry for participants in networked communities (Gaines & Shaw, 2012a). It is active inquiry, allowing “phenomena modeled through data mining to be investigated in greater depth” (Gaines & Shaw, 2012a, p. 1). The models include probing questions and new topic stimuli, which help to generate additional data (Gaines & Shaw, 2012a). Research has shown that computer-based conceptual modeling has successful social uptake and is supportive of the communities under study by contributing to their sense of “cognitive commonality” or the shared meaning of membership (Gaines & Shaw, 1989, 2010, and 2012a, p. 2). This is because the process is stimulating and, therefore, results in ongoing feedback, which in turn promotes further discussion in the web community (Gaines & Shaw, 2012a). Conceptual or Repertory Grid elicitation and analysis helps to develop stronger theoretical foundations for human socio-cognitive activities conducted with the use of computers as cognitive aids (Gaines & Shaw, 2012a).

In the current study, research participants commenced a Rep Grid session with a brief period of brainstorming to invite responses (generate elements) related to the first question I provided them (What are the major elements (components, features, characteristics) of professional learning? (Professional learning includes: traditional professional development--seminars, masterclasses, training, courses (school-based or mandated), professional learning networks (PLNs), and informal online CoPs). They were then given an opportunity to choose from among the elements generated to complete the selection of constructs to complement those elements, in relation to the second question I gave them (Thinking about the elements you identified, what factors would contribute to personally meaningful professional learning experiences for teachers involved in informal online CoPs?). As background, I provided each group with Lave and Wenger’s (1991) definitions of a PLN (a set of relationships, personal interactions, and
connections among participants) and of a CoP (a shared identity around a topic that represents a collective intention to manage a domain of knowledge and to sustain learning about it). Each group then spent time comparing three random elements at a time to determine which were similar and which were different. In order to do this, they were asked why they were similar or different, as these answers provided the two sets (or poles) of constructs required for their grid. Finally, to complete the grid elicitation task, the focus group participants had to rate the elements they had agreed upon on a scale of 1 to 5, one being most aligned and 5 being least aligned, with personally meaningful professional learning experiences for teachers involved in informal online CoPs. By rating each element against each pair of similar/different constructs, the focus groups completed their grids. The aim of this activity was for participants to move towards group consensus on the constructs they felt characterized the informal online CoP experience for professional learning (itself an exercise in community-building). This activity was audio-visually recorded. A key reason for the simultaneous recording was to capture the collection of dissenting opinions and diversity of thought which arose in these group sessions.

Consent.

It should be noted that the issues of participant privacy and confidentiality were not addressed in the same manner by the administrative structures overseeing the teachers from each country involved in this study.

Both sets of participants voluntarily underwent identical procedures for providing consent and permission to participate in the research according to ethics regulations set out by UOIT, the home institution of this investigation. However, the Canadian teachers were additionally bound by the permission requirements of the Edmonton Catholic and Elk Island Catholic School Districts, which were duly fulfilled. No specific protocol was requested by the Lviv educational administration in this regard, presumably because a procedure relating to teacher research (especially external research) is not currently in place. This may, in part, be attributable to the long-standing tradition in Ukraine (and much of Eastern Europe) of teaching and research being two separate branches of
academia, overseen by different institutions. In order to introduce a measure of additional protection for them, my participation request was vetted and subsequently negotiated by the International Institute of Education, Culture and Diaspora Relations at the Lviv Polytechnic University in Lviv,

The final teacher cohort for the current study was selected (on a first come, first served basis) from responses to an email letter of invitation & consent for voluntary research participation, originally distributed to a larger population (See Appendix D “Letter of Invitation & Participant Consent Form” and Appendix E “E-mail Request to Participate in Pre- or Post-Survey”). The consent form outlined the following: purpose and logistics of the study, potential benefits, confidentiality protection, participant rights and obligations, and separate sections to accept or decline consent to participate in the various aspects of the research (surveys, structured focus groups, audio-visual recordings, consent to use name, consent to be quoted, consent to be contacted about participation in other studies), as well as whom to contact with any questions. The permission form made clear that participant involvement was voluntary, with an option to opt out at any time without repercussion. Those contacted were given two weeks from the time of receipt of the electronic consent form to provide their response. In addition, any technical assistants (outside the investigative research team) were required to sign a Confidentiality Agreement (See Appendix F: “Confidentiality Agreement”). All correspondence with potential participants was conducted in English and/or Ukrainian, as required.

**Research design and data analysis**

Participation in CoPs, or lack thereof, can be described in terms of reasons for such participation, and of barriers to it. The same applies to the use of the community as a source of knowledge. Therefore, in order to gain insight into the role of informal online CoPs in teacher learning, and the subsequent impacts on student learning, I analyzed the collected data in relation to the study’s research questions, as shown in Table 1:
Table 1. Research Analysis Table

<table>
<thead>
<tr>
<th>Research Questions</th>
<th>Data that address these research questions</th>
</tr>
</thead>
</table>
| 1. What factors influence professional learning experiences for Ukrainian language teachers engaged in informal online CoPs? | **Pre-survey:** Q5 (2a), Q 6 (2b), Q8 (4a), Q9 (4b)  
**Focus group:** Question #2  
**Post-Survey:** Q 2, 3, 4, 5, 7, 8 |
| 2. What differentiates informal online CoPs from other forms of professional learning for Ukrainian language teachers? | **Pre-survey:** Q3 (1c), Q6 (2b)  
**Focus group:** Question #1  
**Post-survey:** Q8 |
| 3. What are some key challenges faced by Ukrainian language teachers to participating in informal online CoPs for the purposes of professional learning? | **Pre-survey:** Q7 (3)  
**Focus group:** Question #2  
**Post-Survey:** Q5, 6, 8 |

As mentioned earlier, each of the teacher samples involved in my research study completed a pre-survey, a structured focus group (Repertory Grid) activity, and a post-survey. The pre-survey was distributed one week prior to each scheduled structured focus group session, and the post-survey was sent out immediately following each session. The participants had one week within which to complete their surveys. Each survey required approximately 15 minutes to complete. *Survey Monkey* was used to generate statistics from the quantitative questions, while the open-ended questions were analyzed using spreadsheet software. The surveys were provided in bilingual (English-Ukrainian) format.

The Lviv, Ukraine focus group session occurred in November of 2016 in a neutral community educational facility, easily accessed by all participants. This session was recorded on two video cameras, the purpose of which was to capture different perspectives. The Edmonton focus group took place in December of 2016 and was facilitated online, through *Adobe Connect* virtual meeting software. The online focus
group session was audio-visually recorded within *Adobe Connect* using computers within the Educational Informatics Lab (EILab) of the University of Ontario Institute of Technology’s Faculty of Education, which hosted the session. *Adobe Connect* provides an immersive, fully-online, feature-rich, face-to-face web-conferencing experience. It recently received the highest scores in the Gartner Critical Capabilities Web Conferencing report for its seamless virtual collaboration environment (Preset, Fasciani, & Andrews, 2016). In both cases, recordings were made for the purpose of subsequently analyzing them using *Transana* qualitative analysis software (see below).

Each of the two focus group sessions was allotted approximately 2 hours of time, and each session took place shortly following the completion of the surveys. Each session was conducted in the participants’ language of choice, either English or Ukrainian. In addition to their unstructured discussions, participants were also involved in structured Repertory Grid activities, whose results were analyzed using the online *RepGrid5* analytical tool, which is part of a suite of conceptual modelling tools developed by Dr. Mildred Shaw and Dr. Brian Gaines (Gaines & Shaw, 2007). *RepGrid5* generates graphs that provide deeper and more detailed insights into the meaning of Rep Grid results. (All results generated in Ukrainian were translated into English for the purpose of analysis.)

**Focus group audio-visual data analysis: *Transana*.**

The *Transana* qualitative analysis program deals with media-based data, which differ from text, and provide different layers of information. For example, multiple simultaneous video files, such as those capturing individuals involved in a focus group. *Transana* supports transcript-based analysis and re-situation of text, audio, and video data, allowing for multi-layered analysis of learning perceptions and practices (Woods, 2014). As a result, coding is emergent and developmental. For these reasons, the *Transana* program provided an effective context for analyzing the audio-visual recordings of the focus group sessions both in Lviv, Ukraine and Edmonton, Canada.

Initially, I edited the audio-visual focus group recordings to reduce them to manageable lengths, whose content was aligned with the research questions of this study. Then, I imported them into the *Transana* program, where I created written transcripts for
each one. (To begin with, I translated the Ukrainian group’s transcript into English using the tool Dragon Naturally Speaking.). Each of the imported recordings was considered an episode in the Transana program (the Lviv, Ukraine recording being made up of two parts, from the two different video cameras which had been placed at different vantage points). I then took short clips from each episode (along with the segments of transcript connected with them) and assembled them into collections (Figure 4). I created the collections based on keywords which I assigned to each selected clip/transcript segment. This keyword coding not only relates to the study’s research questions, but also to its Autonomous Learning Framework for Informal Online CoPs (ALFIO-CoPs), as well as to the benefits and challenges of online CoP for professional learning that were identified in the literature review. Following this, I organized the related keywords into keyword groups. The purpose of this kind of organization of analytic information is to help make sense of the data by grouping it into analytically interesting or meaningful compilations. This allows the researcher to move from identifying what they believe to be significant, to building an analytical argument in defense of their findings (Woods, 2016). Reporting included responses that exemplified an important or repeating idea, since quotations capture not only the words, but the emotions, experiences, and perceptions of interlocutors and this makes them compelling (Lofland & Lofland, 1995). Responses which represented an exception were also highlighted, so as to illustrate a minority opinion or bring attention to a noteworthy idea (Lofland & Lofland, 1995).
Figure 4. Keyword coding of audio-visual recordings and transcripts
Chapter 4 - Findings

Overview. In this chapter, I will present the findings of the current case study in relation to results from the pre- and post-surveys, Rep Grid activities, and recordings of focus group discussions, all in the context of the study’s theoretical framework. My field observations are also provided, with explanations of the contextual setting in which they were recorded.

Pre- and post-survey findings

All research participants were invited to complete one pre-survey and one post-survey in Survey Monkey, immediately before and immediately after participating in the study’s Rep Grid activities. Each survey was provided in English and Ukrainian, and required approximately 15 minutes to complete. Participants had one week to complete and submit each survey.

The first survey contained only one quantitative question (Q 1), asking respondents whether or not they belonged to an informal online CoP. The remaining questions were open-ended, and asked participants about their involvement in (a) online and/or physically co-located professional learning activities, (b) the nature of that involvement (if any), (c) reasons for any lack of involvement, (d) challenges to participation in any forms of professional learning, and (e) the impact of their involvement in any informal online CoPs on their technological self-efficacy and pedagogical innovativeness.

It should be noted that the Lviv group took longer (than the Edmonton group) to complete their pre- and post-surveys because they were less accustomed to checking and responding to email (and other forms of online communication), mainly because of limited, localized, and cost-prohibitive Internet access and access to digital technologies in general. Time constraints also appeared to be a factor.

Following their Repertory Grid triadic elicitation activity, each member of both focus groups completed the post-Rep Grid online survey. This time, the survey gathered more quantitative information about how often group members participated in online
professional learning (and/or informal online CoPs), and the degree to which such participation might affect their emotional well-being as a teacher, their professional technological skills development, and their work in developing pedagogical approaches for integrating digital technology into the classroom. It also solicited their views about recommending informal online CoPs to other teachers, and reviewed their thoughts on challenges to participation. Finally, it asked them if they felt this form of professional learning could contribute to their pedagogical self-efficacy. (see Appendices A and B)

Lviv survey findings

Of the six original Lviv participants, five completed each of the surveys, along with one additional teacher who ended up joining the focus group (replacing an original group member who was unable to attend). Hence, in all, six Lviv teacher-participants filled out the surveys. Their surveys were completed in Ukrainian, and subsequently translated into English by the researcher.

In the pre-survey, none of the members of the Lviv group reported ever having belonged to an informal online CoP. The group members described their experiences with traditional professional learning as consisting of school-based courses, regional seminars, and other training sessions, such as subject or grade-based masterclasses and specialized workshops (like those conducted by their Centre for External Independent Evaluation, for example). Noted non-traditional professional learning included different types of what respondents described as “self-directed learning,” among these online webinars, an online working group for ICT curriculum development, and online additional qualification courses.

As for their feelings about the potential of informal online CoPs to supplement their professional learning, all respondents expressed interest in joining such a community on a test basis to determine how it functions and how it differs from more familiar formal professional learning activities. Respondents added that they felt such communities could provide exposure to new perspectives, opportunities to converse with a wide assortment of colleagues and like-thinkers, and new alternatives for increasing
professional qualifications. One respondent remarked that participation in an informal online CoP could contribute to deeper learning.

Interestingly, although these participants had not been involved in an online CoP to date, they did not feel that membership in one would be any more difficult than in a physically co-located setting. They stated that the online community is practical and convenient, being unconstrained by time or geographic considerations. However, they commented that there is a general lack of awareness among Ukrainian teachers about this alternative. They expressed the wish that this learning option be promoted more broadly among teacher populations, and that teachers (particularly teachers in Ukraine) need more information about its pedagogical purpose and use by educational professionals elsewhere.

