A Community of Practice Assessment Framework: A Typology for Effective Groups

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Abstract: This paper outlines a typology for use in the qualitative assessment of communities of practice (COPs). COPs are groups of people who meet together to share knowledge and solve problems around a similar interest, and they are essential to intellectual capital development within organizations. This paper types COPs along two dimensions: trust and risk. These dimensions are used to analyze a COPs capacity for learning and collaboration outcomes. Trust requires an environment that fosters openness toward good and bad ideas, mistakes and accomplishments, and a structure that it is negotiated and agreed upon by the self-initiated membership. Productive inquiry provides the baseline for measurement and recognition of risk capacity within a COP. By typing COPs along the dimensions of trust and risk, it will be possible to estimate a given COPs strengths and weaknesses. This can answer the question of what types of groups are more likely to achieve success along these qualitative lines of learning and collaboration. Focus groups are offered as a means of this qualitative assessment.

Keywords: Communities of Practice, Collaboration, Organizational Learning

Introduction

The aim of this paper is to develop the dimensions of trust and risk preference in a Community of Practice (COP) typology to assess the relative strengths and weaknesses of various COPs. This assessment is along the outcome measurements of learning and collaboration. First, a typology will be introduced with dimensions of the typology defined. Second, outcomes for successful COPs will be outlined, with typologies hypothetically listed as more or less capable of learning and collaboration. Finally, a methodology will be provided for actual COP assessment.

COPs represent “groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (Wenger, McDermott, and Snyder 2002, 4). They represent effective and organic ways of growing intellectual capital within organizations. This capital differs from an organization’s tangible or financial capital, and includes intangible human, structural, and relational capital (Andriessen, 2005). COPs can exist in many different forms, with a wide variety of membership and organizational support. They essentially give individuals with similar interests an opportunity to share resources and come together to solve problems (Saint-Onge and Wallace 2003). An organization’s awareness of such groups, and its ability to leverage the knowledge that comes out of collective problem solving, will increase its intellectual capital. Increased intellectual capital creates a more competitive organization and intelligent.

Dimensions

The following dimensions frame the discussion of what is required for a COP to be successful and fulfill its defined purpose. Figure 1 shows four quadrants that have been defined by the author according to their risk preference and trust environment. Later, the discussion will show how a COP can be placed on a continuum of outcomes based on their placement within the typology.

The theoretical significance of a typology is with its definitions of ideal types. Doty and Glick (1994) argued that this identification of ideal types is what makes typologies more than
mere classification systems. These ideal types are theoretical because constructs within the ideal type are identified, relationships among these constructs are identified, and these identified internal relationships are falsifiable. The closer an empirical example is to the ideal type, the more likely it is to show whatever that type has been hypothesized to show.

![Diagram of Organizational Cultures](image)

**Political Club:**
- Strong knowledge sharing restricted by cultural assumptions.
- Marks by bond, trust, and identity. Limited number of ideas available for exchange.

**Community of Practice:**
- Strong knowledge sharing without restrictions of cultural assumptions.
- Marks by bond, trust, identity, free exchange of ideas, social awareness, and high intellectual capital.

**Social Club:**
- Focused on maintaining the status quo. Marked by lack of knowledge sharing, group identity, and trust.
- Plagued by the unproductive rehashing of old ideas.

**Biker Club:**
- Willingness to challenge the status quo, but without the architecture to support it efficiently. Marked by independence, individual isolation in groups, and great capacity for new ideas.

**Figure 1: A Typology of Communities of Practice**

**Trust**

The first axis is trust. Trust is made up of the following variables: bonds, structure, organizational links, and social awareness. In other words, a COP that is placed higher on the trust axis recognizes the importance of community connections, has clearly defined roles for group members, is recognized by the larger organization, and recognizes the importance of social skills in the transfer of knowledge.

