

Communities of practice; facilitating teacher professionalization in higher education

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Abstract

The field of higher professional educational in the Netherlands is undergoing drastic structural changes. Organizational-wide mergers are commonplace and are often followed by development of new curricula. Furthermore, this is often accompanied by the implementation of a completely new educational concept as well. These structural changes in the educational system require that teachers adapt their current teaching practices, along with working on gaining new competences associated with working in a changing organization. This paper presents a short background of communities of practice in higher education, followed by a report on the first impressions from an experiment in which a bottom-up style of change management has been implemented through the use of a community of practice.

A community of practice (CoP) is a powerful knowledge management tool that brings people from a similar domain together in order to solve complex problems, deal with a changing organization and build knowledge around a specific practice. Inholland decided to implement a CoP for the international faculty in order for the members to better cope with the major curricula and didactic changes currently being implemented there. Concepts such as change, organizational sense making and teacher professionalization

will be discussed through the perspective of a community of practice, with Inholland's International Community of Practice (InterCoP) being used as a case study.

Key words; educational change, community of practice, professionalization, international faculty, organizational change

Introduction

The Changing landscape of higher education

As a teacher in a University of Professional Education in the Netherlands, I work in an environment that is rapidly changing. There is, firstly, a change in the fundamental way in which education is provided. The days of standing in front of a lecture hall full of busily- scribbling students is giving way to the teacher as coach, as mentor and as process supervisor. Exams are no longer written exercises testing a student's knowledge about a particular subject or theory learned from a book or lecture. Assessments are now structured reflections on competences gained during the project-based educational experience, as expressed through *beroepsauthenthiek producten*, which translates as 'simulated authentic professional products'. These changes in the pedagogical framework, as manifested in competence-based learning, distance learning, blended learning, e-portfolios, communities of learners, etc. are forcing a transformation in the didactical approach of teachers (Bieshuizen 2004).

The second change that I am experiencing is in the organization where I work. Higher educational institutions are being required to function more and more as competitive organizations, much like in the private sector. This means that they are subject to the demands of the new economy, which stresses knowledge building and innovation as the main drivers for success (Senge 1990). Public learning institutions are now expected to mirror the private sector and become themselves learning organizations in order to remain viable and competitive by contributing to the knowledge society in ways other than delivering educated youngsters to society (Raad 2003). Changes of this order require several alterations to the current system. First, faculty must be approached by management in a different way than was previously the case. Lecturers are now seen more as human resources that can be used to meet the goals of the institution, rather than

teachers only working on the educational process. For example, Inholland has had a group of 160 faculty and staff work together in order to produce scenarios that will be used when writing the university's strategic plan for the coming two years. Also, Inholland is developing external sources of revenue such as contract education in the form of workshops, founding of research centers in order to link small and medium enterprises with the university better. These are just a few examples of activities where faculty is used, and expected to take part in. This places different demand on the competences and professionalism of faculty, which in the past has only been responsible for achieving goals more readily associated with teaching and sometimes research..

Further, Inholland University has recently instituted a balanced scorecard management system, which requires that faculty and staff are assessed according to their contribution to the strategic goals of the institution (Kaplan and Norton 1992). This is complete with formalized individual development plans that are linked to the (desired) core competences of the university. The plan of the university is to link this to the annual salary review of the employee, which is a major change for anyone employed in the public sector, including lecturers in a university, a situation where publications, speaking engagements and student satisfaction have been the traditional measures of success.

Finally, there has been a trend toward mergers among universities of professional education here in the Netherlands. These mergers are often a source of uncertainty surrounding job security, curricula changes, and other factors, and can place an inordinate amount of stress on faculty within the merging organizations. Organizational cultures, which have a strong influence on employees, are also disrupted and to be re-examined and dealt with in a way that will help employees to make sense of their new environment.

In summary, universities of professional education here in the Netherlands are undergoing changes in two regards – didactically and organizationally. This paper focuses on the latter concept in regards to teacher professionalization, or how teachers can learn to function in an environment that is becoming more and more professional. External factors such as lower government funding, higher student numbers and stronger competition has forced universities to become more like organizations one finds in the private sector, where communities of practice have for some years been recognized as an

exceptional knowledge management method for organizations wishing to stimulate learning and innovation among its employees (Fox 2000; Hakkarainen, Paavlova and Lipponen 2004b; Hinds and Pfeffer 2003). Higher educational institutions are now recognizing knowledge management as an important strategic tool in helping the change process and stimulating innovation, and communities of practice are starting to be formed as one result.