In answer to the question concerning the potential impact of involvement in an informal online CoP on their technological self-efficacy, the Lviv respondents generally stated that they anticipated a positive one, because these communities could be a place to learn from other teachers who use technology in education, especially in innovative ways, as well as to practice with technology before trying it in a classroom context. One teacher noted that the online space would be a place to learn from one’s own mistakes and those made by others in a trustworthy peer-based environment. Another saw the informal online CoP as a unique venue for learning about the newest educational developments in practice in different parts of the world and to do so through an ongoing computer-mediated learning experience. Others added that the non-obligatory nature of these communities, in their view, allows members to participate as they wish, be it through listening or interacting, to improve their teaching skills in their own way.

Lastly, with respect to their ideas about the connection between technological self-efficacy and technological pedagogy, the Lviv teachers commented that they could not really answer this question, as they had little, outdated, or no technology available at their schools (they made no mention of the use of personal digital devices). Nonetheless, they did share their opinions about the potential of such communities. One Lviv respondent to the pre-survey observed that “teachers learn alongside their students and so,
must acquire new teaching approaches using new technologies so as to model the effective and confident use of these tools for learning,” including innovative strategies for understanding and dealing with complex problems using such affordances. Another Lviv teacher ventured that informal online communities for professional learning could provide pedagogical opportunities for instruction with technology, because they are innovative learning spaces. This same teacher felt, therefore, that teacher approaches developed in these communities would be helpful in student learning and that “this, in turn, leads to more positive learning outcomes.” Yet another commented that efficiencies could be gained with the proficient use of technology for learning, freeing up the learner to focus more on the learning itself. All respondents agreed that there is a strong connection between teacher technological self-efficacy and technological pedagogy, because the opportunity to interact with fellow professionals using digital tools and in digital environments helps to develop new habits of mind about digitally-enhanced learning. It was also noted that access to digital tools outside of school means that the potential exists for teachers to improve self-efficacy and pedagogical approaches independent of local/school constraints.

The answers of the Lviv group members to Question 1 of the post-Rep Grid survey concerning how often they participate specifically in informal online CoPs for professional learning indicated that they continued, for the most part, to be unclear as to the particular nature of these communities, as compared to other online groups, networks, or professional learning in general. Originally, in the pre-survey, all of them had acknowledged that they had not yet been involved in an online CoP. However, in the post-survey, their answers to this same question, when framed in terms of frequency of participation, suggested that they had begun to re-analyze the nature of their professional learning experiences to date and to discover elements of CoPs within them. A similar pattern of “reconsideration” can be seen in their answers to Questions 2, 3, and 4, given in Table 2:
New insight into these answers could be found in the narrative which arose from the open-ended responses to the second half of the post-survey. Here, the Lviv teachers gave further thought to the capacity of informal online CoPs for professional learning in their own work and the work of their colleagues. In addressing possible benefits and challenges to participation, they considered the personally meaningful professional learning experience for teachers involved in such communities, as outlined in the framework for this study. They spoke of the potential to increase their professional qualifications and to learn new things, develop new relationships, and grow professionally. Respondents described the informal online CoP as a place to present the benefits of one’s experience to others, to access professional information conveniently,
and to receive news of pedagogical developments and related research. Importantly, one Lviv respondent described these communities as a place to “broaden one’s circle of professional conversation.”

Regarding challenges, the Lviv respondents reiterated that, regrettably, lack of awareness was for them and their colleagues a major obstacle to participation. They again mentioned a general lack of understanding about the function of informal online CoPs as compared with other forms of professional learning. No less of a hurdle was the critical issue of technological access (raised repeatedly by the participants), be it inside or outside of school. With little or no access to the Internet, computers and digital devices, even teachers who might be aware of online communities would have difficulty participating in them. One of the Lviv group members wrote about difficulties establishing a personal professional teacher webpage. Upon learning about the subject of the current research study, this group member began looking into informal online CoPs and decided that joining one would assist in the development of the technological skills needed to complete the website. However, this depended on computer availability. On a more basic, human level, several remarked upon time limitations arising from work overload and demanding domestic responsibilities resulting from the current economic climate in Ukraine.

Addressing themselves to the broader issue of the potential to improve their pedagogical practices and build new ones in such communities, the Lviv teachers commented that access to the many articles, hyperlinks, videos, conversations and other Web-based tools through informal online CoPs could expand one’s range of personal professional skills, while active participation in the community could contribute to personal professional growth and learning that could immediately be applied in the classroom. One respondent observed that the classroom represents unrealized potential to develop technological pedagogy, owing to the dearth of educational technologies. This respondent attributed value to the exchange of ideas, experiences and approaches with like-minded colleagues which might be realized in online communities, because this exchange could inspire new educational thinking and joint initiatives. In this way, the
development of technological pedagogy would take on a new, more collaborative definition.

In their additional comments, the Lviv post-survey respondents mentioned the importance of professional mentorship in the community, that is, more experienced individuals who could facilitate and be consulted on a regular basis, a feature they did not encounter much in other forms of professional learning due to minimal or missing interaction. This feature is in keeping with the Zone of Proximal Development concept (Vygotsky, 1978), whereby community members advance from assisted to independent learning. Finally, they emphasized the critical unifying aspect of the informal online CoP, since it can assemble geographically dispersed teachers to continue their professional learning journey together, offering one another emotional support and reducing apathy.

Edmonton survey findings

All five of the original Edmonton focus group participants completed the pre-survey. However, as was the case with the Lviv group, only the pre-surveys of the four teachers who actually participated in the Rep Grid focus group activity were considered. These same four individuals completed the post-survey, as well. These surveys were all filled out in English.

Unlike their Lviv counterparts, the majority of the Edmonton pre-survey respondents (three of four) answered that they did have previous or current experience in an informal online professional teacher community. These experiences comprised a diverse array, including a CoP pilot project for Ukrainian language teachers involving teachers in Alberta, Saskatchewan, Manitoba, and Ontario; an email group of Ukrainian Saturday and bilingual day school teachers; The International Heritage Language Association Ukrainian Schooling in Canada’s online SIG (Special Interest Group); and the online SIG for Ukrainian Teachers of Alberta. There was also one individual with no online group experience, but who belonged to both a provincial teacher association and an international one. These organizations held various physically co-located traditional professional development events.
Describing the nature of their involvement in online professional learning, the Edmonton pre-survey respondents spoke about using Skype on a regular basis to discuss and share challenges and needs related to the teaching of Ukrainian; creating a digital repository of existing Ukrainian teaching materials and developing new ones, along with best assessment practices and tools; organizing Internet-based student partnerships for the purpose of creating and leading authentic language learning and communication opportunities; the co-construction of reading literacy approaches; exchanging ideas about rubrics or lesson plans and collaborating in their development; pooling ideas; creating new approaches, and designing original tasks for the use of interactive whiteboards and computerized word processing for learning Ukrainian; and participating in online educational conferences.

When answering the pre-survey question about the importance of the online community to them, the Edmonton member of a pilot CoP remarked that it had been very beneficial to connect with other teachers in this manner, since the community offered the chance to address common concerns and challenges specific to the field of second language education. This teacher felt that the sharing of professional experience around new strategies and tools, which takes place in this community, has a direct impact on the quality of Ukrainian language teaching and learning: “our students can then benefit greatly from better quality instruction and learning tools.” According to one teacher, “extremely important is the fact that second language teachers spend an extraordinary amount of time planning and preparing. This [community], then, provides a platform to discuss projects to address needs and to implement and share the workload. This, in turn, can be shared with all Ukrainian language teachers overall, benefitting more students.” The individual who had never been in such a community indicated an interest in being involved, because there would be more opportunity to share than in traditional forms of professional learning (professional development).

In terms of the difficulties experienced (or not) when participating in an informal online CoP, Edmonton pre-survey respondents offered many insights. One individual commented that the online community was easier to be involved in for several reasons. The first was the fact that it was more inviting, since knowledge is constructed
collaboratively, rather than simply being a medium of information delivery. Also, the context of the community encourages and engages all participants over time. In addition, the time commitment for asynchronous interactions is negotiable, easing and maximizing participation. Another respondent stated that the goals of the community are arrived at through consensus, which contributes to a sense of common understanding and purpose. One respondent remarked that the online CoP brings a broader spectrum of teachers together, sometimes from all over the world, since location and distance are not obstacles. Several respondents remarked that it is easier in the online community to share strengths, knowledge, skills, and experiences, and to work collaboratively.

Concerning any difficulty with participating in informal online CoPs for professional learning, two of four Edmonton post-Rep grid survey respondents observed that involvement requires additional time outside the school day, which can already be overwhelming for a teacher. They stated that professional development during school hours is less stressful. Also, in their opinion, as professionals, teachers often have online and other courses to attend which already take up a considerable amount of time. Furthermore, personal obligations add to these time constraints, resulting in limited time for participation in an online community. Members of the Edmonton contingent were adamant about the need for these professional communities to blend seamlessly into their busy lives, so as not to present a time burden. In this regard, a respondent, who was a member of an online professional community, described it in the following way: “my experience so far was to commit to meet for about 1 hour every 2 months. This seemed manageable and not overwhelming. Also, [dates were] chosen to meet teachers’ schedules and availability. However, time zones can be a challenge to coordinate [online] meetings.” Another Edmonton post-survey respondent explained that “it’s more difficult to participate in an informal online PD community, because it really requires more time and effort on your part outside of school. If your PD is formally organized, then you participate in it during school hours.” Yet another commented: “as professionals, we have many obligations and commitments. Sometimes, some online [sessions] require a lot of time.” Another teacher brought up the matter of credentials: “formal training workshops and PD courses are approved by the [teacher association] or your district and you are confident in their professional value.” This person’s comment suggests, in addition,
uncertainty about the ability of informal online CoPs to assure the same professional value as other forms of professional learning.

Speaking to the issues of technological self-efficacy, technological pedagogy (and their relationship), the Edmonton group generally agreed that the online community experience had a positive effect on both. Two members, in particular, discussed benefits of informal online CoPs, with one member indicating that learning from others occurs when those participants share their knowledge about, and experiences with, technology, and the other opining that involvement in an informal online CoP contributes to their professional flexibility (that is, the ability to adapt in a pedagogically resourceful manner to unforeseen circumstances in a changing learning environment). Yet another respondent commented that constant interaction in these communities leads, in turn, to a confident use of interactive tasks, games, and projects with students involving digital tools. This teacher also mentioned that membership in the online community raises awareness about the use of technology to engage learners and enhance learning. Another Edmonton teacher commented that technological competency developed in these communities relates directly to the development of technological pedagogical approaches, because “the more technologically competent I feel, the more new ideas I am able and willing to try in the classroom.” Yet another teacher stated that teacher technological self-efficacy is no longer optional, because much of the existing curriculum assumes a proficiency with digital tools. As a result, the informal online CoP is a necessary component of professional learning which addresses this ongoing need for technological competency. Finally, one Edmonton post-survey respondent noted that there are a variety of school-based, as well as personal, digital tools to be found both in day schools and in Saturday schools offering Ukrainian language programs. However, one of the only places this teacher has been able to work on pedagogical approaches to the use of these tools has been in the online space.

In answer to Question 1 of the post-survey about their level of participation in informal online SL/FL teacher CoPs, all Edmonton respondents (100%) answered “occasionally.” In relation to this, it became clear from their remaining responses to the
first half of the post-survey that, while community involvement is helpful, it is not as helpful as it could be. These responses are summarized below, in Table 3:

Table 3. Edmonton group post-survey findings

<table>
<thead>
<tr>
<th>Post-Survey Question</th>
<th>Response Rate</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. Participation in an informal online second/foreign language teacher community of practice contributes to my emotional well-being as a teacher</td>
<td>25% 50% 25%</td>
</tr>
<tr>
<td>3. Participating in an informal online second/foreign language teacher community of practice allows me to improve my technological skills</td>
<td>25% 25% 50%</td>
</tr>
<tr>
<td>4. The informal online second/foreign language teacher community of practice experience provides me with opportunities to develop pedagogical approaches for integrating digital technology into the classroom</td>
<td>25% 75%</td>
</tr>
</tbody>
</table>

The Edmonton respondents were more succinct in their comments in the post-survey, whereas they had been quite expressive in their answers to the pre-survey, and likewise, in their intervening Repertory Grid discussion. It appears that the post-survey served as a summary of what matters most to them.
Regardless of whether they were currently involved in an informal online CoP or in some other form of online professional learning, the Edmonton post-survey participants emphasized a well-defined, shared purpose as their most important criterion for participation. They connected a common goal (or goals) to practical professional outcomes. As one respondent put it: “[teachers] need to feel they have accomplished something, be it sharing resources, or collaborating on projects or authentic tasks connecting language learners.” The next most important factor was time. Participants remarked that synchronous interactions continue to present a challenge owing to the diverse schedules and demands on the time of community members. In their reflective responses contained in the post-survey, once again, the Edmonton teachers responded similarly about effective time management for informal online CoPs to serve professional learning, with one respondent noting that “finding and making time is always the biggest factor,” another indicating that “sometimes I can’t participate, because the time of an online activity is not suitable for me,” and yet another noting that “[the problem is] the set time and commitment.” Several mentioned that having to make a time commitment had caused them to hesitate about their decision to join such a community.