It is important to develop trust within an organization or group if a COP is to survive and fulfill its primary knowledge sharing functions. Individuals need to feel comfortable sharing ideas informally, requiring that an environment be created that fosters openness toward good and bad ideas—mistakes and accomplishments (McDermott 1999, 8). Japanese companies have been successful because of the creation of *ba*, or a high trust environment (Von Krogh, Ichijo, and Nonaka 2000, 196). Wenger, McDermott, and Snyder (2002), noted that a primary intangible component of a COP is trust (15). Rosen (2007) included trust as one of the 10 cultural elements of collaboration, calling it necessary for exchanging ideas and creating things with others (10). Sergey Kravchenko’s also included trust as one of *Four T’s* for success (Rosen 2007, 52).

There are levels of trust, however, at different stages in a COPs life cycle. Trust is something that takes time to develop, and may require face-to-face (F2F) meetings early on in a community’s life cycle to build a foundation for future meetings (Saint-Onge and Wallace 2003, 90). Coleman and Levine (2008) noted that trust takes time and experience (193). The more often a group meets, the more focused they become (Rosen 2007, 35). This is one of the elements that
separate a COP from a task group—COPs are concerned with relationship longevity over one-time agreement (Coleman and Levine 2008, 170).

Trust within a COP can develop along a number of lines. Trust can be found as a construct of sharing, i.e. shared sense of purpose and a shared sense of ownership (Saint-Onge and Wallace 2003, 105). Individuals must also believe that their participation in the COP is worthwhile, and that they work in an organization that recognizes and rewards participation in these groups. Knowledge hoarding must be discouraged for trust to develop. Rosen (2007) noted that members must not fear that an idea will be stolen (10). It is better that individuals feel that an idea not submitted for peer review cannot be very good anyway, so a stolen idea such as this is not worth much.

Knowledge hoarding is the antithesis of knowledge sharing. As noted, trust is developed over time. As individuals spend time together, they share information and knowledge as a means of collective problem solving (Wenger, McDermott, and Snyder 2002, 25). McDermott (1999) called this sharing element the heart of a COP (4). Likewise, Rosen (2007) included sharing as one of the 10 cultural elements of collaboration (10). Trust can also be found through learning, i.e. individual readiness to learn from others, honesty in admitting lack of knowledge, and willingness to bring problems to the surface. Saint-Onge and Wallace (2003) refer to this element of COPs as a meta-capability of collaboration, but this particular assessment will refer to these elements as elements of trust (60). Coleman and Levine (2008) refer to trust as a precursor to collaboration (19).

Bond

“Community is about connections” (Saint-Onge and Wallace 2003, 183). The development of trust within a COP should be positively correlated with the development of bond and cohesion. The very development of COPs is largely informal, yet the content of interest promotes a strong bond and an identity (McDermott 1999, 5). Contributions to the group by members often result from a sense that such acts are owed to the group (McDermott 1999, 5). This commitment is also an important element of Saint-Onge and Wallace’s framework.

Bonds can be developed through the creation of public and private spaces (Wenger, McDermott, and Snyder 2002, 51). Public spaces serve a ritualistic function in COPs and offer tangibility to the group’s value. Relationship development, however—which Wenger, McDermott, and Snyder (2002) refer to as the heart of COPs—is formed in private spaces (62). Communication serves an important function in bond development, as it provides the channel through which questions are asked and conversations are had. Saint-Onge and Wallace (2003) noted that these conversations make up one of the Five C’s of a COP (140). As members converse together, they should develop networks and a sense of interdependency that discourages knowledge hoarding, encourages sharing, and increases collaboration (Saint-Onge and Wallace 2003, 140). Interpersonal and organizational communication requires a feeling of comfort with peers, and involves the sharing of interests, values, and goals (Rosen 2007, 15). The goal of this communication is shared meaning (Coleman and Levine 2008, 143).

Structure

A primary means of establishing trust and identity within a COP is proper structuration. COPs vary according to size, longevity, location, formality, etc. The importance of structure for trust development is that it is negotiated and agreed upon by the self-initiated membership. Wenger, White, and Smith (2009) provide three dimensions of structure upon which members must agree (4). Members must agree upon the group’s domain, i.e. what are we about? (6). They also must agree upon the makeup of the community itself, i.e. who are we? (8). Finally, they must agree upon the practice of the group, i.e. what do we know and what will we do? (6).
Organizational Links

An important aspect of trust development within a community is the links a given community has with the larger organization. This link comes at the intersection of individual values and organizational culture (Saint-Onge and Wallace 2003, 18). Community members must not only believe that their participation is valuable to them as individuals, but they must also believe that their participation is an integral aspect of the overall success of the organization itself (Saint-Onge and Wallace 2003, 107).

