1 Introduction

In this chapter I would like to introduce the knowledge management concept known as communities of practice (CoPs) and show a direct link between CoPs and human resource development (HRD). CoPs are a proven way to effectively manage knowledge as well as promote organizational learning, so it is a logical step to aim HRD initiatives towards developing and supporting them. It is my experience that both the vision and operational goals of an organization’s HR department is exceptionally crucial in designing and supporting a learning organization and that CoPs are one strategy to achieving these goals.

The set up of the chapter is as follows; in this section I present some of the advantages that communities can have for the organization and the individual. Then I give an introduction to what CoPs actually are and how they function, followed by a discussion of the link between HRD, CoPs and organizational learning. In section four I look at what kind of support CoPs need in order to thrive and in section five, I expand these concepts to include global communities. The following section looks at how technology enables CoPs – both local and global – and describes general guidelines for deciding which technology is appropriate for facilitating communities. My closing remarks consider the increasing role of Cops in HRM as well as some of their possible down-sides.

1.1 Added values

An important part of any initiative is proving value to upper management. The business case for developing CoPs is backed by the argument that CoPs contribute to attaining organizational goals more efficiently by;

- retaining knowledgeable employees, protecting organizations from ‘brain drain’
- linking individual development and organizational goals
- promoting an organizational-wide environment of continuous learning
- fostering arenas for innovation and problem solving
- improving information flow across organizational boundaries
- improving knowledge sharing across time and distance
- stimulating the reuse of knowledge
- mitigating the continuous reinvention of the wheel
- using the power of informal networks to get tasks accomplished more effectively
- helping the organization to sense and capitalize on new market developments and
- building up intellectual capital.

CoPs have been shown to support employees by;

- building and expanding expertise
- promoting group and organizational status
- helping to develop professional identity
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- increasing employability
- maintaining and improving an individual’s networks
- facilitating exchange of tacit knowledge
- giving stability in a changing, uncertain working environment

This is not to say that communities of practice are a panacea for all organizational woes, but they have been proven effective at fostering trust, which in turn facilitates group learning and knowledge exchange; two prerequisites for establishing and maintaining a learning organization.

2 Understanding Communities of Practice

Communities of Practice are not a new concept. Social learning and collaboration have always played a role in humankind’s development – from groups of cavemen learning from each other how to kindle a fire to the guilds of Europe, which functioned as both a social arena and a training ground for new apprentices. And CoPs are everywhere, and we are all members of at least one. In fact, reflecting on your own career, you will probably notice that some of your most effective learning took place during informal discussions with a group of peers; people you were friendly with, who worked in the same field and had similar tasks which you could discuss. These three aspects of social learning forms the basis for a CoP and are referred to as community, domain and practice. In order to understand how CoPs can play a role in organizations, it is important to first have a clear picture of what they actually are and how they function theoretically.

2.1 What a CoP is

There are different definitions of CoPs but they all reflect the concept of people learning together, solving problems and improving their daily practice through social interaction. The following points can help further our understanding.

Communities of practice are about
- sustained mutual engagement - people bound by common practice through meaningful relationships
- group identity – social interdependence and shared understandings
- connections – persistent and sustained institutionalized networks

All CoPs are similar in the way they function. However, there are also different types of CoPs, which can be categorized by their focus or main activity. The following is a fairly comprehensive overview.

- **Innovative communities** are those that focus on fostering new ideas, products, processes, etc. While most CoPs are innovative in some respects, CoPs designed for innovation often have a membership that is drawn from different backgrounds, allowing for different perspectives.
• *Best-Practice Communities* function as forums for the testing and further development of new practices, as well as serving as an engine for knowledge dispersion within an organization. In these communities, practices are often verified according to a specific process developed by the CoP itself, taking organizational processes into consideration.

• *Helping communities* focus on solving daily problems members might come across as well as serving others in the organization as well.

• *Knowledge-stewarding communities* organize, upgrade and distribute new knowledge. For example, CoPs may search through data banks in order to find and disseminate innovative practices.