On the other hand, recognizing the role of informal online CoPs in life-long learning, Edmonton respondents remarked that these communities make it possible to continuously improve teaching skills, and that they extend an individual’s professional support group. As one participant stated: “my online colleagues will be able to help me.” Furthermore, one respondent felt that participation in such a community provides the opportunity to develop concrete strategies for diverse teaching situations; the community becomes the “go-to” place to work out professional problems. Another teacher was attracted by the practicality of asynchronous interactions in the online CoP, because participation in real time is not required. In this regard, the Edmonton participants noted that opportunities to interact via blogs, email threads, and Twitter were valuable on a daily basis. Lastly, as with the Lviv group, post-survey respondents from Edmonton also mentioned the importance of mentorship in the community, referring to community “leaders” who guide other members through the processes of the community. From among the Edmonton post-survey respondents, several teachers stated that they belong to an informal online community because it has contributed to the improvement of their own
technological skills. For this reason, they would, and do, recommend to other teachers that they also consider membership, in order to create a larger community of Ukrainian teachers who share similar technological know-how.

As shown in the table below, the combined post-survey results for both groups indicate a positive teacher perception of the role of informal online CoPs in professional learning experiences which are personally meaningful in the key areas considered in this study: teacher emotional well-being, technological skills, and digital pedagogy:

**Table 4. Combined responses of Lviv group and Edmonton group to the post-survey**

<table>
<thead>
<tr>
<th>Post-Survey Question</th>
<th>Percentage Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I participate in one or more informal online second/foreign language teacher Communities of Practice for the purpose of professional learning.</td>
<td>Occasionally + Rarely = 80% vs/ Never at 20%</td>
</tr>
<tr>
<td>2. Participation in an informal online second/foreign language teacher community of practice contributes to my emotional well-being as a teacher</td>
<td>Always + Often + Occasionally = 70% vs. N/A at 30%</td>
</tr>
<tr>
<td>3. Participating in an informal online second/foreign language teacher community of practice allows me to improve my technological skills</td>
<td>Always + Often + Occasionally = 80% vs. N/A at 20%</td>
</tr>
<tr>
<td>4. The informal online second/foreign language teacher community of practice experience provides me with opportunities to develop pedagogical approaches for integrating digital technology into the classroom</td>
<td>Often + Occasionally + Rarely = 70% vs. N/A at 30%</td>
</tr>
</tbody>
</table>

**Repertory Grid Findings**

*Introduction*. The Lviv session began with the teachers dutifully taking notes, speaking only when spoken to, and hesitating to provide a response that might differ from the others or appear to be "wrong". As the repertory elicitation process progressed, however, and the discussion delved deeper and more freely into the similarities, differences, strengths, and weaknesses of different forms of professional learning, the teachers became more animated, forthcoming, and inquisitive. What's more, they began
communicating less as individuals, and more as a group, openly consulting with, and querying, one another. In addition, they offered personal anecdotal teaching experiences to enhance the subject of the discussion, and raised new problems and questions, which resulted in their having to think twice about choices they were making during the elicitation process. By the end of the activity, they were quite prepared to continue the discussion beyond the two-hour time frame, and were grateful for any further resources or contacts relating to teaching and learning, particularly in the online space. While for the most part Internet access in Lviv schools is still in its early stage, households tend to have a connection to the Internet and individuals also access digital resources through public WIFI, where available, using their personal devices. As for the Edmonton group, consensus took time to develop. Along the way, dissenting views presented additional insights and spoke to the varied professional experiences and learning conditions of the Edmonton teacher cohort (whereas the background of their Ukrainian counterparts was largely uniform).

**Focus Cluster Graphs.** The graph created by the RepPlus5 program and employed in this study to present an analysis of the collected Repertory Grid data is called a Focus Cluster (see example in Figure 5):
Figure 5. A typical Repertory Grid focus cluster graph (http://grid.eilab.ca/)

The program algorithm sorts the elements and constructs so as to focus on clusters of high and low correlations (Gaines & Shaw, 2010). These correlations refer to closely matching elements and, in turn, constructs, which the program brings together. In addition, shading on the graph highlights groups of ratings which are closely related. On a 5-point Likert Scale (such as the one used in this study), these would be the 1’s and 2’s, and 4’s and 5’s (3’s are on their own). According to the RepPlus5 program originator, this aggregation of ratings suggests a high level of agreement and very little significant difference (Shaw, 1980). To the side of the elements and constructs respectively are given their correlations as a percentage of the maximum possible match. The link lines represent the clusters of similarity among elements or among constructs.

The Repertory Grid focus cluster graphs produced by the Lviv group and the Edmonton group are provided in Figure 6 and Figure 7, respectively. In each case, the text written in red font are the elements and the text written in blue font are the constructs. The numbers within the box are the ratings assigned by each group on a scale of 1 through 5.
Among the six Rep Grid elements identified by the Lviv group, the following pairs resulted in a 100% correlation; the highest rated clusters of elements in this group’s definition of an informal online CoP:

- exchange of professional experience / blogging/reflection in a universally accessible space (100%)
- exchange of professional experience / public presentation of own ideas/initiatives (100%)

Additional Lviv group cluster correlations (in decreasing order) include:

- raising professional qualifications / blogging/reflection in a universally accessible space (83.3%)
- raising professional qualifications / mutual support (75%)
• collaboration with talented, engaging professionals / mutual support (66.7%)

It is worth noting that the last element in the list above, “collaboration with talented, engaging professionals”, resulted in a middle rating (#3 on the scale) in relation to all identified constructs.

Since the constructs are divided into two groups or poles, the left side representing those items which the focus group found to be most aligned (#1 on a scale of 1 to 5), and the right side representing items the group identified as being least aligned (#5 on a scale of 1 to 5) with their elements of informal online CoPs, the matching between constructs reflects the nature of the relationship between each set of polar-opposite construct pairs. In the case of the Lviv group, the following constructs generated a 100% correlation:

• exposure to new and useful methodologies / space unconducive for methodological development and developing new knowledge / no/limited opportunity for involvement in knowledge construction (100%)

• Internet access / lack of/limited Internet access and information sharing / repository information (100%)

The next most closely related were:

• developing new knowledge / no/limited opportunity for involvement in knowledge construction and internet access / lack of/limited internet access (95.8%)

The remaining sets of construct pairs were quite closely matched, as well:

• informal learning / formal professional development and information sharing / repository information (91.7%)

• informal learning / formal professional development and personally essential/desirable participation / mandated participation” (83.3%)

The Repertory Grid focus cluster graph of the Edmonton group (Figure 7) was more densely populated with data, and produced a greater number of correlations. This group identified ten common elements which they decided were associated with informal online CoPs for professional learning. The correlations among the elements were strong, all above 90%, as follows:
At the top end, the following four sets of elements were correlated at 95.8%:

- discussing best practices / investigating teacher challenges
- discussing best practices / accessing quality resources
- sharing of planning/assessment ideas / equal input opportunity for all participants
- accessing quality resources / devising new resources

The following two pairs were correlated at 93.8%:

- sharing of planning/assessment ideas / investigating teaching challenges
- partnership with geographically dispersed colleagues / equal input opportunity for all participants

Lastly, the following three element pairs aligned at 91.7%:

- devising new resources / creating personal growth plans
- grade/subject based collaboration / partnership with geographically dispersed colleagues
- blogging/reflection / creating personal growth plans

It is worth remarking that the relationships among the construct pairs were equally strong, once again at a correlation rate of 90% or higher. The two sets at 95% were:

- dedicated space to meet needs / inadequate space to meet immediate/urgent needs and mentorship / expert facilitator required
- ease of access / lack of/limited Internet access and collaborative construction of new knowledge / having to work in a group

The majority of constructs were correlated at 92.5%, those being:

- asynchronous interactions / synchronous interactions and defined choice of topics/tasks / unrestricted range of topics
- collaborative construction of new knowledge / having to work in a group and mentorship / expert facilitator required
- mutually beneficial experience / little/no reciprocal benefit to participation and impact on program/school development / little/no program/school impact
- mutually beneficial experience / little/no reciprocal benefit to participation and defined choice of topics/tasks / unrestricted range of topics
• ease of access / lack of/limited Internet access and asynchronous interactions / synchronous interactions
• minimal cost / fees/other costs and flexible involvement / required time commitment

Finally, at a correlation rate of 90% were:
• modest size of community / community size unproductive for larger gatherings and impact on program/school development / little/no program/school impact

Transana analysis

As outlined earlier, the Transana qualitative analysis program was employed in this study to analyze the content of audio-visual recordings obtained during Lviv and Edmonton group Repertory Grid discussions. As previously mentioned, the coding was developed in response to the research questions and framework, but was also informed by the main themes which arose from the literature review. In addition, the coding served to highlight the data from the Repertory Grids and surveys. This is not to say that the codes developed in this study were “a priori” (i.e., determined prior to empirical data analysis), but rather, that the codes which emerged from the data (empirical codes) exhibited an affinity with the study themes when examining the data for commonalities, differences, and relationships to these themes (Gibson & Brown, 2009).

Although the Transana coding was conducted separately for each of the Lviv and Edmonton groups, it turned out that the participants of both came to largely the same conclusions in terms of defining the qualities of traditional, or formal, professional learning, as compared with alternative, or informal, professional learning. After reviewing the recordings numerous times, the researcher noted that the quantity of audio-visual clips (and related transcript segments) which were connected with the keywords in these two categories of professional learning was nearly the same for both groups. While a superficial count is not proof of common understandings between the groups, a closer examination of the keywords which emerged from the transcripts, when compared with the elements and constructs identified by these same groups in their Repertory Grid sessions, offers further empirical support.
To begin with, the groups were quick to describe their traditional school-, board-, or district-mandated professional development experiences, not only in terms of what defined them, but also what they felt was missing from them. This is reflected in the keywords attributed to these characteristics, namely, lack of interactivity, limited dialogue, limited time/opportunity (to participate), restricted selection (of types or choices of professional learning), standard format, and subject-matter learning. In addition, traditional professional learning was categorized into types, namely: learning circles; staff meetings or work groups to share ideas, classroom experiences and best practices; presentations by teachers who have attended outside professional development; teacher conferences or conventions; in-service workshops; team-teaching; webinars; and masterclasses.

When asked to consider what alternative or informal professional learning means or could mean to them, the teachers from both groups did not define this learning in terms of types, as they had done with traditional professional development, but notably, in terms of choices of experience. In fact, the only two “types” of alternative or informal professional learning they named were blogging and social network groups such as Facebook. The experiences which they connected with alternative/informal professional learning are identified in the keywords associated with their comments, those being: both asynchronous and synchronous, collaboration, common purpose, mutual support, personally meaningful professional learning, shared experience, and social construction of knowledge.

As the two groups moved through their Repertory Grid activity towards identifying which elements defined or might define the informal online CoP for professional learning, along with which constructs anchored these elements, they considered this in terms of advantages and challenges, akin to some of the findings in the literature reviewed for this study (Ertmer & Ottenbreit-Leftwich, 2010; Macià & García, 2016). The challenges they identified have been captured in the following keywords and expressions: Internet access, computer mediated learning, lack of opportunity, pedagogical support/facilitation, purpose, time, and trust.
Alignments between the two focus groups grew stronger when the participants proceeded to fill in their group Repertory Grids with their Likert scale ratings, so as to assess their elements of informal online CoPs for professional learning against the least and most relevant constructs related to (ideas about) these learning communities. In this regard, the keywords/expressions which arose in relation to the advantages of informal online communities for professional learning were the following: asynchronous, collaboration, common purpose, emotional support, interactivity, new professional relationships, personally meaningful professional growth, self-determined learning, shared experience, social construction of knowledge, synchronous, technological pedagogy, technological self-efficacy, unconstrained learning, and voluntary. Of these, three keywords emerged as descriptors of online community advantages which are particularly germane to this study. These were “self-determined learning”, “voluntary”, and “unconstrained learning”. One of the Lviv group members described self-determined learning in the following way: “in the online community we can experience opportunities for improvement that match our nature or character or temperament.” Regarding the voluntary nature of the community, both sets of focus group members spoke about the importance of an unmandated experience, the need for members to choose topics and tasks relevant to them, to negotiate a community structure which suits all participants, and to have the freedom to come and go as they deem fit. And as for unconstrained learning, Edmonton participants felt that the ongoing nature of these communities creates continuous access to borderless professional learning. The Lviv focus group members remarked on the value of being able to go online at any time, both to connect with other community members and to respond to them. Lastly, they brought up the possibility of situating the community in a social network, such as Facebook, which can be accessed from personal devices when access through school-based technology isn’t possible. According to one Lviv group member: “that’s how we have figured out to conduct some kind of community of teachers in our school.”

From these findings, we may discern some of the key themes drawn from the literature, including developing new professional relationships, unifying around a common goal, untethered/non-mandated professional learning, voluntarily sharing knowledge and experience, emotional support, both asynchronous and synchronous
interactions, as well as opportunities to build technological self-efficacy and pedagogy—and—in accordance with the framework for this study, the themes: learning which is self-regulated, personalized and collaborative, and whose personal professional meaningfulness derives from the confidence, mentorship, and shared repertoire constructed in the community.
Chapter 5 - Discussion

**Introduction.** This chapter discusses the findings of this study, in light of themes in the study’s literature review and conceptual framework, in order to answer the research questions: 1/ What factors influence professional learning experiences for Ukrainian language teachers engaged in informal online CoPs? 2/ What differentiates informal online CoPs from other forms of professional learning for Ukrainian language teachers? and 3/ What are some key challenges faced by Ukrainian language teachers to participating in informal online CoPs for the purposes of professional learning?

While the data provided by the focus groups represent only a sample of the Ukrainian language teacher population, as a case study, the current research helps to build greater knowledge about the experiences, views, and feelings of Ukrainian language teachers within their own milieux and as part of an international professional teaching community.