This requires participation from the organization, i.e. support and recognition of groups that exist within its boundaries. In general, intelligent organizations will work to realize the value of all knowledge assets (Bollinger and Smith 2001, 10), and COPs are essential to this realization. Individual communities must align themselves with organizational goals, but the organization must support this process and include COPs as part of a larger strategic process. A primary role of the organization is to ensure that the self-regulated nature of COPs does not lead to stagnation and lack of productive inquiry. Organizations must encourage productive conversations within COPs (Saint-Onge and Wallace 2003, 108).

Newer visions of strategy are focused on competitive advantages that include a greater interest in capability generation, i.e. learning and collaboration (Saint-Onge and Wallace 2003, 21). This strategic advantage is accomplished when COPs and organizations work together. For Wenger, McDermott, and Snyder (2002), this requires effective cultivation of groups to allow them to succeed (12). For Saint-Onge and Wallace (2003), this requires thoughtful building efforts whereby COPs are established as structured communities with a priori organizational support (38).

Social

Knowledge itself is a phenomena best understood as it connects with actual human knowing (Wenger, McDermott, and Snyder 2002, 8). Knowledge is contextualized information that has a strong social component. Individuals may experience the knowledge of something in isolation, but the knowledge itself is socially constructed. The community aspect of a COP assumes this social aspect.

The social well being of an organization can be noted in Goleman’s (2002) basic tenants of emotional intelligence: self-awareness, self-regulation, empathy, self-motivation, and social skills (37). This last point—social skills—is of particular importance to COPs, as it refers to the navigation of the individual in group settings, requiring that an individual understands the impact of words and actions on other people.

People are important elements of COPs. Because knowledge is tied to a person, replication of knowledge is difficult. Teece (2009) noted that, because knowledge is embodied, it could not be easily transmitted as information to other groups (128). “Indeed, replication and transfer are often impossible absent the transfer of people” (Teece 2009, 167). Likewise, Coleman and Levine (2008) noted that people are the key ingredients in the development of trust required to share knowledge (25). In his Law of Agreements, Levine (2002) noted that all productivity and satisfaction in relationships—both professional and personal—require successful collaboration among people (108).

Risk

The second axis of a COP typology is risk preference. The following variables make up a high risk-preference: membership typology, life cycle understanding, intellectual capital, process, and learning. In other words, a COP that is placed higher on the risk preference axis has an appropriate distribution in membership of experts and non-experts, appropriation of risk based on
a group’s placement on the COP life cycle, development of relational capital to increase productive inquiry, awareness of a group’s origination, and a willingness to learn.

Inherent in this preference for risk is the capacity for ambiguity. *Productive inquiry provides the baseline for measurement and recognition of risk capacity within a COP.* The comfort of members to introduce problems and think outside the box is a sign of healthy risk preference. Especially for groups with strong core values and cultural assumptions, it can be easy to develop institutional and unconscious reactions to things that halt the productive inquiry process that is necessary for successful collaboration. Although history must not be forgotten (Teece 2009, 124), it must also not be allowed to become a hindrance to the surfacing of historical assumptions. The capacity for ambiguity, therefore, is what allows COP members to ask questions, share knowledge, and make decisions.

Capacity for ambiguity allows for the agility needed in dynamic organizations. COPs must encourage productive inquiry as a means of detecting problems early. This early detection allows time for innovative solutions to problems through communication channels, thereby allowing the organization to adapt to internal and external pressures in an efficient and timely way (Saint-Onge and Wallace 2003, 19). Once again, however, agility is dependent upon productive inquiry. This productive inquiry is accomplished in successful COPs.