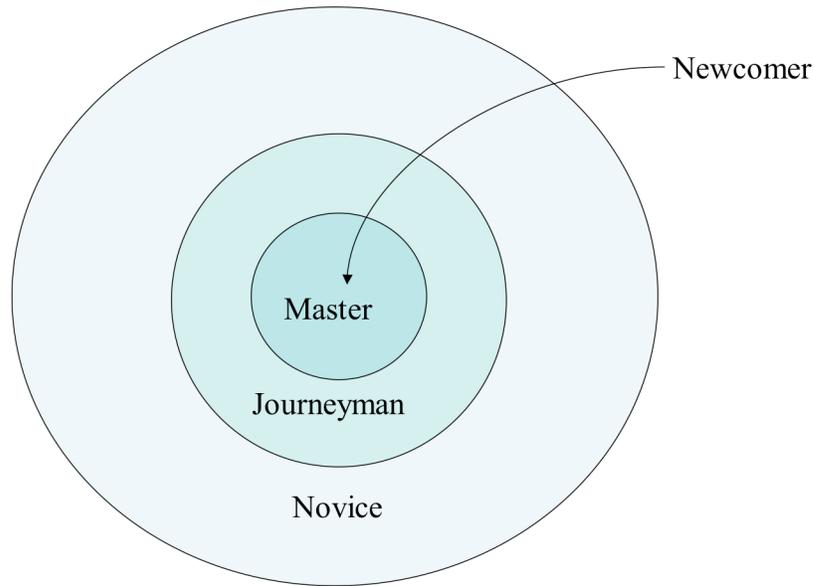
In the next section, I discuss the conceptual framework surrounding CoPs and how modern organizations in the private sector use them in order to remain competitive. I will then relate this to the educational sector and in conclusion explain some implications for the future of CoPs in higher education.

Communities of Practice - Conceptual Framework

Introduction

Jean Lave and Etienne Wenger first coined the term “Community of Practice” in their book entitled *Situated Learning: legitimate peripheral participation*, in which they studied five groups learning behaviors (Lave and Wenger 1991). What they found was that people learn in a social context through continuous interaction. Learning, it was discovered, was no longer a dyadic function between a teacher and a pupil, but is an experience, or process, wherein many different actors play a role. Their observations of quartermasters, meat-cutters and three other communities helped to show that newcomers to a field learned to become professionals by functioning in a community of practitioners of mixed expertise, or a community of practice. Diagram 1.1 illustrates this learning path graphically. Although perhaps not explicit in the diagram, an important realization is that learning is not just a process between master and novice, but, more importantly, a process occurring between the levels of master, journeyman and novice. Also, the newcomer, at first participating at the edge of the community (i.e. peripherally), not as a full member, is nonetheless still a legitimate member. This is because he or she is interacting with the other members of the community in relation to common language use, agreed procedures, or other, reified concepts of the community.

Diagram 1.1 Learning to be a professional



Learning, according to Wenger (1998), is an ongoing process that has four elements that are interdependent and intertwined; meaning, practice, community and identity. The following table explains these concepts.

Table 1.1 Explanation of Wenger’s Elements of Learning (Wenger 1998)

Meaning	A way of talking about our (changing) ability-individually and collectively- to experience our life and the world as meaningful.
Practice	A way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action
Community	A way of talking about the social configurations in which our enterprises are defined as worth pursuing and our participation is recognizable as competence.
Identity	A way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities.