Each of the Lviv and Edmonton focus groups produced different Repertory Grid elements and constructs pertaining to their understandings of informal online CoPs, based on different experiences with professional learning. Nevertheless, there were some intersections as well as some distinctions in thinking. In order to focus on what is indicative of a personally meaningful professional learning experience for these teaching professionals, the data were examined in light of the key components of the research study’s Autonomous Learning Framework for Informal Online CoPs (ALFIO-CoPs) (Figure 8), arrived at on the basis of findings in the existing research: emotional support (confidence), technological self-efficacy (shared repertoire), and technological pedagogy (mentorship):
Emotional support (confidence).

As earlier research has shown, emotional support (confidence) is an issue of self-efficacy and is a key factor in teacher professionalism (Hur & Brush, 2009; Kyonghye & You-Kyung, 2013; Lord & Lomicka, 2008; Macià & García, 2016; and Wu et al., 2014). Although less experienced than their Edmonton counterparts, the Lviv teachers noted that learning from other teachers in the online community who use educational technologies could only benefit their sense of teacher self-efficacy. They felt that they would gain new understandings from mistakes shared by other teachers, as well as themselves. This observation reflects Piaget's (1936) notion of cognitive assimilation, whereby learners take in new information or experiences and incorporate them into their existing mental schema (linked mental representations of the world). It also suggests that an important component of emotional support for these teachers is the potential to build self-confidence by exploring inadequate knowledge and failed approaches within the community. In this regard, the Edmonton teachers remarked that they often find themselves working alone and in isolation, which prevents them from dealing with any doubts about their teaching methods and effectiveness. This seems to indicate that sharing not only of positive, but negative experiences helps to alleviate feelings of uncertainty and builds confidence through the realization that teachers are not alone in their struggles.
Moreover, these findings suggest the importance of the public exploration of difficulties in teaching, as well as the potential to overcome these obstacles within the community. In accordance with the framework of this study, these findings serve as further evidence of CoI model dynamics in the informal online CoP. Open, critical and sustained communication in the community is a reflection of cognitive presence, while people dealing with real issues together reflects social presence (Garrison, Anderson, & Archer, 2000).

In addition, these findings imply a sense of trust in the community as a safe space for professional self-expression, findings aligning with those of many other studies, including Johnson (2005), Kushnarenko (2010), Macià & García (2016), Preece (2000), Sharatt and Usoro (2003), and Veletsianos (2016). In the case of the Ukrainian teachers involved in the current study, trust was expressed in terms of their willingness to share their work with their peers in the online community. Some of these teachers said they were uncomfortable about sharing their work with other teachers in traditional professional development situations. Lack of familiarity with one's colleagues could be a contributing factor to the discomfort they expressed (for example, some participants in the current study were acquainted with one another, while some were not). Results from the Repertory Grids of both the Lviv and Edmonton groups demonstrate a very strong (if not the strongest) correlation between the public presentation, or sharing, of ideas and initiatives and each group’s notion of an effective informal online CoP. What emerged from their discussions about trust was the importance of a mutually-beneficial experience to confidence-building. Reciprocal benefits and relationships have been identified as fundamental building blocks of sustainable, scalable online communities for educational professionals (Schlager & Fusco, 2006).

The keywords which emerged from the recordings of both focus group sessions bring these observations into further focus. During their initial discussions about the characteristics of alternative/informal professional learning, the concept of mutual support arose from a number of comments and this was designated a keyword for this type of learning. The Lviv group talked about the possibility of the online space as a place to examine, discuss and reflect upon their own and others’ psychological
characteristics as teachers, an opportunity not to be found in traditional professional development. They felt that this was an important component of their professional life and would complement their study of student psychology. They also pointed out that emotional support and confidence-building are positively impacted by access to and interaction with colleagues. According to one of the Lviv teachers, “Mutual support requires two sides, or even three or more, I would say.” Both groups commented that they experienced (or believed that they would experience) mutual support only in non-traditional/non-formal professional learning.

These findings are supported by recent investigations into the optimal conditions to facilitate growth in learning, which emphasize the strong sense of emotional attachment and empathy in non-mandated online CoPs resulting from mutually-beneficial interpersonal relationships and assistance strategies (Tseng & Kuo, 2014). For example, in their Repertory Grid discussion, Lviv group members associated blogging, which is conducted in the online space, with mutual support in an informal learning community because, according to their experiences, it invites feedback and response to that feedback among trusted peers. Interestingly, they distinguished the exchange of information in the online community as a form of mutual support, because it is not a passive activity (unlike much of the professional learning they were accustomed to). One of the Lviv teachers expressed this as follows: “We have to listen in an active way to one another and respond with what best serves the purpose of our colleague.” The Edmonton group offered similar observations, and added that participation in informal online learning represents a break from the everyday teacher experience, creating new and ongoing connections which can combat emotional stresses related to teaching and teacher burnout. In fact, they commented that it is natural to desire and receive support from your colleagues, and that the online community is collegial and offers a potentially broad base of support. These findings are in line with those of earlier studies, including Hur and Brush (2009). In the aforementioned study, the researchers interviewed 23 teachers from three self-generated online communities and analyzed more than 2,000 postings in those communities. They found that sharing emotions topped the list of five main reasons for participation, and among those five reasons was also a sense of camaraderie. Scholarship about the conditions for sustained communities of practitioners has also determined that criticism
and its public uptake, as well as critical, joint evaluation of theory and practice, are fundamental to the long-term vitality of the community (Longino, 1994). However, it appears that feelings of emotional support and kinship prepare community members for more spirited and challenging interactions as the community develops.

**Technological self-efficacy (shared repertoire).**

Current research refers to the value of online learning communities for developing technological self-efficacy (Ertmer and Ottenbreit-Leftwich 2010; Macià & García, 2016; Wideman, 2010). In concert with Bandura's (1977) theory of self-efficacy, teachers in online CoPs have previously reported that they valued the opportunity to try and test diverse digital tools which they could use with their students (Lord & Lomicka, 2008). Notwithstanding their limited experience, the Lviv teachers also remarked that they anticipated a positive impact on their technological self-efficacy by participating in such communities, owing to the opportunity to sustain robust, in-depth discussion on topics and concerns relating to the use of technology in education. In line with earlier research which has indicated that informal, online, teacher-led CoPs establish a culture of technology integration and modeling (Bond, 2004; Cornu, 2004; Duncan-Howell, 2010; Kopcha, 2010; Matei, 2005), the Lviv teachers stated as well that the informal online CoP can provide a space to practice with technologies in order to determine their value as classroom affordances, including teacher Web tools. Interestingly, in one of the Lviv pre-surveys, a respondent commented that, in their opinion, it would be more interesting to participate in an informal online CoP for professional learning, and that this, in turn, would generate more interest in online technologies for learning. While this may seem to be a peculiar remark, it in fact speaks to the stimulating conditions created by computer-mediated learning (Papert, 1980) and the cognitive partnership with technology outlined in the GTCTU Framework (Desjardins, Lacasse, & Bélair, 2001; Desjardins, 2005). The Edmonton teachers commented on the flexibility of the informal online CoP for practicing with learning technologies and receiving feedback about how they are using them in that space. This is similar to comments made by teachers elsewhere (Wu et al, 2014), who stated that the online environment provided them with the means to gain technological skills and serve as mentors, offering guidance, and providing practice
opportunities in online, tool-based interactions for fellow teachers with less digital exposure.

Emergent concepts arising from the transcripts of both focus group sessions further supported the two groups’ views on technological self-efficacy and the development of a shared technological repertoire in the informal online CoP space. The discussion revealed that both asynchronous and synchronous interactions were valued for the tools used as well as the content. Some participants in the current study remarked how learning to use asynchronous tools, such as email, permits the digital collection and curation of ideas. Others commented on the fact that they appreciate online face-to-face interactions, as they help to develop skill with multi-tasking in digital environments. This evidence supports earlier studies, which have shown that online CoPs offer a synchronous alternative whose experience shares many similarities with its physical counterpart, but also offers incentives and conveniences unavailable in traditional face-to-face communication (Swift, 2014). The findings also support previous research, which notes that the possibility to interact asynchronously is highly valued and a chief attraction of these communities (Macià & García, 2016).

Some participants mentioned that the community provided the opportunity to become more resourceful in the use of digital tools with their students, while still others remarked on learning to negotiate interactional etiquette when using online meeting platforms. All of this is in keeping with research about the GTCU framework, which has been used to support the current study. Research pertaining to the GTCU suggests that the optimal design of an online environment for learning involves the learner using a simple computer-based interface containing meeting and communication tools, information access and management tools, information production and processing tools, and time management tools (Desjardins & van Oostveen, 2008). From the responses of both groups, it became apparent that creating and maintaining a shared repertoire of online learning tools, as well as topics of discussion related to them, was a defining characteristic of the informal online CoP, thus providing further insight into the potential value of these communities for language teachers interested in technology for learning. For these teachers, shared knowledge and skills related to the use of technology to
enhance language learning was seen as a value-added benefit of the online professional community in a field where such training and resources are limited.

**Technological pedagogy (mentorship).**

As discussed in Chapter 2, the introduction and acceptance of ICT in education has not been easy, owing to persistent issues related to teacher self-efficacy around the adoption of technology and the development of technological pedagogy (Hur & Brush, 2009; Kyonghye & You-Kyung, 2013; Murugaiah et al., 2010; Pino-Silva & Mayora, 2010; Wesely, 2013). In this regard, additional research has shown that the practical application of technological competency developed in the community impacts technological pedagogy (Holmes, 2013). While many of today’s teachers may be confident using technology and social media for their own, personal purposes, fewer are comfortable with their potential in professional practice (Madge et al., 2009). What’s more, some teachers have reported that online settings present experiences which differ in some ways from the physical classroom (Kulavuz-Onal, 2013; Lord & Lomicka, 2008; Murphy & Laferrière, 2003). In the current study, this was clear from remarks made during the Edmonton focus group session, during which participants felt that their ability to develop their own technological pedagogical approaches, as well as contribute to the approaches of other community members, was dependent upon support from knowledgeable others in the online community. These statements are supported by diverse studies which have shown that teachers’ decisions to adopt a technology-based pedagogical stance is influenced by how they find that their peers react to, use, and accept new technology (Ertmer, 2005; Hu, Clark, & Ma, 2003; Kopcha, 2010; Zhao & Frank, 2003). In this regard, it is interesting to note that the Repertory Grid focus cluster graph for this group indicated a difference of opinion among group members concerning the nature of expert guidance they required: collaborative vs. leader-led. This suggests an interplay between mentorship and apprenticeship in these communities (Lave & Wenger, 2002). This connection has also been described as modeling and leadership through mutual mentoring (Bond, 2004; Cornu, 2004; Duncan-Howell, 2010; Kopcha, 2010; Matei, 2005). Reference to mutual mentoring was found in the focus group discussions about digital learning space design for the classroom modelled on the professional
community, as well as innovative student-teacher co-development of curricula for digitally-enhanced language learning.

As noted in the findings, in answer to the post-survey question concerning the degree to which informal online CoPs support pedagogical approaches for integrating digital technology in the classroom, the combined totals for both groups were significantly high. These results are better explained by the narrative comments, which once again raised the issue of expertise as an important factor. The teachers spoke of the value of "teacher-consultants" within the community, who could be approached specifically about pedagogical issues. In relation to this point, some remarked that learning new professional methodologies come naturally from exposure to the pedagogical leadership of others. However, it became clear through the discussions that this role would move around the group depending on a participant's background and could involve more than one participant. This would seem to indicate that mentorship is, in fact, embedded in these communities (Ertmer & Ottenbreit-Leftwich, 2010).

These findings also reveal the potential for mentorship to be transformative, if the leadership role is distributed, since this would invite more active participation (Johnson, 2001; Stoll & Louis, 2007; Stoll et al., 2006). This revelation substantiates other findings about online practice communities involved in life-long learning, which have demonstrated that collaborative leadership and community management impact the capacity of members to engage in methodological innovation relating to digitally-enhanced learning (Jameson et al, 2006).

Advantages and challenges to participation in informal online CoPs for professional learning

In accordance with the research questions of this study, which were designed to address some of the gaps in our knowledge about the learning conditions in informal online CoPs, the discussion thus far has considered the factors arising from the data which influence professional learning experiences for Ukrainian language teachers engaged in informal online CoPs. It has done so in light of the characteristics of a
personally meaningful professional learning experience, proposed in the ALFIO-CoPs framework. The remaining discussion will address a number of additional factors which were revealed in the data and which attest to the advantageous conditions which differentiate these communities from other forms of professional learning for Ukrainian language teachers. As well, it will consider some key challenges faced by Ukrainian language teachers to participation in these communities for the purposes of professional learning.

Advantages.