At a less practical level, CoPs can be classified as either *self-organizing* or *sponsored*. A self-organizing CoP is usually rather informal in nature - informal in the respect that there is no official recognition of the CoP by the organization - thus there are no real expected results. This means that the CoP is self-governing as well, which serves the members’ learning needs most efficiently, and can lead to high levels of innovation. Unfortunately, these self-governing CoPs are quite fragile and depend on the enthusiasm and dedication of a few core members for their momentum and continued existence. On the other hand, these communities are quite resilient, changing and evolving as the needs of the members change. Finally, because of their informal status, self-organizing CoPs may not reach their full potential because of lack of facilitation by the organization.

Sponsored communities have full recognition from management, reflected in allotment of time, money and IT facilities; in other words, investment. On the downside, there is a fine line between enough and too much intervention in a CoP. This is because a sponsored CoP, like its self-organizing counterpart, is also self-governing in nature. But because there are formal roles and responsibilities in a sponsored CoP, there are naturally bottom line expectations. These expectations can lead to friction between members and management and possibly even to the demise of the CoP. This somewhat paradoxical situation makes it difficult for some types of organizations to successfully foster CoPs.

### 2.1 What a CoP is *not*

At the surface level a Community of practice may seem to be similar to other groups typically found in organizations, but this is misleading and approaching one in the same way can produce negative results. For example, project teams have specific goals with pre-determined time frames in which to accomplish them. They are governed by an outside factor. Another major consideration concerns legitimation of the members. While the members of a project team are legitimized by the formal hierarchy of the organization, in a CoP, members must earn their status. Other differences are shown in the chart below.
## 2.2 How a CoP works

All communities share three elements that form the basis for their functioning (and further separate them from other organizational groups). Without the structural elements of domain, practice and community, a CoP cannot (and does not) exist. Figure 2.2 below shows these structural elements and the way that they are interconnected.

<table>
<thead>
<tr>
<th>Teams</th>
<th>Communities of Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Driven by results</td>
<td>Driven by improvements in practice</td>
</tr>
<tr>
<td>Defined by task</td>
<td>Defined by knowledge domain</td>
</tr>
<tr>
<td>Guided by a pre-set work plan</td>
<td>Guided by member learning</td>
</tr>
<tr>
<td>Commitment through accountability</td>
<td>Commitment through reciprocity</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Networks</th>
<th>Communities of Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>A mix of mutual needs and relationships</td>
<td>A mutual attraction</td>
</tr>
<tr>
<td>Creates possible links</td>
<td>Creates a shared identity</td>
</tr>
<tr>
<td>Power resides in coming together</td>
<td>Power is in actively sharing</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Learning communities</th>
<th>Communities of Practice</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on expanding knowledge</td>
<td>Focus on knowledge and practice</td>
</tr>
<tr>
<td>Crossing boundaries</td>
<td>Testing boundaries</td>
</tr>
<tr>
<td>Focus is static</td>
<td>Focus is fluid</td>
</tr>
</tbody>
</table>
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Domain: joint enterprise
The *domain* is the raison d’être for a CoP. It is a continuous creation – and recreation - of the common ground that brings people together. The domain also serves as a guide for learning and innovation within the CoP, developing a group identity. Finally, the domain sets boundaries and defines the focus; it gives direction to members when trying to understand what is actually worth sharing with others in the community.

Community: mutual engagement
*Community* creates the social fabric needed for learning. The feeling of community among members is how trust is developed, which is a critical part of collaboration and knowledge exchange. Community also gives a sense of belonging, which can be especially important in global organizations. Finally, *community* is the force behind commitment. We work hard for members of our community, and expect them to reciprocate.

Practice: shared repertoire
It is the *practice* of a CoP that creates a set of frameworks, usable ideas and standardizes language and tools. Practice is used here in the way that one uses ‘legal practice’ or the ‘practice of medicine’. In other words a CoP has, like the world of medicine, its own specific body of knowledge and its own lexicon. It is the practice aspect of a member’s participation in a community that leads to status. And, without a basic mastery of the practice, participation is not possible.
3  CoPs: Linking Organizational Learning and HRD

In a global knowledge economy, organizational learning is a must. Creation and regeneration of knowledge needs to be strategically planned and guided. For years, organizations invested in knowledge management systems, but now these same organizations are realizing that people facilitated by systems is the most efficient and effective way to manage knowledge while promoting organizational learning. If you take a people-centric view towards knowledge management, then it is only logical that investment in HRD should play a strategic role in promoting a learning organization. But now there are operational questions; ‘what aspect of HRD do we invest in?’ And ‘should we invest at the individual level or the group level?’ And ‘what shape should the initiative take?’ I propose that approaching these questions from an organizational learning perspective will show developing CoPs may be the answer to these questions.