Communities of practice have several different forms. The CoPs that Lave and Wenger studies were essentially learning communities which, as an object of research, served to develop and explain their new theory of how newcomers to a community learn to become professionals. The literature defines four general types of CoPs, but in each of these learning plays a central role. Furthermore, innovation and learning is also present in most every CoP (Bood and Coenders 2004). However, CoPs can have different characters and focus on different concepts. The four major types of CoPs according to (Wenger, McDermott and Snyder 2002) are;

- Helping communities – where members help each other to solve problems and share ideas occurring in their daily practice
- Best-practice communities - where practices are evaluated and either validated or discarded
- Knowledge stewarding communities – in which the knowledge of an organization is kept current and organized through groups of Cops
- Innovative communities – where a mix of people from different backgrounds are brought together to create new products or services.¹

What CoPs are (and are not)

At first glance CoPs might appear to be like other, more traditional groups found in organizations, but this is misleading. The two major differences between traditional groups and communities lie in the concepts of self-organization and end-results. (Dekkers 2005). For example, a project team might learn collectively in similar ways to a CoP, yet project groups are formed by management in order to achieve specific goals formulated in respect to deliverables, or actually produce products. Members of a project team are thus expected to take an active role in the team so that the team as a whole can produce a pre-specified end result. CoPs on the other hand, are made up of voluntary actors who decide their own learning agenda, and determine the course the CoP takes. In contrast to a project group, the organizational structure of a CoP is not formalized by management, but by the CoP itself – it is a self-organizing group. Knowing the differences between

¹ For an excellent discussion on innovative communities, see Hakkarainen (2004b).

CoPs and other organizational groups is quite important for the success of CoPs smith because of its organic nature (Smith and McKeen 2003).

CoPs and Higher education

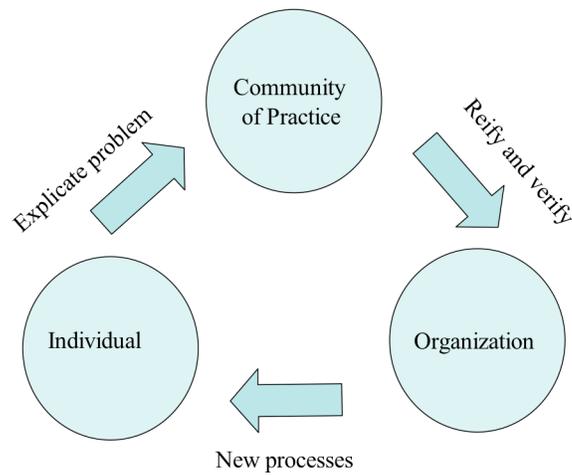
A review of the literature showed that there is little published about CoPs in higher education. There is some research being done here in the Netherlands by groups funded by institutions such as The Digital University, *Stichting SURF* and other government-supported foundations, but this is still in the formative stage and not well known except within a small circle of researchers. Most international research about communities in higher education deals with communities of learners or knowledge building communities (such as those used by scientists to further their research), not with those CoPs dealing with the profession of teaching. Furthermore, there is little general exploratory and no empirical research into the knowledge management consequences related to CoPs in public institutions.² However, there is a substantial corpus of work about CoPs as a knowledge management tool in the private sector (Davenport and Prusak 1998; Hakkarainen et al. 2004a; Ray and Little 2001; Saint-Onge and Wallace 2003; Schwen and Hara 2003; Smith and McKeen 2003). Thus, I turn to this source in order to understand how and if CoPs can be successfully initiated into higher education organizations.

CoPs in private organizations are cultivated in order to improve its competitiveness in the market place through investment in learning at the individual level (Davenport and Prusak 1998). The conceptual framework for CoPs as an organizational learning tool can be seen as follows: Learning, according to (Hakkarainen et al. 2004a), originates with the individual in the sense that a gap exists between one's mental model and new information or experiences. Thus, a problem arises. This gap is then explicated by the individual through dialogue, so that the group is able to understand the individual's problem. Thus, the learning gap becomes, in essence, one for the whole group. Once this gap is closed,

² There are some studies done on successful CoPs, like those of the World Bank Kim, R. 2001. "Virtual Communities and "Low-Tech" Tools: Lessons learned at the World Bank." and Habiform (van Luin 2003), are anecdotal rather than empirical in nature.