**Dedicated online space.** Since Web 2.0 has enabled collaborative, participatory and distributed practices giving learners more choice (Lankshear & Knobel, 2006), this has given rise in recent years to increased educational scholarship focusing on borderless learning spaces, that is, spaces which expand the repertoire of means and domains of active professional learning (Pawson, 2016). In relation to this, all current study participants agreed that an online community space for professional teacher learning should be an option available to them. According to one study participant, “it’s important to have a place where we can all say what is on our mind because we are all different and our experiences are different.” This was made even more obvious in the Repertory Grid results where, notwithstanding their reported lack of awareness of and participation in informal online CoPs, the Lviv participants agreed that there is a strong correlation between personally meaningful professional learning and accessibility to alternative, universally available learning opportunities. They remarked on the shared experience, which is specific to the informal online professional learning environment, as it can gather geographically-dispersed members. As previously mentioned, both groups acknowledged the value of online learning independent of time and place in their survey responses and in their focus group discussions. This adds to a growing body of knowledge about the flexibility of online environments for teacher learning (Dede et al., 2009; El-Hani & Greca, 2012; Lord & Lomicka, 2008; Rogers, 2000; Stevens, 2006; Tseng & Kuo, 2014).
The Edmonton group expressed dismay that there is little opportunity for professional learning for teachers of Ukrainian and so, a dedicated space of their own making would be welcome and valuable. According to one of the teachers, “[in terms of online CoPs], most definitely I would say [they are] more meaningful, more valuable, and more needed, for sure.” The Canadian teachers explained that they are in need of ongoing professional training and curriculum-development opportunities where they could jointly investigate and address issues specific to Ukrainian language teaching in Canada. During the discussion in both group sessions, participants agreed that, since informal online CoPs can be prolonged or continued, it is possible to concentrate one's learning efforts in the community with justifiable hope for success. What they meant by success was the joint resolution of common problems and identification of new challenges. These findings would appear to confirm research pertaining to the Personalized Collaborative Learning (PCL) Framework referenced in this study, which recognizes that online environments are best suited to ubiquitous learning (El-Bishouty, Ogata, & Yano, 2008). In addition, they seem to support initial research investigating CoPs for language teachers, which has suggested that deep and meaningful learning can be achieved in unconstrained, self-sustaining, situated, virtual learning spaces (Wesely, 2013).

**Informality.** As supported by the Self-Regulated Learning Framework (SRL) (Zimmerman, 2001) contained in the ALFIO-CoPs framework underpinning the current study, an integral aspect of the dedicated online space is its informal nature. This environment is well suited for what the author of the SRL framework refers to as dynamic and continuous feedback, which permits learners to observe their own performance, compare it to others, and reflect on differences (Zimmerman, 2000). Importantly, participants can take advantage of this feedback at their own discretion, which in turn serves to motivate further participation (Zimmerman, 2011). In this regard, the Lviv teachers were particularly vocal about the value of informality, since they were accustomed to professional development (learning) which they described as "mandated voluntary" or obligatory voluntarism. Moreover, in line with research about informal online CoPs as self-organized learning systems (Gray, 2004), both the Lviv and the Edmonton teachers associated the freely-chosen community with a greater likelihood for learning to take place, owing to the unrestricted exchange of ideas. This important point
echoes research which has determined that informal online learning communities are less likely to be characterized by the kinds of expectations which often define formal learning and which can restrict the free flow of ideas (Hall & Graham, 2004; Grimshaw et al., 2009).

**Common goal.** Both teacher groups identified a strong connection between the informal nature of the online CoP and the idea of a common goal arrived at by community consensus. Reasons given for a common goal included a shared sense of purpose, identity, as well as differentiation from other types of professional groupings. One participant referred to this as “being on the same wavelength,” which attests to the value of unity in the community. Although the results from the Repertory Grids also indicate that participants appreciated the possibility of having a variety of shared tasks in the community (permitting the formation of sub-interest communities), it was nevertheless clear from the discussion around this issue that an over-arching goal arrived at by all members was a key attraction of the online CoP for professional learning. This aligns with research about informal online teacher study groups, which has demonstrated that teachers are less likely to participate in professional learning groups whose purpose is mandated (Dufour, 2007).

**Social construction of knowledge.** In keeping with Wenger's (1999) learning as social participation, where knowledge is constructed in a community, but not necessarily institutionally (Desjardins & van Oostveen, 2008), teachers involved in the current study who had previous online experience talked about the opportunities to create new approaches through partnerships with other individuals or groups of individuals in the online community. Teachers with little or no online background remarked on the valuable potential for diversification within the online community through the formation of sub-groups of like-minded members, or those sharing similar professional training, providing a means to broaden collaborative efforts for the development of new curricula. Evidence of social knowledge construction was no less obvious during the community experience of the focus group activities themselves. An important development occurred during the Lviv focus group session. The consensus-building which was part of the Repertory Grid exercise served as a catalyst of new thinking among the group members about the
definition of an informal online CoP for professional learning. This was evidenced in their post-survey answers, where they began to relate emotional support, improvements to technological self-efficacy, and opportunities for developing technological pedagogies specifically with the online CoP. What's more, as mentioned earlier, they began to notice resemblances between online learning experiences they had had and the CoP model. The process of social knowledge construction in the community was even more obvious during the Edmonton session. Here, the integral role of peripheral learning (Lave & Wenger, 1991) in the community became manifest.

During the Edmonton session, peripheral participants began by taking advantage of the written form to express themselves. As their thoughts unfolded on screen and other individuals shared their professional experiences orally, the discussion slowly moved in the direction of building a consensual understanding of the community of practice in general, and the online CoP in particular, through the community-building they were involved in. While the more introspective participants expanded on their on-screen lists of elements, those more involved in the oral discussion began to address themselves to what was simultaneously appearing in writing on the screen. In doing so, they drew out their fellow group members by engaging them in discussion about what they were reading, and from then the discussion became more balanced, thereby contributing to the consensus needed for determining a common set of constructs. What transpired in the Edmonton session has been documented in the literature, which states that the online community provides individuals new to it with the opportunity to become accustomed to the skills and culture of the environment, refine their individual professional presence, and eventually contribute to the identity of the collective (Gray, 2004; Lave & Wenger, 1991). It also reflected authentic learning, as participants were engaged in solving a problem of relevance to them and arriving at solutions applicable in real life (Herrington, Oliver, & Reeves, 2003; Hong & Sullivan, 2009; Lave & Wenger, 1991; O’Donnell & Tobbell, 2007). As one participant described it: “by bringing people together, everybody’s little piece can create a puzzle that’s a little bit more complete.”

More evidence of social construction of knowledge and the integration of peripheral learners characteristic to informal online CoPs became apparent during an
additional session requested by the Edmonton group, since they were unable to complete their Repertory Grid during the original gathering. The elements and constructs they devised were put into a grid for them, so that they could rate them on their own time. This presented some difficulty for some members of the group in terms of understanding the comparative aspect of filling in the grid, which they attempted to overcome by meeting with one another. Two participants were able to complete the task by working both individually and as a pair. Another two asked to meet with the researcher online to once again go through the process together. The discussion during this extension exercise (conducted in Google Hangouts, another learning experience in online environments for learning) was robust and insightful, since it was clear that the participants had reflected upon both the content and the process since the original focus group meeting. The period they had spent thinking and talking about the elicitation task resulted in greater eagerness to complete the grid and to do so candidly and thoughtfully. During this additional meeting, part-way through the completion of their Repertory Grid, the Edmonton participants became comfortable with their understanding of the process and proceeded to complete it themselves. This outcome substantiates research which has shown that the conditions in informal online CoPs permit peripheral members to move from a passive to active stance on their own (Macià & García, 2016; Swift, 2014). In addition, it is further evidence of the fact that interactions become more complex, changing in quantity and quality, after an initial phase of learning in a practice community (Koch & Zumbach, 2002).

Language program development and technology integration. As individuals with experience in online learning communities, including CoPs, the Edmonton participants raised the issue of the impact of the informal online CoP on schools and programs. It was the opinion of the group that participation in an informal online CoP for professional learning can have a positive impact on program/school development. They noted that online community interactions were not only important for improving personal professional knowledge and skills, but for setting school-based technology goals and working towards them. This conclusion advances earlier research undertaken in a number of schools which has shown that teachers who appropriated technology in a range of ways in their CoPs developed the confidence to broker cross-classroom, departmental and
school leadership decision-making about individual programs and learning technology integration goals (Hartnell-Young, 2006). Since they did not address themselves to this issue, it was not clear from the Lviv group findings if participation in professional informal online CoPs would impact their ability to influence program policy or technology integration for language learning.

Physically co-located versus online professional learning. One of the aims of the current case study was to gain insight about how professional learning which is physically co-located (as was the case with the focus group held in Lviv) might differ from that which takes place in the online environment (such as the Adobe Connect session of the Edmonton group), and what this might mean for learning. The environmental experiences of the two groups provide some useful understandings about the potential of the online space to expand the plane of professional learning for language teachers.

To begin with, it took a fair amount of time and effort to arrange a physical location for the Lviv group to hold its session. In addition, since the space was booked for additional use, the prescribed 2-hour timeframe for the session was fixed. Also, save for the tools I brought with me for the purposes of the focus group session, participants did not have access to digital affordances which they could use, nor an Internet connection to make it possible for them to take advantage of any personal devices. During their discussion, the Lviv participants described similar conditions in their schools, resulting in limited opportunities to gather for professional learning. As a result, I had to input their Repertory Grid data manually after the session, with no opportunity for participants to make any changes or further contributions based on reflection. On the other hand, although the Edmonton group members experienced some initial technical and navigational difficulties adjusting to the Adobe Connect environment which was new to them (attributed by some researchers to the "orderly anarchy" of Internet settings; Newhagen & Rafaelli, 1996, p. 2), they were able to resolve these issues in short order by taking advantage of more experienced participants. In addition, they had access to the expertise of the research supervisor, who was involved in hosting the virtual event. In fact, this initiation into the community was an important moment of participant
enculturation (Gray, 2004), which has been identified as a key motivational component of adult learning (Knowles, 1985).

As Internet spaces evolve, scholars continue to debate the pros and cons of each environment and to question if there are any significant differences in learning conditions found there. For the most part, both environments share many similarities. For example, both are designed information spaces; both are social spaces in which educational interactions occur, “turning spaces into places”; each can enrich the learning experience of the other; and each has the capacity to integrate multiple technologies and multiple pedagogical approaches (Dillenbourg, Schneider, & Synteta, 2002, p. 3). These characteristics were also exhibited during the focus group sessions conducted during this study. Each group was easily able to acquire the information I presented. The Lviv group received this information by shared access to my laptop, as well as directly from me. Similarly, I was present within the Adobe Connect environment to present to the Edmonton group members, and was able to share information from my computer with the group using the platform’s built-in affordances. In each case, the meetings were face-to-face. And, in each case, the opportunities to interact with one another were unlimited, save for the designated timeframe of each focus group session. Furthermore, in each case, I could adjust the approach with the group as required, and the group members had access to the basic tools they needed to perform their tasks. Finally, each environment facilitated the Community of Inquiry (Garrison, Anderson, & Archer, 2000) process in support of learner engagement.

It should be recalled, however, that the teaching population considered in this study is spread throughout Ukraine and the Ukrainian diaspora. Hence, the documented fact that online settings permit teachers, otherwise unable to interact, to unite, reduce the sense of isolation experienced by working in a minority discipline, share ideas about current practice, and identify and develop future goals for their field (Ernest et al., 2013; Gray, 2004; Hur & Brush, 2009; Risner, 2009; Wu et al., 2014) is especially relevant to the current investigation.
During the Edmonton session, participants were free to access online resources and information which they needed in order to optimize their participation in the activity. While the Repertory Grid data had to be input after the fact for this group as well, because they had reached their 2-hour limit without having completed their task, these participants were able to continue the process by taking advantage of asynchronous communication. As previously discussed, the follow-up session which some group members had requested, and which they were able to conduct once again online, showed significant reflection and change in thinking had taken place about both the process and purpose of the Repertory Grid exercise. This development was especially important, in that it served to exemplify characteristics of all four theories used to ground the current study. In addition, it also appears to reflect the overlap which exists among the Presences identified in the CoI Framework (Garrison, Anderson, & Archer, 2000; 2010), which more recent research has termed “Influences” (Peacock & Cowan, 2016, p. 272). These researchers believe that it is the “Influences” which have the greatest impact on the educational experience in the community. They have labelled these “Influences” as “trusting,” “meaning-making,” and “deepening understanding” (Peacock & Cowan, 2016, p. 272). It is within these intersections of community experience that researchers feel important learner challenges are addressed, such as limited experience with collaboration and the development of higher-level thinking skills (Peacock & Cowan, 2016).

The positive developments which took place during both of the online focus group meetings speak to the optimized conditions for collaborative learning set out in the Collaborative Online Learning Environments (COLE) Model (Desjardins & van Oostveen, 2008) extending from the GTCU (Desjardins, Lacasse, & Bélair, 2001). According to the authors of the COLE model, in these spaces, learning is not simply information; it is something which transpires (Desjardins & van Oostveen, 2008). They have also noted that an optimal online learning experience for teachers can have a profound impact on their personal assumptions about learning, which was reflected in both groups’ post-survey responses strongly favouring the informal online CoP experience.
Challenges.

Time. Notwithstanding their different backgrounds, both the Lviv and Edmonton teachers identified time as a challenge to participation in an informal online CoP for professional learning. This is important because little research has been conducted to date about the humanizing factor of time for teachers contemplating online CoPs (Northcote & Gosselin, 2016), and I was not able to locate any specific to language teachers. In addition, there was a small, but significant difference in the difficulty presented by time between the two groups and this was expressed in the constructs each group compiled for their definition of an informal online CoP for professional learning. The Lviv group identified the issue as "no/limited opportunity for involvement in knowledge construction," while the Edmontonians described it as "required time commitment." The difference between the two groups sheds light on the varied learning conditions experienced by Ukrainian language teachers in Ukraine and Canada.