A learning organization is one that operates holistically. In other words, each individual part has aspects of the whole replicated within its processes. Think of how a brain works – you can cut out a piece, but it continues to function. This is sometimes called redundancy and assures that a system will continue working after one part breaks down. This concept of holism can also illustrate how global organizations work. Although each local entity functions in a way that is influenced by its immediate environment, it will also use processes that are common to the general organization. In this way, important organizational knowledge is protected because it is spread through the entire organization. This redundancy is also needed for innovation because using duplicate processes free up organizational resources for new learning. Knowledge management systems based on information technology (IT) are one way of stimulating holism – the network itself acts as a central organizational memory from which each local unit can draw from. However, IT cannot overcome some of the more pernicious barriers to knowledge exchange and so lead to less effective organizational learning.

To see how CoPs fit in the strategy of a learning organization, we first need to realize that a direct link between individual learning and organizational learning (OL) can be difficult to prove; HRD initiatives such as individual training and development do not always lead to OL. However, CoPs may be one way of linking HRD initiatives and OL. This is because CoPs play an integral role in learning, guiding the way knowledge is created and helping this knowledge to flow within and across organizations, helping stimulate a learning ecology. I explain this flow with the help of figure 3 (Ropes 2005a).
The model shown in Figure 3 portrays a circular pattern of knowledge building, based on learning, and the consequent knowledge flows within an organization. In the model, knowledge is built by an individual making his or her knowledge explicit to the group. However, the process of explicating knowledge is not always easy. One difficulty is called ‘the curse of knowledge’ and refers to the problems that arise when people having unequal levels of expertise try and communicate. For example, a college freshman has difficulty understanding the explanation of a complex theoretical concept given by a professor, because the levels of understanding are too disparate. This disparity may also exist among members of a CoP, but can be lessened through interaction of members with varying degrees of expertise as a moderating effect. The varying levels of expertise illustrates further the concept of legitimate peripheral participation - a guiding concept behind social learning - that maintains people become more professional the more they participate in the community of practice.

Knowledge sharing, an important part of learning, can also be hindered by motivational factors. People are wary of sharing information with others because of power relationships, competition for resources or perceived conflictual goals. Sharing knowledge and learning together also takes considerable effort and time, often burdening experts more than others. And experts are exactly who should be stimulated to share knowledge. Thus, there are persistent barriers to knowledge sharing and learning. However, community dimension of CoPs, where trust and reciprocity play important roles, helps break through these motivational barriers.

Once the group has received the new knowledge, which may be a problem, new idea or even a new artifact, it is discussed in relation to established practices and judged as to its validity and applicability in different situations. This leads to new concepts being developed and verified, which in turn are introduced into the community. This new knowledge, which has been intentionally created, then becomes objectified by the CoP in
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the form of new processes, products, protocols, etc. The new, objectified knowledge is dispersed through the organization by the members of the CoP, and because this knowledge has been validated, will also be more easily absorbed into the organization as a whole.

Once the new knowledge is in fact absorbed into the organization, it finds its way back to the individual through formalized procedures, protocols, etc. where it becomes part of that individual's implicit knowledge, completing the cycle.

What I have tried to show in this section is that stimulating a learning ecology at a group level, through fostering CoPs, will strengthen the link between individual and organizational learning. If guided by CoP theory and practice, HRD initiatives can be designed that will promote a learning organization. The next section specifically discusses important considerations when deciding to develop communities.