**Membership Typology**

To properly understand the risk preferences for a COP—and thus, for an organization as a whole—it is necessary to understand the membership typologies of COPs. Nichani (2001) noted a wide range of membership types, and the very nature of COPs allows for shifts in member contributions over time (49). Potential distractions to risk preference include the expert groups of community members. If a COP contains no experts, it is possible that important questions addressing significant gaps will not be asked. This makes a COP a risk-averse community. Likewise, if a COP contains only experts, it is possible that conventional wisdom will not be questioned, as *dumb* questions are not encouraged. Such an attitude toward inquiry of all kinds makes the community less likely to allow for ambiguity. This would likely result in a lack of agility to changes in the market that are not noted by COPs uncomfortable with asking all types of questions and introducing all types of problems.

The orientation of a COP can also help researchers understand their capacity for risk and ambiguity. Wenger, White, and Smith (2009) provide an extensive list of community orientations, including those that focus on content, those that focus on relationship development, and those that focus on the development of a specific context (72). Organizations must be aware of the orientation of COPs to understand how they fit within the broader context. Relationship oriented groups, for instance, emphasize interpersonal communication as a means of learning through knowledge exchange (Wenger, White, and Smith 2009, 86). Such communities must be supported by the organization to foster these relationships. These relationships provide the environment for productive inquiry, thus growing a community’s capacity for *dumb* questions, ambiguity, and risk.

**Life Cycle**

Understanding a community’s risk preference also requires an understanding of COP life cycles. Wenger, McDermott, and Snyder (2002) outlined five stages of COP development: potential, coalescing, maturing, stewardship, and transformation (69). Each stage exhibits varying levels of energy and visibility, as well as the element of longevity. This has relevance for the assessment of risk preferences. For instance, a community at the potential and coalescing stages will need help finding each other and identifying their collective identity. Risk taking at this stage will tend to be low. The goal is to cultivate these groups to advance through the stages of development. A
maturing community, for instance, should be more involved in introduces problems and, thus, should be more able to handle risk and ambiguity.

**Intellectual Capital**

A COPs intellectual capital will impact its risk preferences. Indeed, intellectual capital has influence over almost all organizational activities. As distinct from tangible and financial capital, intellectual capital includes human, structural, and relational capital (Andriessen 2005). All of these elements have previously been noted. Human capital was noted as an important variable for trust development and the importance of people in a COP. Structural capital was also noted as a trust variable, as members negotiate their existence. Relational capital—as a customer-focused variable—has particular relevance for the development of a risk-preferring environment. It requires an environment suitable to productive inquiry and problem surfacing for those on the front lines, i.e. those connecting directly with customers, to bring forth questions to COPs. These COPs can then deal with them and take them to management that is often far from the customer.

**Process**

The distinction between Wenger and Saint-Onge on COP processes, i.e. cultivation and growth, impacts views on the ways in which COPs can foster risk preference. Wenger, McDermott, and Snyder (2002) suggest that COPs are organic communities that evolve from common interests (66). The following aspects of organic growth are pertinent to the discussion of risk: open dialogue between outside and inside perspectives, differing levels of participation, value generation for members, combination of familiarity and excitement, and the establishment of a community rhythm.

Saint-Onge and Wallace (2003) provide a more systematic approach that seeks to grow COPs from an organizational perspective (38). As communities define their project and establish their components in preparation for an official launch, they work toward the establishment of rules, communication norms, content boundaries, and membership criteria. For Saint-Onge and Wallace, community launch necessitates organizational support (39). All of these Phase I elements require varying levels of risk, but Phase II requires more risk assessments as communities grow and expand. The various checkpoints and evaluations embedded in the process model of Saint-Onge and Wallace require varying levels of risk and productive inquiry.