usually through dialogue or other types of work forms meant to help the group-learning process, we can say that both the group and the individual have learned. However, at this point, we can not speak of real organizational learning – it remains in the domain of the CoP. We can only speak of organizational learning once the new knowledge – in the form of solved problems, innovation or new processes – is somehow injected into the organization itself, where it is used by others either in their daily duties or is adapted as an institution or guideline for the organization (Stahl 2000). The process of integrating new knowledge into the organization – organizational learning, in other words - is one of communication and can take two forms (Ropes 2005). New developments are either reified in documents that are made available to others in the organization through either through codification, where one can think of depositing a document in an organization's data bank so that it can be recalled or through the individual himself (Hansen, Nohria and Tierney 1999). In the former case, knowledge is seen as a tangible resource that can be stored and transferred electronically. In the latter case, the individual is seen to disseminate the new knowledge to his colleagues through personal interaction for example during CoP meetings. This knowledge is, in turn introduced into the organization as verified and reified artifacts, and finally finds its way back to the individual through new organizational processes, products or other developments (Stahl 2000). Diagram 2.1 below shows the organizational learning process by portraying this link between the individual, the CoP and the organization.

Diagram 2.1 Organizational Learning via CoPs



Thus, communities of practice are one way of promoting organizational learning as well as systematically managing knowledge in a rapidly changing business world where highly contextual and complex problems need to be quickly solved, or innovation must occur at a rapid pace in order to remain competitive (Gaines 2003; Kayworth and Leidner 2003; Nonaka and Takeuchi 1995). The need for knowledge management is highly documented as is the effectiveness of CoPs as a knowledge management tool and higher educational institutions, which are slowly morphing into private-sector organizations, should be aware of this. However, CoPs are organic in nature and often difficult to cultivate. In the next section I discuss some practical concepts surrounding communities of practice and then attempt to place these into the context of higher education. Afterward, I discuss these points in the context of a case study.

Communities of practice often fail due to problems that can arise at three levels; organizational, community and individual or member level. The three bullets below reflect several critical success factors emerging from the literature, divided according to these three levels. I elaborate briefly on each one of these points below. Later, when I

examine the case study, I use this structure to frame the discussion on CoPs in higher education.

- The organizational level, where such problems can arise such as lack of funding (Saint-Onge and Wallace 2003), lack of recognition (Wenger, McDermott and Snyder 2002), too much involvement by management (Smith 2003, Brown 2000) and organizational issues in regards to culture, infrastructure, etc. (Kayworth and Leidner 2003)
- The community level, at which problems can arise such as lack of interest (Blunt 2003), poor management (Saint-Onge and Wallace 2003), lack of coordination and facilitation (Wenger 2001), poor internal communication processes (Sunwolf 1999) and no sense of community (Sharrat 2003)
- The individual, or member, level, where motivational and cognitive aspects of knowledge sharing form barriers to success (Davenport and Prusak 1998; Hakkarainen et al. 2004a; Hinds and Pfeffer 2003).

Critical success factors at the organizational level

A review of the literature brought me to the conclusion that without support from management, the difficulties surrounding the cultivation of CoPs are too great to be overcome, and the CoP fails (Saint-Onge and Wallace 2003) Management can support CoPs in two ways; financially, through allowing budget to specifically allotted to the CoP and intangibly, through recognition, autonomy, etc. (Dekkers et al. 2005) However, if management becomes overly involved in the CoP, it often fails (Smith 2003).

The organization itself, including such aspects as structure, culture and communication processes is another factor that can negatively affect the processes of cultivating CoPs (Kayworth and Leidner 2003). Wenger and his colleagues cite two different types of organizational barriers that lead to problems when implementing or guiding CoPs; the first type they refer to as "...perennial organizational dysfunctions" such as "irrational politics", short term orientation and focus on individual performance (2001, p155-156). The second type of problem considers that CoPs are difficult to manage because they add

another form of complexity to the organizational structure. In a situation where multiple CoPs are functioning, it is difficult for managers to maintain a strong influence on the knowledge that is being generated. In other words, a certain amount of power is no longer in the hands of management, but is spread out in the different CoPs, which leads to uncertainty for managers, not usually a comfortable position for them to be in.

Management uncertainty is also affected by the organizational structure in which it operates. A network type organizational structure lends itself to the cultivation of CoPs better than one based on a strict hierarchical structure because in the former situation, management is more accustomed to a distribution of knowledge and power, thus allowing it to be able to better deal with CoPs in general (Medina, Lavado and Cabrera 2005). Furthermore, participative organizations, in which a culture of trust is present and communication is between all levels, are more conducive to CoPs than an exploitative-authoritative system, where mistrust abounds and top-down communication is the norm (Harris 2002).