4 Developing Communities

CoPs are usually seen as being emergent. In other words they come to be on their own, maybe evolving from another organizational group. In any case, in order to thrive, communities need to be supported. In this section I introduce some of the more important aspects of stimulating community development. First I discuss how one can actually find communities, followed by the presentation of a general model showing the life cycle of a CoP and discussing how each stage needs a different type of support in order to develop. Then I show some more general critical success factors that can be related to the different life-cycles.

4.1 Searching for communities

Communities of practice are emergent phenomenon and should be approached as such. There are literally no examples that I know of where an artificially created CoP has been sustained long enough to show value. This means that you need to find ones that have already formed and evaluate whether development support would be appropriate. Finding existing CoPs can be done through network analysis, social activity analysis, or ethnographical descriptions that point towards a CoP-type ecology. The following are some of the indicators that a CoP has formed;

- sustained relationships
- a shared way of doing things
- inside jokes, shared anecdotes
- a common discourse
- mutual artifacts
- rapid flows of information
- ease of communication
- high levels of innovation
- defined boundaries
Designing support for a CoP needs to be a participative process in which members shape the interventions according to their specific needs. These needs will change over time as members come and go. The important point is to understand how the ecology will change along with it. Furthermore, keep in mind that domain, practice and community need to be developed in parallel.

### 4.2 The community life-cycle

Each community goes through noticeable changes in the course of it existence and meets new challenges at each stage. Knowing about the different stages is important for understanding when what type of development support is needed. Figure 4.3 illustrates a five stage model of CoP evolution (Wenger, McDermott, and Snyder 2002).

**Figure 4.3 Stages of Community Development**

- **Potential** – at this stage there are only loose networks, possibly showing some tendencies of CoPs.
  - **Support interventions** need to focus on defining the domain and finding the right people.
- **Coalescing** – connections promote the start of community forming.
  - **Support interventions** should focus on building trust and creating energy by proving value to members.
- **Mature** – this is when membership is growing and knowledge sharing increases.
  - **Support interventions** must concentrate on clarifying the community’s domain, role in the organization and boundaries with other groups.
Stewardship – here the community has reached a stage where knowledge is being refined and developed.
  
  Support interventions – takes the form of maintaining momentum through rejuvenation and maintaining relevance.

Transformation – may be the change of the community into another form – a social club or loose network, for example - or it might completely disband

  Support interventions – need to help members find a way to deal with the change and live on.

Not only does each stage of development require different interventions, but also at three, intertwining levels. The next step is to look at these.

4.3 Supporting development

Community initiatives need to be supported at the; individual, group and organizational-wide levels. Each level requires a different approach, and has a specific type of support associated with it. The following reflect several strategic success factors that will help determine the operational support.

The organizational level, where issues such as official recognition and funding play a role. Also, at this level, factors such as culture and infrastructure are important. In an organization where learning and sharing knowledge are not part of the culture, facilitation may require extra efforts on the part of the management. The same is true for technological infrastructure which is of vital importance for knowledge flows.

Support initiatives
  • allot resources; assure adequate space, budget and time for participation
  • develop management support; assure a link between the CoP and corporate goals
  • give incentives; provide for extrinsic motivations to participate
  • create awareness; use the organization’s intranet for wide-level publicity

The community level, at which considerations about participation, management, coordination and group facilitation are important. Also, communities need to be stimulated in the forming of group identity. One way to do this is to assure effective internal communication processes for both knowledge building and exchange. Also, leadership is crucial.

Support initiatives
  • assure clear purpose; focus on the domain, as defined by the members
  • coordination matters; make sure there are regular and engaging community events
  • connections are the focus; make lots of opportunities for members to connect, either virtually or face-to-face
  • remain cutting-edge; engage key thought leaders in the community

The individual, or member, level, where motivational and cognitive aspects of knowledge sharing need to be looked at. Motivation can be either intrinsic; for example
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assuring that status can in fact be gained and is recognized; or extrinsic, in which case rewards could be linked to financial gains. Cognitive barriers are those that frustrate exchange of knowledge due reasons such as disparate levels of expertise or differing vocabularies, etc. This barrier can be overcome through coaching as well as regular and continued participation in the CoP itself.