**Ability to Learn**

For organizations to learn, they must be willing to “expand their capacity to create the results they truly desire, where new and expansive patterns of thinking are nurtured” (Senge 1990, 3). This expansion requires risk and the capacity to accept the ambiguity that comes from challenges to basic cultural assumptions. COPs foster individual and organizational learning, requiring a certain capacity for the free-flow of ideas and challenges to existing knowledge. The value of a COP for organizational learning is in its ability to offer situated learning. As opposed to resource-based learning, situated learning is active, and requires immersion with others in problem solving efforts. This is the basis of collaboration. Learning also requires behavior modification (Garvin 1993, 79) and experimentation (Saint-Onge and Wallace 2003, 131). The learning exercise is, in itself, a risky enterprise, as it makes an individual more aware of what he or she does not know (Senge 1990, 10).
Outcomes

The previous sections outlined the dimensions by which COPs can be described. This is the what of COPs. The following section will outline the goals and outcomes of COPs, or the what for criteria. This criteria form along two dimensions: learning (Figure 2) and collaboration (Figure 3). Learning is the ability to gain and develop capabilities, while collaboration is the ability to learn across functional units (Saint-Onge and Wallace 2003, 60). They are, therefore, necessarily linked.

An important component of COP learning is technology use. More specifically, COPs must learn the practice of technology stewardship. This entails the purposive selection, configuration, and use of technology as it suits a community’s needs (Wenger, White, and Smith 2009, 70). More and more communities are developing at least a partial virtual component. Wenger, White, and Smith (2009) refer to this component as a digital habitat for COPs (37). This habitat must be constructed in a way that ensures the sustainability and survival of the group. Knowing how group members learn, technology can be used to facilitate the learning and knowledge sharing process.

We tend to want to make Computer Mediated Communication (CMC) as close to F2F Communication as possible, but it is actually sometimes better to leave CMC alone because it does things that F2F cannot. Walther (1996) noted the idea of hyperpersonal interaction, in which the virtual communication is actually able to accomplish things not possible in F2F, making it even more personal than F2F (28).

Technology can not only reduce costs and increase frequency of communication, but it can also create protective contexts in which people feel they can express themselves and lay open more knowledge gaps because it is a safe context in which to do so, i.e. it is more risk preferring.

Learning as an outcome of COPs is also gauged by access to, and exchange of, knowledge. Referencing the COP architecture of Saint-Onge and Wallace (2003), learning is a central component of the creation, exchanging, and accessibility of knowledge (64). As members introduce conversation topics and engage in productive inquiry, they initiate knowledge access, creation and exchange. The relevancy of this productive inquiry is important to consider, and should be an aspect of a community’s defined boundaries and conventions.
Saint-Onge and Wallace (2003) includes learning and collaboration as meta-capabilities in their COP architecture (60). COPs first require access to relevant knowledge repositories. These repositories contain static and codified knowledge that is controlled by information management techniques. Second, COPs require exchange of tacit knowledge among community members (64). This exchange is initiated by productive inquiry, and must lower interpersonal barriers, support peer-review, retain transparency, and ensure value through embedding the process in everyday activities of the organization.

Figure 3: Collaboration Outcomes by Typology

Collaboration

Collaboration is a second meta-capability or goal of COPs. Rosen (2007) defined collaboration as “working together to create value while sharing virtual or physical space” (9). This creation of value is the specific outcome of collaboration. Michael Schrage also noted this value creation of collaboration (Rosen 2007, 8). Collaboration has also been defined as the art of discovering together what could not be discovered alone (Coleman and Levine 2008, 17). This discovery is the essence of learning, explaining the intrinsic links between learning and collaboration.

There is a certain level of intimacy required for collaboration. Coleman and Levine (2008) refer to the ability of members to attend to nuances of conversation through verbal and physical cues (89). This is similar to the Cognitive Complexity Theory developed by Burleson and Caplan (1998) to explain why individuals with more available constructs through which to view the world are better communicators as they can better formulate person-centered messages (233). Cognitive Complexity is an intrinsic and required aspect of effective collaboration.

The value of collaboration as a goal for COPs is clear. Coleman and Levine (2008) described collaboration as a “key driver of overall performance of companies around the world” (189), noting that its impact is twice as significant as a company’s strategic orientation in the market.

Any measure of collaboration must include some measure of chaos, as chaos an integral process that supports collaboration (Rosen 2007, 12). Intel CEO Andy Grove noted that at certain times, organizations must loosen up control, allow for experimentation, and “let chaos reign” (Grove 1996, 130).