As the data gathered about the Lviv group show, limited Internet access within the school environment is a contributor, because these teachers reported actually having more time during the school day to participate in informal learning (that is, during scheduled non-teaching periods, preparatory time and breaks) than they do outside of school. More importantly, they have a considerable amount of school-related paperwork and required courses, as well as domestic responsibilities, outside of school and this significantly reduces their free time. While some of these teachers manage to participate in online groups and interactions during the early morning hours, this is considered an exception and not the rule. Additionally, this group associated participation in the online community with computer access, which is minimal owing to limited school-based affordances on the one hand, and on the other, the need to share access to this tool with the rest of the family at home. While a few of these teachers mentioned interacting via social media with other teachers using their cell phones, for the most part the idea of mobile professional learning, which would allow them to take advantage of even small amounts of free time variously throughout the day, did not enter into the discussion. Thus, lack of time translated into lack of opportunity for the Lviv group, which they felt prevented them from being able to develop new knowledge and thereby disrupt learning.
for themselves and their students. Increasing investigations into the potential of mobile technologies to positively affect professional teacher learning have argued that effective professional learning requires reflection and collaboration and that mobile learning is ideally suited to allow these to take place, because it captures spontaneous learning moments (Aubusson, Schuck, & Burden, 2009).

In marked contrast, the Edmonton group described their school day as overwhelmingly busy. This phenomenon is discussed in the literature and relates mostly to the North American experience (Beach, 2012). Importantly, as teachers of Ukrainian as a second language in Canada, the group members reported that their extracurricular time was equally limited due to the disproportionate amount of time they needed to spend on curriculum adaptation and development. As an example, group members drew attention to how difficult it was for all participants to agree upon a day and time for their focus group activity. As a result, the Repertory Grid findings for this group point to the need for flexible involvement in informal online CoPs. The problem is, while flexible community participation does support autonomous learning (Ardichvili, 2008), teacher-learners also require a persistent, sustained social network for sharing and developing an overlapping knowledge base (Barab et al., 2002).

Research on general demographic differences among online learning community participants has identified several common characteristics such as the fact that they tend to be mature, have professional responsibilities, and little available time (Paechter & Maier, 2010; Palloff & Pratt, 2003). More recent studies have begun to examine the influence of the learners’ Time Perspective (TP) as a key factor in online community participation (Romero & Usart, 2014). This research suggests that online learners must self-regulate their temporal flexibility for learning, but notes that there has been no previous research on the online context, resulting in a lack of knowledge about online learner TP profiles (Romero & Usart, 2014).

The dichotomy in perceptions on the part of each group involved in the current study regarding the time factor is recognized in contemporary research, which refers to this difference in terms of preference (Lviv group) versus convenience (Edmonton group).
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(Romero & Usart, 2014). This is further explained by emerging research about online learner profiles relating to time, which compares the needs of polychronic vs. monochronic learners (Capdeferro, Romero, & Barberà, 2014). Polychronic individuals are involved in everything, doing many things at once because they value human relationships and interactions over arbitrary schedules. In contrast, monochronic individuals focus on one thing at a time, perceive other events as interruptions, and stress a high degree of scheduling and promptness in meeting obligations.

It is conceivable that the difference in views on the part of the Lviv and Edmonton groups about the challenge of time might be explained, at least in part, by their polychronic or monochronic learner profiles.

**Praxis.** Closely related to the aforementioned issue of time was the practical and immediate contribution of the community to classroom teaching. The Lviv group was concerned with pedagogical skills and techniques which could be easily accessed through the community. While some participants did speak about developing digital competence in the community to improve classroom learning, it was not clear if this was simply a matter of expediting learning management tasks or something more authentic, student-led and metacognitive. One participant remarked on the value of the community to expose members to new educational research, but no mention was made about the discussion of such research in the community or of the possibility of contributing to the literature as teacher-researchers. It appears that the notion of teacher research as good teaching (and learning) does not, as yet, have uptake among these teachers and may be a reflection of the broader teaching culture in Ukraine. Consequently, the potential to build and contribute new understandings in their field appears difficult to realize for the moment. In the case of the Edmonton teachers, the practical application of involvement in the online community (resources, assessment/rubrics, strategies) dominated their discussions and subsequently the data which they contributed. It is a well-known fact within the educational community that teachers, in general, face enormous pressures in their work to keep producing new and different learning materials (and this is especially true of teachers in minority disciplines). However, the findings from the current study about the importance of praxis were nonetheless in contrast to recent research regarding the impact
of teachers’ digital interactions on classroom pedagogy. This research has demonstrated that it is possible for teachers to direct their learning in digital spaces, and the use of digital tools for learning, to build pedagogical capacity, model learning as they learn alongside their students, and that this is what ultimately enhances student outcomes (Holmes, 2013; Homan, 2014; Jones & Dexter, 2014). In other words, being a professional means being a learner (Sagor, 2010).

**Recognition of community value.** Both groups brought up the matter of institutional recognition of informal professional learning in the online space. According to their shared understanding, the Lviv group expressed the opinion that for the informal online community of practice to be a viable option in their current educational context, participation would need to be recognized by their administrations. These teachers did not appear to see any discrepancy between the notion of informality and institutional acceptance, as they associated the latter with improving participation. While the need for public recognition or credentialization was less pronounced in the Edmonton group, some participants appeared to be convinced that the value of informal professional online learning lies in acceptance from the outside. These findings suggest that among the teachers involved in this study, for some, personal recognition of the professional value of the online CoP is nevertheless influenced by entrenched notions of formal professional development. Within the context of more contemporary, life-long professional learning, these findings are also suggestive of a "badging mentality." Digital badges, also known as micro-credentials, are online representations of learning experiences and activities which are stored and accessible publicly, and represent external recognition (Gamrat et al., 2014). This leads one to wonder about the role of teacher self-efficacy in the attribution of professional value to the online learning community independent of external approval. This also raises the question about how learning for learning's sake as a manifestation of cognitive presence in these communities could serve to reinforce participant self-efficacy by counterbalancing the need to seek outside validation. Research into how value is determined in the online CoP has only just begun (Shea & Bidjerano, 2010; Beach 2012), and further research is required.
Awareness of the informal online CoP for the purpose of professional learning.

A review of the literature about online teacher learning communities (Wideman, 2010) concluded that teacher awareness of these communities still poses a considerable challenge. It is not surprising, then, that the Lviv teacher sample involved in this study framed many of their responses and much of their discussion around a dearth of information about informal online CoPs for professional learning. The implications of this for Ukrainian language teaching and learning are significant in light of the current political and socio-economic climate in Ukraine. The prolonged occupation of Eastern Ukrainian regions by Russian forces and the disruption to society in these areas caused by destruction, injury, and loss of life, continue to impact educational institutions, teachers and students. Internal displacement of individuals affected by the military invasion has created a disconnect for professionals who have been forced to move. Additionally, educational reforms aimed at encouraging and establishing online learning platforms have been wrought with controversy and delayed. Finally, many parts of Ukraine still lack the required digital infrastructure to support effective communication and learning, independent of physical circumstances. As a result, some Ukrainian teachers in Ukraine, such as those who participated in this study, have been left at a disadvantage when compared with teachers of Ukrainian elsewhere in the world (like Canada). They have been cut off from online professional learning initiatives which are being developed in response to the conditions in Ukraine, and also from learning communities which have been formed around the globe. It remains to be seen how internal efforts to bridge this awareness gap in Ukraine will be taken up by the teachers themselves, in their search of ubiquitous professional learning.
Chapter 6 - Conclusion

Introduction. As a case study, my investigation gathered data comparing the experiences, feelings and perceptions of a sample of Ukrainian language teachers from Ukraine and Canada regarding informal online CoPs for professional learning. I sought not only to gain insights into some areas identified in the literature as warranting further research, but also to develop a better understanding of Ukrainian language teachers’ attitudes about professional learning.

While none of the Lviv, Ukraine teachers reported having had previous experience with informal online CoPs due to lack of exposure, they did have some modest experience with digital social tools for teacher interaction, exchange or collaboration. As a result, although, at first, they had difficulty finding distinctions between formal and informal professional learning, including informal online professional learning, during the open discussion which followed their structured Repertory Grid focus group activity, they came to understand the features which set apart an online practice community. They were quite vocal about the qualities of an informal online CoP which would be of benefit to them, not simply as an alternative choice, but as a staple of their professional learning repertoire. In this regard, the Lviv teachers concluded that only the informal online CoP was a distinct form of alternative professional learning, while they saw other online networks and groups as more casual or personal in nature.

Certain members of the Edmonton, Canada focus group did have experience in an informal online CoP, while other members had participated in various other forms of informal online professional learning. This background helped them to identify characteristics of online groups for professional learning, both for general teaching purposes and based on their needs as Ukrainian as a second language teachers. They came to a consensus about the ideal qualities of an online community for Ukrainian teachers, but remained cautious about this form of alternative professional learning, owing to factors which this group saw as ongoing challenges to the success of these communities.
In my study, I also compared physical and online environments for professional learning. Both spaces share designs for informational and social interactions relating to education, making them places for learning, and both support inquiry activities. However, the virtual space proved able to bring together research participants with fewer constraints. Moreover, the online environment offered built-in technical affordances, along with access to other computer and Web-based tools. Finally, the ability to communicate both synchronously and asynchronously in the Internet space permitted the online participants to enjoy engagement and collaboration with one another even beyond the prescribed research activities.

Summary

My investigation was based on three research questions. Below, I provide summary responses for each of them, based on my analysis of the data gathered in this study.

Research Question 1. What factors influence professional learning experiences for Ukrainian language teachers engaged in informal online CoPs?

This study showed that emotional support is integral to teacher self-efficacy, which, in turn, is essential to teacher professionalism. Teacher-participants noted that learning from trusted peers in the online CoP who use learning technologies would benefit their sense of teacher self-efficacy. They stated that sharing both positive and negative experiences in the community helped alleviate feelings of uncertainty, build confidence and combat professional isolation. They welcomed the possibility of open, critical and continuous discussion, coupled with the ability to present their ideas and initiatives publicly. They remarked that effective professional learning in the online CoP was also influenced by mutually-beneficial experiences, such as mentorship (and the apprenticeship of peripheral learners), distributed leadership, collaborative knowledge construction (including the formation of sub-communities), and practice with digital technologies through online, tool-based interactions. Being able to share knowledge and skills specifically related to the use of technology to enhance Ukrainian language learning was seen as a key feature of the online CoP, in a field in need of more training and
resources. The ability of the community to identify a common goal, with practical and immediate classroom applications, was considered fundamentally important. Finally, the teachers involved in this study were attracted to the ubiquity and continuity of the informal online CoP for professional learning, since geographically-dispersed colleagues could gather for professional learning when it was convenient for them.

Research Question 2. What differentiates informal online CoPs from other forms of professional learning for Ukrainian language teachers?

The teachers involved in this study identified a number of factors which, for them, distinguished professional learning in informal online CoPs from traditional professional development activities. First and foremost, they remarked on the importance of the informal (voluntary) nature of the community, which made it more likely to be self-sustaining. Participants noted that, unlike traditional mandated PD, members of the informal online CoP were co-authors of the group’s identity, arrived at through consensus-building, and co-masters of their communal destiny. Once again, the factors of emotional support, improvement to technological self-efficacy, and opportunities for developing technological pedagogy were identified as differentiating factors. The informal online CoP was seen as a more stimulating form of professional engagement which could contribute to greater interest in online technologies for learning, especially language learning. Some teacher-participants felt that the informal online CoP permitted deeper investigation of psychological and cognitive issues related to teaching and learning. Compared to standard PD activities, which tend to be limited in time and function, teachers in this study felt that the continuous nature of the informal online CoP permitted the development of interpersonal relationships and help-seeking strategies, which facilitated growth in learning. The research participants drew attention to feedback (and response to that feedback) among trusted peers through active listening, which they did not feel was possible in traditional forms of professional learning. They felt that the online community was collegial and offered a potentially wide range of support. Another difference they identified related to the nature of the informal online CoP. They saw it as break from daily teacher experiences, helping to deal with every-day emotional difficulties related to teaching. Unlike PD, the teacher-participants saw the informal
online CoP as an evolving experience in which the connections between theory and practice could be challenged. In addition, the teachers involved in this study identified a number of other features which they concluded were unique to the informal online CoP, those being: a dedicated professional learning space; synchronous and asynchronous interactions supported by diverse digital tools; social knowledge construction; and authentic learning with real-world applications. Finally, teachers-participants expressed the belief that they could build leadership skills in the community, allowing them to influence policy and program development related to technology integration for language learning.

Research Question 3. What are some key challenges faced by Ukrainian language teachers to participating in informal online CoPs for the purposes of professional learning?

While the teachers in this investigation strongly approved of the informal online CoP for professional learning, they still identified several challenges to participation. For the Lviv participants the chief challenge was a continued lack of awareness of these communities, which related in part to limited Internet access and technological infrastructure. They were unclear about the potential for mobile technologies to actualize the informal online CoP. They also spoke of time limitations for engaging in this endeavour, insofar as opportunities to interact online were nevertheless greater during the school day. The Edmonton participants also raised the issue of time. In their case, finding mutually-convenient times for synchronous meetings, as well as for ongoing participation, were problematic, since their teaching day was already stressful and extended into the after-school period. Finally, some teachers in this study raised the issue of how value is attributed to the informal online CoP professional learning experience. Enhancing professional credentials appeared to be an important consideration.