Support natives
- use intrinsic motivation; prove the value of participation to individual
- rely on communication; use methodologies to tap tacit knowledge
- promote voluntary participation; allow for different levels of participation

4.4 The value of proving value

What makes support possible is value. Proving added value is perhaps the most important factor for fostering and sustaining CoPs. Managers (and members) both will regularly ask themselves what participation in the community does to help reach organizational goals in relation to resources spent. If there is no clear and ready answer, the CoP will not, and should not, continue as an institutionalized entity. The value to an individual is decided by him or her self; meaningful participation can only be voluntary. However, we can develop metrics that will allow us to measure the value addition of a CoP to the organization and subsequently translate them to real financial terms. Metrics can be developed that focus on the points listed below.

Knowledge generation - learning
- New products or processes that have been developed
- Number of discussions taking place on website
- Best practices published on the website

Knowledge distribution – sharing knowledge
- Meeting frequencies
- Number of document downloads
- Amount of feedback on best practice cases

Process improvements – knowledge reuse
- Increase in employee productivity
- Time to answer business problems
- Number of days spent on research and development

Knowledge/talent retention – protecting from ‘brain drain’
- Depth and breadth of data base
- Employee turnover rates
- Employee experience
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What you probably notice is the important role IT plays in valuing CoPs. For example, document storage and retrieval rates are easily measured on a webpage, and point specifically towards knowledge exchange.

In the next section I expand the CoP model to include a global dimension. There we will see that IT plays a further role.

5 Going Global

Organizations need to have the capacity to quickly and efficiently draw on knowledge and expertise, no matter where it is located. Communities of practice can help. But designing and supporting CoPs for a global arena adds complexity. This is because the domain of a group may be difficult to define, practices often differ widely between localities, and community forming can be extremely difficult to foster because geographic distribution limits face to face contact. Also, cultural issues, issues concerning cross-business unit collaboration, different expectations and understandings can all frustrate making global communities work. On the other hand, if the community is successful, the rewards to both the individual and the organization can be great.

5.1 Globalizing the model

All CoPs are built on the same foundations. However, these need to be strengthened for global CoPs because of the added dimensions mentioned above. I now look at the model pictured in figure 2.2 again through a global perspective.

Domain: multiple understandings

Who decides what the focus of the CoP will be? Are there enough similarities between business units to flesh out a domain that everyone agrees to? These are serious questions that arise when trying to build any community, but the differences are amplified by problems associated with time, distance, culture and space. These factors make investment and the formation of clear agreements in the beginning phase of the community very important.

Community: trust and relationships

Community is based on trust and personal relationships and cannot function without them. But building relationships across time and distance is not easy. Lack of spontaneity is also a pitfall of IT connected groups. There is little or no room for spontaneous knowledge exchange between individual members, one of the best ways to foster trust. While the domain establishes which information should be shared, trust is a prerequisite for deciding what knowledge can or will be. Finally, adding a cultural dimension complicates community building even more because people tend to identify first with their cultural group and then as part of a larger whole.
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Practice: commonality not standardization

The element of a shared practice in a global community should be approached from a slightly different perspective than in a global one. In a global CoP, each local business unit may have built its own repertoire applicable to the local situation. However, there are commonalities with the main organization - as seen in a shared domain – that guide global learning by allowing members to approach problems from these different viewpoints.

5.2 Special needs for global communities

Global CoPs work on the same principles as local ones, and need the same support. However, there are differences that require another approach. For example, more time must be invested in the overall start-up process in order to assure participation. The following activities are vital when developing global CoPs (Wenger, McDermott, and Snyder 2002).