Community level failure

As I discussed above, CoPs are different in their structure than other organizational groups. Members are focused on a particular domain that allows each to develop an identity through interaction with other members. If one of these two aspects, focus on domain or social interaction, are left untended, then interest falters, and the CoP will most likely fail.

Without proper coordination, which includes management of the community's resources, and facilitation from the coordinator, a CoP stands a chance of failing. (Saint-Onge 2003). The concept of an organic entity holds true at this practical level – without proper care and management, the entity can wither.

While communication technology has made informal communication easier, thus adding to the possibilities for CoPs, group communication processes can be difficult to guide. This holds true for virtual platforms and face to face meetings as well. Research has

shown that if certain interventions are used to help small group communication function better than others, and these should be carefully considered (Sunwolf and Seibold 1999). Sharrat and Usuro hypothesized that knowledge-sharing will be facilitated by a high level of “sense of community”, or SoC (2003). The concept of SoC is based on factors such as trust, mutual feelings of respect and a shared learning agenda. Wenger (2001) writes that SoC is very important because “...learning is a matter of belonging, as well as an intellectual process, involving the heart as well as the head.” (p. 29). Thus, community building initiative play an important role in a successful CoP.

Individual aspects of failure

Communities of practice add another dimension to professional behaviors in the sense that motivation to join one must be intrinsic and originate with the member himself, not from an outside factor, such as appointment from a manager to one. Davenport and Prusak propose that people are adverse to sharing knowledge because of competitive reasons, i.e. the knowledge as power concept (1998). Hinds and Pfeiffer (2003) found that workers do not share information because of cognitive reasons and time constraints. Time is a consideration for everyone and attending CoP meetings that may not have any direct value or immediate returns may lead to disinterest.

Cognitive problems of knowledge sharing can also lead to failure of a community as well. In order for a community to work, members need to be able to explicate their knowledge in a way that others are able to further discuss. Often, experts have difficulty in explaining concepts to beginners due to language and advanced conceptual thought processes (Hinds and Pfeiffer 2003)

Case study

So far I have discussed the theoretical and conceptual framework for CoPs through a perspective that is based on private sector experiences. In order to tie in the concepts discussed above, as well as to place this paper in the context of higher education, I will

use a case study, which is based on my personal experience. The structure of this section is based on the three concepts of community failure listed above. In reality, I am trying to see if the InterCoP project has a strong enough theoretical base in order to work. First I give a short introduction to the case followed by a discussion that will intertwine the concepts previously discussed, and place them in the context of higher professional education here in the Netherlands.

InterCoP- the organization framework³

International Community of Practice, or InterCoP as it is referred to, was started as a result of an initiative by the board of directors of Inholland University. Following a study on employee satisfaction, which revealed problems in this area. The board of directors (which I will further refer to as the CvB) decided to put out a request for proposals (RFP) to which all employees were encouraged to respond to. The RFP was clear that although the initiative itself originated from management, the projects approved were to be implemented by the faculty members, with limited intervention from management. The point was to fund employee-centered and developed projects on a small scale that would increase faculty satisfaction through more bonding within groups.

In response to the announcement by the CvB, two direct colleagues and myself wrote up a proposal that specifically addressed problems that we experienced in our daily professional lives. These were overlapping with the employee satisfaction problems discovered in the survey and mentioned in the RFP issued by the CvB. We related these problems to the practice of teaching in an international course, of which there are several within Inholland.⁴ The InterCoP proposal was accepted with the recommended budget also being granted in full. Reflecting on these developments in relation to the framework discussed in the previous section, I conclude that the organization is trying to approach

³ Please note: the purpose of this paper is not to show the operational details of how the CoP was started, but rather to look at the case of InterCoP to see how CoPs can (or cannot) fit into higher education. In this regard, I will limit the operational details and try to attend to the major concepts.