Limitations

While this study provides an in-depth exploration of the use of CoPs within two communities of Ukrainian language teachers, there are considerations which were beyond the scope of this research, and which require addressing. As a case study, my
investigation provided a snapshot of the background and opinions of two groups of Ukrainian language teachers from two different geographic communities to learn more about the potential of informal online CoPs for professional learning to serve as learning settings for both local and dispersed teacher groups. The samples selected allowed me to conduct a deeper examination of a small group of participants’ lived experiences, providing rich and detailed observations and analysis. However, a complete discussion was not possible within the limits of this research study. Also, as a qualitative case study, my study is not representative of the whole Ukrainian language teaching population. In terms of sample diversity, I was not able to present findings related to diversity in terms of gender, experience, and various other personal, professional, and social characteristics, for reasons of access, time and cost. Still, as indicated in Chapter 3, scholars have pointed out that highly-limited, albeit in-depth, case studies may, however modestly, add to the findings of related cases, thus enhancing our overall understanding of a particular phenomenon.

Similarly, the measurement tools I used (surveys, Repertory Grid focus group activities, and audio-visual transcripts) were not thoroughly tested for accuracy and reliability. Also, since the analysis of the pre- and post-surveys was conducted in part by me, a certain degree of subjectivity was unavoidable. However, it is worth remembering that the strength of qualitative approaches is that they account for and include difference, because context-dependent knowledge is valuable. In addition, the amount of data collected was limited by the fact that the research activities took place over two, brief, time-restricted sessions (one with each focus group).

**Opportunities for future research**

During their focus group activity, the Lviv, Ukraine teachers came to recognize, and expressed, a keen interest in the potential informal online CoPs had for professional learning. As a result, several of them took advantage of the opportunity to join a closed Ukrainian teacher Facebook group, which I had recommended to them (this Facebook group originally forming during an international Ukrainian teachers’ conference which took place in their city concurrently with the focus group meeting). Future investigations might consider the impact of individual factors, such as Internet access, time commitment
and communal purpose, on the experiences of teachers of the Ukrainian language involved in informal online CoPs situated in social network sites such as Facebook. Also, additional research is needed about the views and experiences of Ukrainian language student teachers concerning informal online CoPs, to determine how their involvement and views may (or may not) differ from practicing teachers. As indicated in Chapter 5, additional research focusing on cognitive presence and teacher self-efficacy is needed, especially in terms of how these factors may support the attribution of intrinsic professional value to an online CoP. A new area of research could include comparing the ideas, feelings, and experiences of language teachers from various post-Soviet bloc countries about the informal online CoP as an alternative for professional learning beyond borders. By extension, research comparing and contrasting the perceptions and experiences of teachers from diverse cultural backgrounds and various geographic regions would be invaluable to a greater understanding of what personally meaningful professional learning means around the world.

The factor of trust, referred to in the literature review of this study, was not specifically addressed by the focus group participants. One may only surmise that, given more time or additional opportunities to interact and express their views candidly, the research participants might have ventured their opinions about this issue when discussing the factors which challenge CoP involvement, insofar as this relates to confidence in the online space as a professional learning medium. Therefore, further research relating to the conditions in informal online CoP (which may or may not contribute to member trust) remains a theme deserving of additional attention.

**Educational implications**

In a recent report of lessons taken from around the world, the Organization for Economic Cooperation and Development (OECD) notes that “effective professional development needs to be on-going, [involving] teachers in learning activities that are similar to those they will use with their students, and [encouraging] the development of teachers’ learning communities” (Schleicher, 2011, p. 18). The results of the current study reinforce these recommendations. Moreover, the findings of this study are also directly relevant to the emerging Fully Online Learning Community (FOLC) Model (van
Oostveen, DiGiuseppe, Barber, Blayone & Childs, 2016), which reimagines the ecosystem of the informal online CoP for professional learning. It conceptualizes the teaching function as one of social and cognitive empowerment across the community, and encourages negotiated learning outcomes shaped by the goals, experience, culture, and values of the community itself. This FOLC model presents the democratization of education at the level of the learner, an important and timely proposition for Ukrainian language teachers in Canada, Ukraine, and around the world.

**Canada.** Canadian teachers of the Ukrainian language are faced with an ever-changing student landscape, due to assimilation and immigration. As a result, they constantly need to adapt, or create, new language learning opportunities which are responsive to their increasingly diverse learner population. In addition, as 21st century teachers, they must develop and incorporate pedagogical approaches which leverage digital affordances both inside and outside of school. Teachers of Ukrainian in Canada have access to the teaching and learning resources of the Ukrainian Language Education Centre (ULEC), as well as those of the Alberta, Saskatchewan, and Manitoba Ministries of Education, and various educational community organizations in North America and abroad. However, they do not have ongoing professional learning which brings together all teachers of Ukrainian in Canada into a Community of Practice, where issues in their field can be identified and worked out together, and where teachers can be involved in continued discussion and research that can influence programs and policies.

The results from this study lend support to the informal online CoP pilot project currently underway in Alberta (“ULEC”, 2015-2016, p. 15). The goal of the project is to draw attention to this form of alternative professional learning and build linkages among Ukrainian language teaching professionals, so that they can have a direct impact on their profession, as well as on their own learning. What’s more, supported by the findings of new studies like this one, the Canadian-Ukrainian CoP pilot project can expand its efforts to reach teacher-counterparts in Ukraine and the Ukrainian diaspora, with the aim of raising awareness about informal online CoPs for professional learning, and building language learning capacity.
Ukraine. The findings from the current research have direct implications for Ukrainian language teaching and learning in Ukraine, as well. At the time of submission of the current study, the Parliamentary Committee for Science and Education of Ukraine approved for second reading the text of a new law about education. Although rooted in Ukraine's euro-centric 2014 “Revolution of Dignity,” some of its provisions continue nonetheless to be contested (such as: compulsory 12-year education; the official language of instruction; minority language learning; required (core) subjects; revision and publication of new textbooks; teacher compensation; etc.). With this legislation comes a new emphasis on building competencies and capacity.

The views of diverse stakeholders differ significantly when it comes to how teachers, students, and the school system can change (and how quickly) to embrace a competency-based approach. Within this context, proponents of differentiated and cross-disciplinary learning face a system lacking the mechanisms to prepare teachers to facilitate these kinds of learning, and the appropriate environments within which to learn in these ways. Educational innovators encounter arguments, such as only a small percentage of teachers is capable of designing integrated lessons. However, media reports increasingly talk about the resourceful methodologies and innovative pedagogies beginning to be developed and implemented by local principals and teachers in various parts of the country.

Much of the current educational debate in Ukraine now takes place in digital spaces, such as the platform: https://www.ed-era.com/. However, those who favour traditional subject-based education observe that not all citizens have access to the Internet in order to be included in the discussion (especially teachers), owing to the lack of digital infrastructure. They also draw attention to the need for pilot projects to test the approaches being proposed, among these multimedia and hybrid or blended learning variants. Finally, they state that, for any reforms to be successfully implemented, a significant amount of time is required.

On their part, reformers describe new initiatives, such as intensive, ongoing, informal teacher practice communities to develop and test competency-based curricula
for the elementary grades, in preparation for the 2017-2018 school year. These communities have formed in response to the current Ministry of Education initiative, called *The New Ukrainian School*, which represents a motivated realization of the new law awaiting passage. Teachers involved in this Ministry-led reform movement describe a new vision of the Ukrainian school that is decentralized, with greater control in the hands of local communities, teachers, and parents. They note that compulsory subjects will not be eliminated, but rather, that such competencies as initiative, entrepreneurship, and social and communal skills will be introduced and supported. Learning at the secondary level will include instruments to help students develop critical competency profiles to assist them to work towards their career goals. Coupled with this, new approaches to initial teacher education and ongoing teacher learning will be implemented to help teachers transition to practice community-based, life-long learning.

The expectation is for elementary teachers to learn alongside their pupils, while engaging them in problem-based learning activities during which ever more complex problems and solutions are developed by the learners themselves. Following certification, teachers could be encouraged to advance through continuous alternative learning. Propositions include the possibility of attaining a salary increase based on a teacher's ability to demonstrate their improved professional competency in revamped regional qualification centres. What's more, the current Minister of Education and Science in Ukraine has promised that pilot testing of all proposed reforms will begin with the start of the 2017-2018 school year in some 100 schools across Ukraine (Hrynevych, 2017). According to the Minister, it is all about maximizing knowledge capital.

As the three-year-long discourse about current educational reform in Ukraine continues to unfold, all parties involved in the debate emphasize the importance for teachers to voice their needs and concerns, and to do so by forming discussion communities about the future of learning in Ukraine, not only among themselves, but with colleagues in neighbouring and other countries, who share their trials of transitioning to a democratic space. The purpose of these communities is to examine, critique, and respond to empirical educational research, with the hope of contributing new findings based on the situation in Ukraine. The matter has taken on
additional urgency, in light of public talks and feedback being gathered to develop a strategy to further popularize Ukrainian as the state language throughout Ukraine. For these reasons, informal online CoPs for professional learning could be valuable to the reform of schooling in Ukraine, by supporting transformational change and a shift to a more open, learner-centred, and constructionist education system.
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Appendix A: Pre-Survey Questions

Informal Online Communities of Practice (CoPs) for Professional Learning
PRE-Survey of Second/Foreign Language Teachers (Ukrainian)
Ulana Pidzamecky, MA Candidate, Faculty of Education,
University of Ontario Institute of Technology, Oshawa, Ontario Canada

THANK YOU FOR COMPLETING THIS SURVEY. ДЯКУЄМО ЗА ЗАПОВНЕННЯ ЦЬОГО ОПИТУВАЛЬНИКА.

SURVEY -1- ОПИТУВАЛЬНИК

Virtual CoPs for Professional Learning / Інтернет-спільноти практики для професійного навчання

1. Question 1 a. Do you belong to any informal online professional teacher communities? Чи Ви належите до будь-яких неформальних онлайн-спільнот для вчителів? *

Yes / Tak
No / Ні

2. Question 1 b. What is it / what are they? [*If your answer to 1 a. was NO, please skip to question 1 d.] До котрої (котрих)? [*Якщо Ваша відповідь на питання 1 а. була НІ, будь ласка, переходьте на питання 1д.]

3. Question 1 c. What is the nature of your involvement? (What do you do? What kinds of topics are addressed?) У чому полягає Ваша участь? (Чим Ви займаєтеся? Які теми розглядаються?)

4. Question 1 d. If you are NOT a member of such a group, what other types of professional learning are you involved in, if any? Якщо Ви не є членом такої групи, яким іншим типом професійного навчання Ви займаєтеся, якщо взагалі?

5. Question 2 a. How important is the online community to you? Why? [*If you previously answered NO, please continue with question 2 b.] Наскільки важлива ця
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оnлайн-спільнота для Вас? Чому? [* Якщо Ваша попередня відповідь була НI, будь ласка, продовжуйте питання 2 b.]

6. Question 2 b. If you are NOT involved in such a group, would you like to be? Why or why not? Я кщо Ви НЕ є задієні в такій групі, чи маєте бажання бути учасником? Чому або чому ні?

7. Question 3. Is it MORE or LESS difficult to be involved in an informal online professional community, as compared with participating in formal training workshops or attending local PD courses? Why? Чи БІЛЬШ, чи МЕНШ складно уділятися в неформальній онлайн-спільноті, в порівнянні з участю в офіційних навчальних семінарах чи місцевих професійних курсах? З яких причин?

8. Question 4 a. In your opinion, what impact can involvement in an informal online CoP have on your technological self-efficacy as a teacher? На Вашу думку, який вплив може участь в неформальній онлайн-спільноті мати на Вашу технологічну самоефективність, як учитель?

9. Question 4 b. Is there a connection between your technological self-efficacy and your approach to teaching (including pedagogical innovativeness)? Please explain briefly. Чи існує зв'язок між Вашою технологічною самоефективністю і Вашим викладацьким підходом (з урахуванням педагогічної інноваційності)? Будь ласка, коротко поясніть.

10. What is your email address? (Collected for internal data analysis purposes only). Будь ласка, введіть координати Вашої електронки (Інформація збирається виключно для цілей внутрішнього аналізу даних.).
Appendix B: Post-Survey Questions

Informal Online Communities of Practice (CoPs) for Professional Learning
POST-Survey of Second/Foreign Language Teachers (Ukrainian)
Ulana Pidzamecky, MA Candidate, Faculty of Education,
University of Ontario Institute of Technology, Oshawa, Ontario Canada

THANK YOU FOR COMPLETING THIS SURVEY.

Virtual CoPs for Professional Learning / Онлайн-спільноти практики для професійного навчання

1. Please check the ONE answer that best applies (Будь ласка, відзначте найточнішу відповідь):

I participate in one or more informal online second/foreign language teacher Communities of Practice for the purpose of professional learning. (Я беру участь в одному або кількох неформальних онлайн-спільнотах практики для викладачів української мови, з метою професійного навчання (підвищення кваліфікації).