Achieve stakeholder alignment

Because of so many conflicting issues within global organizations - cultural differences, geography, time, and so forth - it is more difficult to get all the potential members to join the CoP. This means it is crucial to convince stakeholders of the value of participation, especially up front. This can be done by;

- sending teams to personally convince local managers of the importance
- focusing on core practice of the group as a base for the CoP
- making the initiative a global one, not just a main office one

Local variations and global connections

Diversity within global companies should be seen as an added value. New, local knowledge can be used for innovation if it properly circulated into main organization. CoPs are one way to help and should be designed to promote knowledge links. Requirements of the design;

- promote smaller, local cells to form that connect with the larger, global community
- facilitate connections between people at a global level through mediating coordinators
- allow for a horizontal, rather than hierarchical organization.
Figure 4 Structure of a Global Community

Maintain community visibility

Far less spontaneous networking takes place in a global CoP and these unplanned moments are where a member really builds the community. This means that the global community’s daily visibility must be higher in order to stimulate regular participation. Specific strategies include:

- the frequent use of teleconferences
- planning special events such as a global conference; face-to-face meetings are very important
- integrating ways of interacting through IT, such as knowledge portals
- publishing frequent newsletters, announcements, RSS feeds, etc.

Focus on the networks

The network within a global community needs to be more intentionally created and more intensely facilitated than in a local one. The network is where relationships form and trust is built. However, it is difficult to build trust between people of different cultures and across space and time. And this is intensified even more because communication is usually mediated by IT. The following are some ways to help assure network forming in distributed CoPs.

- Coordinators need to bridge cultures, time and space through active networking in order to link members.
- Members should be able to have visual connection for personalized contact.
- Small group projects and meetings – across local cells - should be encouraged.
While richer learning and more radical innovation can be positive results of global communities, their development and maintenance demand different – and often more intense - support than local ones. One aspect relates to the technological infrastructure of the organization and the ability to shape or adjust it to the specific needs of the community. The next section looks at the IT needs of both global and local CoPs.

6 Technology

Technology is an enabler, not a goal in itself. But it is a strong factor in CoPs and, without a good technological structure to work with, most communities would have difficulties functioning and global communities could not exist. In this section I first discuss what IT structures facilitate CoPs in general and then focus on the needs of global CoPs in particular.

Local communities may not need information technology (IT) in order to function, but they can thrive by using it. Global communities on the other hand are reliant on it. But CoPs have different IT needs depending on the stage they are in (see figure 4.2) and the focus they have (see section 2.1) For example, communities working mostly on innovation need tools that strongly support collaboration, such as real-time conferencing or synchronous discussion possibilities. And communities in the mature or stewardship phase will need more sophisticated data storage and retrieval systems, as well as possibilities for private spaces and planning. Management tools can also be introduced for tracking purposes – indispensable for documenting added value as discussed above. The following chart shows the basic technological facilities that a CoP needs in its virtual work space and the activities supported (Dekkers et al. 2005).
Practice has shown that as a CoP matures, its IT needs expand and change from more collaborative functionality, to including sophisticated search engines and then, when knowledge is being rapidly developed and applied, workflow engines and secure partitions to the environment. Because a CoP is dynamic, choose an open software standards strategy if possible. Private vendors for virtual work spaces abound and most have the capability of building flexibility into the environments. Other key factors are; ease of use, security, platform-independence, scalability and extensive technical support. Although IT cannot make a CoP, it can break it; it is especially a barrier for less successful CoPs. No member should be disadvantaged by IT either. Finally, let the CoP determine its own mix of technology use; signals will come from it when new IT is needed (Barab, Kling, and Gray 2004).

## 7 Last words

Although I have sketched a rather positive picture of them, CoPs should not approached as an elixir for a company’s ailments. There can be a downside to CoPs too. They can be powerful networks that promote group-think, hinder innovation and resist change dogmatically. Because of lack of insight, or inability to learn and change through learning, some CoPs become lost in mediocrity, unclear of purpose or direction. Or they
can attempt to rule a domain completely. These are problems that can be fixed, if spotted soon enough, so one should be aware of them as a potential threat.

But I do think that as the economy becomes even more globalized, and companies need to leverage their knowledge to the utmost in order to keep competitive advantage. Changing the firm into a learning organization will take on even greater importance. I also think that organizations will need to employ change strategies that are guided by a more holistic approach that focuses on people rather than systems. This means that the role of human resources management becomes even greater in the organization; supporting the development of learning ecologies requires insight into many complex processes. And the technological demands created by distributed communities will require closer collaboration between HRM and IT. CoPs can be very rewarding for the organization and the members that participate. But they are also emergent, organic groups that require careful cultivation.

8 Sources