⁴ The complete text of the proposal can be requested from the author.

one aspect of change - keeping employees connected - in a bottom-up manner, which is an important structural and cultural change for communication within Inholland. The hierarchical organizational structure of Inholland is typical of most educational institutions here in the Netherlands (Emst 1999). However, through financing projects that encourage dialogue within faculty groups, management is trying to stimulate learning and community-forming among the faculty. Once again, there was an explicit mention in the RFP that management was to play only a facilitative role, mostly in the form of funding. In this sense, InterCoP has support from management without over-involvement. Furthermore, it seems that upper-management recognizes CoPs as a viable tool for as this project was the first to be approved.

InterCoP - Community building

Within a few weeks after receiving the official approval, the plan for starting InterCoP was worked out and we began emailing people we knew from our network. In this email we described what we would like to accomplish and how as well as announcing the first meeting date. In order to discover possible themes for the first meeting we emailed those interested a questionnaire we developed in which we inquired about suitable topics for the community. Of the 34 emails we sent, 30 were replied to. Of these, nearly every response was positive in the sense that respondents thought it “ was a great idea” and “ a possibility to meet others and exchange experiences.” About one half had answered the questionnaire and 20 were planning on coming to the first meeting.

The first meeting was held one afternoon in the early summer. We met on a boat that toured through the canals of Amsterdam while we were meeting. There were 18 attendees from four different locations. Some people were familiar with each other via emails or other virtual meetings, but most had never met, either virtually or face to face. For the first half hour we socialized informally with the goal of starting to build a pleasant atmosphere that would later help us to build the social capital of the community.

After welcoming the participants officially, we gave an introduction into how a CoP works and what we thought were some reasons we could succeed as a CoP. Then we began with an exercise based on de Bono’s Six Thinking Hats method for lateral thinking

in order to expedite the communication processes within the group, as well as to come to a common domain that could be reified in a learning agenda (de Bono 1999). We first handed out post-it notes and pens to everyone and asked if they would come up with three major questions or problems they had in regards to their profession in the context where they performed it. Once this was done, we asked participants to introduce themselves, one to one, and to explain to each other the problems they had written down. What we found was that this type of intervention achieved several goals of the framework for success. Firstly, we built social capital by starting the community in an open environment around a domain formulated by the participants themselves. This was achieved with the help of a proven method for expediting the group communication processes. In this sense, we sparked interest for working together as a group.

One of the problems we experience at this level is that coordination of activities, such as planning events and sending out newsletters, etc. are time consuming. This can take away from the proper management of other aspects of the CoP, such as the virtual meeting space we are developing.⁵

Individual cognitive and motivational considerations

The exercise we did using the post-it notes served several purposes. It helped the members to focus their thoughts on their personal experience and put it in a context that they could explain to others. On the surface, we were trying to gather ideas from the participants in order to establish a common domain. However, at a deeper level, we were implicitly going through an exercise that would help members practice explicating their ideas in a way that others could understand them. By explicating their problems and discussing them in the context of their professional experiences, some of the typical knowledge sharing problems were diminished. The next step of the exercise was to engage in dialogue with the whole group, which emphasized the appropriateness of the learning agenda which had been formulated. Thus, learning was taking place in a group situation. When polled later if they believed InterCoP was a worthwhile investment of

⁵ Although an important aspect of modern, distributed communities, at this point IT plays only a facilitating role in the act of knowledge-sharing, and is not the basis for this CoP.

their time and effort, the majority of participants responded positively. This leads me to believe that motivational barriers to success are being minimized for participants due to the implicit rewards associated with a successful CoP; a sense of community where members relate to each other around their practice within a specific domain, which leads to learning and improvement of the professionals themselves.

Conclusion

In conclusion, I think that if we use the InterCoP as an example we can conclude that there is in fact a place for communities of practice in higher professional education. It is my opinion that there is no one singular factor that determines the success or failure of a CoP, but rather a combination, which I have discussed above. Educational organizations are changing for better or for worse, and faculty is changing too. The traditional role of a lecturer is no longer possible, and those who do not change with the organization can quickly lose their sense of identity, purpose and role in the organization. In this paper, using the InterCoP as an anecdotal case study, I think I have shown theoretically as well as practically that one way to deal with the changes occurring in higher education, is through the use of communities of practice. However, a CoP can not be seen as a cure-all and require considerable effort and resources from the participants, the facilitators and the organization. But, if it is successful, faculty can have a renewed sense of identity and meaning while exercising the practice of teaching in a professional organization.

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