* Regularly / Регулярно
Often / Часто
Occasionally / Інколи
Rarely / Рідко
Never / Ніколи
Not applicable / Не відноситься
2. Please check the ONE answer that best applies (Будь ласка, відзначте найточнішу відповідь):
Participation in an informal online second/foreign language teacher community of practice contributes to my emotional well-being as a teacher. (Участь у неформальній онлайн-спільноті практики для вчителів іноземних мов сприяє моєму позитивному емоційному стані, як учитель.)
* Always / Завжди
Often / Часто
Occasionally / Інколи
Rarely / Рідко
Never / Ніколи
Not Applicable / Не відноситься

3. Please check the ONE answer that best applies (Будь ласка, відзначте найточнішу відповідь):
Participating in an informal online second/foreign language teacher community of practice allows me to improve my technological skills. (Участь у неформальній онлайн-спільноті практики для вчителів іноземних мов дозволяє мені поліпшити свої технологічні навички.)
* Always / Завжди
Often / Часто
Occasionally / Інколи
Rarely / Рідко
Never / Ніколи
Not Applicable / Не відноситься

4. Please check the ONE answer that best applies (Будь ласка, відзначте найточнішу відповідь):
The informal online second/foreign language teacher community of practice experience provides me with opportunities to develop pedagogical approaches for integrating digital technology into the classroom. (Досвід у неформальній онлайн-спільноті практики
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dля вчителів іноземних мов відкриває мені можливості розвивати педагогічні підходи до інтеграції цифрових технологій в класі.

* Always / Завжди
* Often / Часто
* Occasionally / Інколи
* Rarely / Рідко
* Never / Ніколи
* Not Applicable / Не відноситься

5. Would you recommend to your colleagues that they become involved in an informal online community of practice for the purpose of professional learning? If so, why? If not, then why not? (Чи Ви порекомендували б своїм колегам, щоб вони залучилися в неформальну онлайн-спільноту практики з метою професійного навчання (підвищення кваліфікації)? Якщо так, то чому? Якщо ні, то чому б і ні?)

6. Have you found any factors have prevented you in the past, or currently prevent you from participating in any informal online Communities of Practice? If so, please give a short description. (Чи будь-які чинники завадили Вам у минулому, або в даний час заважають Вам брати участь у будь-яких неформальних онлайн-спільнотах практики? Якщо так, будь ласка, коротко опишіть.)

7. Do you feel that involvement in an informal online community of practice for professional learning can contribute to your pedagogical self-efficacy? If so, please explain briefly. (Чи вважаєте Ви, що участь у неформальній онлайн-спільноті практики для професійного навчання може сприяти Вашій педагогічній самоефективності? Якщо так, будь ласка, коротко поясніть.)

8. Additional comments - Додаткові зауваги

Please use the space below to share any other thoughts you might have about online Communities of Practice for teachers specifically, or online professional learning in general. (Будь ласка, використовуйте простір унизу, щоб поділитися будь-якими іншими думками, які в Вас є щодо онлайн-спільнот практики для вчителів конкретно, або стосовно професійного навчання в Інтернет режимі в цілому.)
9. What is your email address? (Collected for internal data analysis purposes only). Будь ласка, введіть координати Вашої елекронки (інформація збирається виключно для цілей внутрішнього аналізу даних).
Appendix C: Focus Group Questions

Guiding question to identify **ELEMENTS**.
What are the major components (features, characteristics) of professional learning?
(Professional learning includes:
* traditional professional development: seminars, masterclasses, training, courses
(school-based or mandated)
* professional learning networks (PLNs)
* informal online Communities of Practice (CoPs)**

Guiding question to identify **CONSTRUCTS**.
Thinking about the elements you identified, what factors would contribute to **personally meaningful professional learning experiences** for teachers involved in informal online Communities of Practice?

**According to the main theorists:**
All Communities of Practice are networks in the sense that they involve connections among members. But not all networks are Communities of Practice.

**What’s the difference?**

**PLN** = refers to a set of relationships, personal interactions, and connections among participants

**CoP** = refers to the development of a shared identity around a topic that represents a collective intention to manage a domain of knowledge and to sustain learning about it
Appendix D: Letter of Invitation & Participant Consent Form

Participation in Research Study – Letter of Invitation and Consent Form

Title of Study: Investigating the Role of Informal Online Communities of Practice in Professional Learning: The Experience of Second/Foreign Language Teachers

Principal Investigator and Faculty Supervisor: Dr. Roland van Oostveen, Associate Professor, Director, Educational Informatics Laboratory, University of Ontario Institute of Technology (UOIT)

Graduate Student Researcher: Ulana Pidzamecky, M.A. Candidate, Faculty of Education, UOIT

you are invited to participate in an upcoming educational research study. This invitation has important information about the reason for the study, what you will be asked to do if you decide to be involved in this research, and the way information about you will be used if you choose to participate. The purpose of this research is to investigate teacher knowledge, attitudes and opinions about the opportunities for and challenges to professional learning within informal online Communities of Practice (CoP), and how these may differ from school-based collaboration for professional development. Should you choose to participate, you will be asked to join one (1) unstructured focus group, as well as to complete two (2) brief surveys, one before and one after the focus group session.

This investigation will be gathering data from sample participant populations of Ukrainian language teachers in Edmonton, Alberta, Canada and Lviv, Ukraine.

What will I do if I choose to be in this study?

(NB.: your participation is voluntary and you have the right to opt out of any of the study phases at any time with no repercussions.)

You will be asked to:

1/ participate in one (1) video-recorded unstructured focus group session made up of other teacher participants representing the same country. There will be five to ten individuals per group. Participants will be asked to discuss two questions as a group. The time allotted for the focus group session is a maximum of two (2) hours;
2/ participate in two (2) completely anonymous online surveys about Professional learning communities, before and after the focus group session. In each case, the survey links will be sent to you and you will have one week within which to complete each survey. Each survey will take no more than 15 minutes to finish and will be accessible through a web-based tool called Survey Monkey.

Study period: Once consent has been received from participants, a mutually determined schedule will be worked out between the student researcher and all participants as pertains to the above-given phases of the study. The surveys and unstructured focus group sessions will take place during November 2016.

Study location: The unstructured focus groups will take place on site in Lviv during the IV International Scientific Conference “Ukrainian Language in the World” (Ukraine participants), and in the online space of Adobe Connect (Edmonton, Alberta participants), hosted by UOIT.

Recordings: Audio-visual recordings will be made of the unstructured focus groups, to make sure that an accurate and complete record of all the information provided by participants is available for analysis purposes. These audio-visual recordings and all data will be stored in a secure virtual file location at UOIT and will only be used by the principal investigator and the other research personnel involved in this study, who will be obliged to sign a confidentiality agreement.

These recordings are a necessary part of data gathering for these complex phases of the study and the data resulting from them will be kept completely anonymous.

What are the possible risks or discomforts?
To the best of my knowledge, your participation in this study does not involve any physical or emotional risk to you beyond that of everyday life.

In this regard, your participation in this study may involve the following risks:
You may feel emotional or upset during the unstructured focus group process, insofar as your feelings and experiences related to professional development will be investigated. If you should become uncomfortable, you will be free not to answer or to skip to the next question. The same applies to survey participation.

What are the possible benefits for me or others?
There is genuine potential for professional benefit for participants from both Canada and Ukraine, as each struggles with political and economic circumstances which are having a serious impact on Ukrainian language education. By sharing your knowledge, experience and opinions about informal online CoP, you will have an opportunity to provide valuable feedback for the first time in the area of Ukrainian language education concerning the potential professional and pedagogical benefits of such communities for teachers. At the same time, you will be able to strengthen bonds with fellow teachers whom you know, and develop new learning relationships with colleagues with whom you will be acquainted for the first time.

**How will you protect the information you collect about me, and how will that information be shared?**

All data collected is completely anonymous and will only be available to the investigators of this project (Ulana Pidzamecky, graduate student researcher, and the research team--Roland van Oostveen, Principal Investigator, and the supervisory team members). The data will be stored and secured by password protected encryption on computer hard drives at UOIT. Complete anonymity of your responses is assured. The results from this survey will be used as aggregated data for our research. The aggregated data may be used for secondary analysis in future studies of a similar type. For instance, the resulting data set, in which your data responses are included, might be used for comparison to data sets obtained from participants from other universities. The resulting reports will be shared with the greater research community through technical reports, publications and conference presentations. Links to many of these will be accessible through the EILab.ca (http://eilab.ca).

**Participant Concerns and Reporting**

If you have any questions concerning the research study or experience any discomfort related to the study, please contact the graduate student researcher [Ulana Pidzamecky] at 905-721- 8668, x. 2657 or ulana.pidzamecky@uoit.net.

Any questions regarding your rights as a participant, complaints or adverse events may be addressed to Research Ethics Board through the Ethics and Compliance Coordinator – researchethics@uoit.ca or 905.721.8668 x. 3693.
This study has been approved by the UOIT Research Ethics Board REB #14088 on October 4, 2016.

What are my rights as a research participant?
Participation in this study is voluntary. If at any time and for any reason you would prefer not to participate, please feel free not to do so. We can take a break, stop and continue at later, or stop altogether. You may withdraw from this study at any time, and you will not be penalized in any way. In the event of withdrawal from the study, all data contributed by you will be completely removed.

You may also request a copy of the study once it is complete, should you continue with your participation or not. It is anticipated that the report will be available by December 2017.

Whom can I contact if I have questions or concerns about this research study?
If you have questions, you are free to ask them before completing this consent form, and if you have questions later, you may also contact me (the graduate student researcher - Ulana Pidzamecky) at any time at ulana.pidzamecky@uoit.net, on Skype (ulana.plawuszczak), or at 905-721-8668, x. 2657.

Consent
I have read and understood this invitation and the explanation about the research study included here. I have been given the opportunity to ask questions and my questions have been answered. If I have additional questions, I have been told whom to contact. I agree to participate in the research study as described above and will receive a copy of this consent form after I sign it.

**YOUR CONSENT MUST BE RECEIVED WITHIN TWO WEEKS FROM THE DATE OF RECEIPT OF THIS INVITATION. **

*Please provide your initials to indicate your choice in EACH section:*

_____ (initial) = I agree

Study Phases
_____ (initial) I agree to participate in one recorded unstructured focus group session.

_____ (initial) I agree to participate in the two surveys.

Secondary Use of Data
_____ (initial) I hereby agree to the use of these anonymized data in subsequent studies.
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Participant’s Name

Participant’s Signature

Date

________________________________________________
Signature of Researcher Obtaining Consent
Date
Ulana Pidzamecky, MA Student Researcher
UOIT Faculty of Education ulana.pidzamecky@uoit.net
Skype: ulana.plawuszczak
Tel. 905-721-8668, x. 2657

Roland van Oostveen, Ph.D., Research Supervisor

Director, Educational Informatics Laboratory (EILab)
roland.van Oostveen@uoit.ca
Web: http://eilab.ca
Appendix E: E-mail Request to Participate in Pre- or Post-Survey

E-mail Request to Participate in Pre [Post] Survey about Informal Online Communities of Practice (CoPs) for Professional Learning

Ulana Pidzamecky, MA Candidate
Faculty of Education
University of Ontario Institute of Technology (UOIT), Ontario, Canada

(DATE)

(CONSENTING PARTICIPANT)

Pre [Post] Survey about Informal Online Communities of Practice (CoPs) for Professional Learning

I am writing to you about your participation in a brief survey related to my graduate research. As you might recall from the letter of invitation and consent form which you received and responded to earlier, you indicated your agreement to participate in two surveys related to my research on informal online CoPs for professional learning. This the first [second] of the two surveys.

The purpose of this survey is to investigate teacher knowledge, attitudes and opinions about the opportunities for and challenges to professional learning within informal online Communities of Practice, and how these may differ from school-based collaboration for professional development.

The survey will only take about 15 minutes to complete. Please click the link below to go to the survey Web site (or copy and paste the link into your Internet browser).

Survey link: http://fluidsurveys.com/surveys/ulanapidzamecky/cops-for-professional-learning-1/ [PRE]
http://fluidsurveys.com/surveys/ulanapidzamecky/communities-of-practice-for-professional-learning/ [POST]

Your participation in the survey is completely voluntary and all of your responses will be kept strictly confidential. No personally identifiable information will be associated with your responses in any reports of these data.

If you have any questions concerning the research study or experience any discomfort related to the study, please contact the researcher [Ulana Pidzamecky] at 905-721-8668, x. 2657 or ulana.pidzamecky@uoit.net.
Any questions regarding your rights as a participant, complaints or adverse events may be addressed to Research Ethics Board through the Ethics and Compliance Coordinator – researchethics@uoit.ca or 905.721.8668 x. 3693.

This study has been approved by the UOIT Research Ethics Board REB [insert REB # assigned] on [insert date].

You have one week from the date of receipt of this email to complete the survey.

Thank you very much for your time and cooperation.
Appendix F: Confidentiality Agreement

Confidentiality Agreement

Research Title: Investigating the Role of Informal Online Communities of Practice in Professional Learning: The Experience of Second/Foreign Language Teachers

Principal Investigator: Dr. Roland van Oostveen, UOIT Faculty of Education

Graduate Student Researcher: Ulana Pidzamecky, UOIT Faculty of Education

Master of Education Program

[ ] I understand that all the material I will be asked to record, analyze, and/or transcribe is confidential

[ ] I understand that any digital recordings, data, and transcripts can only be discussed with the principal investigator and the research team working on this study, and may not be shared with others in any format

[ ] I will not keep any copies of the information nor allow third parties to access them

[ ] I will delete all interview, datasets, and other relevant files from my computer after transcription/use is complete

[ ] I will keep my computer and any datasets and transcripts password protected and secure

[ ] I will maintain the anonymity of all participants involved in this research study

[ ] I will keep any information regarding all participants in this study in the strictest confidence and will discuss any information about the participants only with members of the research group

Research Assistant:

______________________________ __________________________
(print name) (signature) (date)

Principal Investigator:

______________________________ __________________________
(print name) (signature) (date)

This research project has been approved by the Research Ethics Board (REB) at the University of Ontario Institute of Technology (REB # 14088).