Methodology

Learning and collaboration thus represent the core capabilities of effective knowledge organizations, and thereby provide the goal statements for COPs. The following section will outline a methodology for measuring success in relation to the goals outlined previously.
**Sampling**

First, it is necessary to provide a sampling methodology for applying the dimensions. Determining success for a COP would be best accomplished using qualitative methodology, namely focus groups and interviews. Therefore, random sampling is not required. The methodology does require, however, a definition of COPs. For the purposes of this assessment, Wenger, McDermott, and Snyder’s definition of COPs will be used as a basis for sampling. This definition was noted earlier. It is important to define the sampling population in order to avoid applying this assessment to groups that are not COPs. This would include functional units, project teams, etc.

**Definition**

Next, it is necessary to provide an operationalization of what is being measured in these groups. At a simplistic level, COPs can be measured according to their development of business capabilities—learning and collaboration. In this framework, COPs are assessed along the dimensions of trust and risk. Within these dimensions, goals of learning and collaboration are noted as the aim of the COP. The question then becomes what types of groups are more likely to achieve success along these qualitative lines. It is difficult to assess COP success in terms of outputs, however, because—unlike task groups—COPs tend to lack specific result orientations. As McDermott (1999) noted, COPs are organized around knowledge rather than outputs (6). COPs can also be measured, however, to Saint-Onge and Wallace’s architecture model, analyzing the access members have to knowledge as well as the general levels of exchange that occur in the group.

**Measurement Questions**

COPs can also be measured along the axis of trust through a similar individual assessment. Saint-Onge and Wallace (2003) offer a few points of measurement that would be helpful in this area:

- “Members have the confidence that their questions will be answered. They know that they will get support from the community when they need it” (111).
- “Members feel that the community offers an environment where they can be honest” (112).

COPs can be measured along the axis of risk through assessments of group disagreements, as such disagreements provide a means of assessing how the group handles inquiry and dumb questions. According to Saint-Onge and Wallace (2003):

- “The inevitable disagreements and conflicts are dealt with in a respectful and timely fashion—dealt with productively rather than punitively. Issues and challenges are positioned as learning opportunities that strengthen the community” (112).

COPs can be measured by the output of learning by assessing member satisfaction with the group. This could be termed the value members receive from the group. This could also be extended to an analysis of the organization’s assessment of the COPs strategic value. Saint-Onge and Wallace (2003) suggested the following questions:

- “Is the community meeting the needs of its members?” (111).
- “Are the members participating and contributing at a level that is valuable?” (111).

COPs can be measured by the output of collaboration by assessing how members work together. Saint-Onge and Wallace (2003) suggest:

- “Members are able to debate and discuss things together without losing sight of the collaborative context in which their work must take place. They respect each other's
opinions. Discussions don't become unnecessarily polarized without an overriding commitment to finding solutions acceptable to all concerned” (112).

- “Technology enables the community's work, increasing members' abilities to communicate in multiple channels” (113).

At an organizational level, COPs can be measured in terms of what it produces. Saint-Onge and Wallace (2003) suggest the following:

- “The community is actively developing knowledge objects. The pace and quality of these objects become leading indicators of the community's vibrancy and value” (113).
- “Do other people see the value of a particular community and communities in general?” (111).

Thus, COPs can be measured at an individual level with member assessment of value. Second, COPs can be measured at a community level with assessments of knowledge access and exchange. Finally, COPs can be measured at an organizational level with an analysis of the value organizations place on COPs.

**Conclusion**

By gauging a COPs risk and trust preferences, it is possible to hypothesize how well it will achieve the goals of collaboration and learning. A COP can exhibit many of these characteristics at different times during its life cycle, and increasing risk or trust can help a COP achieve its goals. This paper outlined two important dimensions developed from the literature on COPs, with a definitions of an ideal type that matched each of four quadrants. A COP can utilize qualitative methods to understand its placement in relation to one of these quadrants and, as a result, note the areas it needs to promote to place itself in a quadrant with higher learning and collaboration outcomes.
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