TWELVE LESSONS TO DEVELOP AND SUSTAIN ONLINE KNOWLEDGE COMMUNITIES

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ABSTRACT

The development of online communities is rapidly becoming one of the important tools in Knowledge Management. Online communities have been emerging steadily and rapidly since the early nineties. Initially these online communities were being developed outside the corporate world. More recently, however, they have also become an organization reality. The concept of Communities of Practice has fuelled its growth and made it a strategic concern in a growing number of forward-looking firms. This paper presents practical lessons for organizations that aim to develop and sustain online communities in the context of knowledge program initiatives of a few leading organizations. These lessons (and the specific examples) are based on the actual experiences of eleven large organizations that were part of a large research that included interviews in Canada, U.S.A., Brazil, United Kingdom and Germany. The following organizations were part of the study: ADC Telecommunications, Bain & Company; Bank of Montreal; Brazil's Finance Ministry IT Agency (SERPRO); Context Integration; Eli Lilly; Hill & Knowlton; Nortel, Siemens, Texaco; and Xerox. Each company provided an opportunity to develop in-depth case studies using a structured qualitative and quantitative inquiry guide. The research was gathered through a combination of face-to-face meetings and telephone interviews. The paper also presents a brief literature review. The key conclusion is that technology only plays a secondary role in developing and sustaining online communities. Much more important are human-centric issues related to leadership, focus, motivation, identity and rewards.

KEYWORDS

Knowledge Management, Online Communities, Global Companies, E-learning, Case Studies, Reputation

1. INTRODUCTION

We believe it is difficult for large, global organizations to remain competitive in industries that demand rapid cycles of knowledge creation, diffusion and usage, without highly advanced digital collaboration tools. With integrated web-based collaboration tools, the sophistication, user-friendliness and mobility capabilities of online communities have been taken to a much higher level. This is not going unnoticed by leading knowledge-focused organizations. Various KM initiatives are strongly leveraging Online Communities of Pratice (CoPs).

In this paper, we will present how some leading organizations are applying collaboration tools into effective use to leverage their "knowledge" know-how. It presents the lessons learned related to the development and support of online communities in large organizations that have strong KM programs. Each lesson is illustrated with many practical examples extracted from the case studies.

Eleven organizations were selected to participate in the study because of their advanced stage in their knowledge management implementations and their strong web-based supporting capabilities. In almost all cases, these were large, global companies that had a strong need to share knowledge across offices situated in different corners of the world. The following organizations provided us with the opportunity to understand their KM/online communities initiatives and develop in-depth case studies: ADC Telecommunications, Bain & Company; Bank of Montreal; Brazil's Finance Ministry IT Agency (SERPRO); Context Integration; Eli Lilly; Hill & Knowlton; Nortel, Siemens, Texaco; and Xerox. The interviews were conducted with employees located in Brazil, Canada, Germany, United Kingdom and the United States.

2. METHODOLOGY

The paper is based on in-depth case studies using a structured qualitative and quantitative inquiry guide. The research was gathered through a combination of face-to-face meetings and telephone interviews. The research interview guide was based on extensive literature research and researcher's personal experiences as practitioners of knowledge management. We chose a detailed case study analysis based on a mix of close-ended and open-ended questions. This choice, we believe, was necessary because of the very early stage of this topic. Very few organizations have fully embraced and/or are providing dedicated resources (people, money and infrastructure) to support the development of strategic online communities. Thus, this research was very exploratory in nature and the choice of the title for this paper intends not to convey the idea of generalization, but that there are many sequential steps that should be well-planned ahead when starting an online knowledge community.

In every case, we conducted a number of in-depth interviews with senior executives in charge of KM and corporate portal initiatives. We did not, however, limit the interview process to KM leaders. More often than not we also interviewed project managers, users (employees) and community leaders. Generally, we interviewed three to eight persons per organization. More often than not, we were also introduced to live demos of the web solutions and/or were provided with screenshots to support interviews over the phone. A number of companies also shared their internal documentation related to the KM efforts.

After an initial round of interviews, as researchers, we would then prepare a first draft of our conclusions and submit it to the organization for further review, discussion and refinement. This allowed the researchers involved not only to correct any misinterpretations, but also to take the interviews to a deeper level of communication as interviewees were prompted to reflect about what they had learned (Many interviewees have expressed their appreciation for the opportunity to develop the cases). They think that this exercise led them to pause for a moment and, through a dialogue with us as researchers, to rethink their overall goals, achievements and lessons learned.

The focus of our research was not on the issues of IT implementation. The understanding of the IT infrastructure only provided us with the necessary context to analyze the KM and online communities initiatives that were being supported. Indeed, as we found out through our interviews, the most important factors of success were related not to the choice of technology, but with the managerial practices and processes aimed at increasing knowledge flows in the organization.

The key strength of this methodology was the unveiling of detailed anecdotes, stories and tips that are just being tested in the field by practitioners. This is reflected on how each proposed "rule" for developing and sustaining online knowledge communities is illustrated by very specific examples from the cases studied. This richness of detail is of paramount importance for other researchers that may engage in similar research projects.

In the next section, we provide a brief literature review and then in item 4 we discuss what the key learning insights were from our eleven research cases.

3. BRIEF LITERATURE REVIEW

Experiences with online communities, such as AOL, Compuserv, WELL and Listserv, pre-date the web. Some people, including sociologist and Berkley University professor Manuel Castell (2001), have suggested, "the origins of on-line communities were very close to the counter-cultural movements and alternative ways of life emerging in the aftermath of the 1960s". Since the web, however, they have become a mainstream fixture for focused files, information and knowledge exchanges. These communities cross the boundaries of organizations, countries, age groups and profit and non-profit organizations. The nineties saw the growth in collaborative work supported by LAN (local area networks) and WAN (wide area networks) in many large organizations (see box below with some of the key lessons from research on Computer Supported Cooperative Work). Since the web, however, online collaboration has reached a much wider scale within and outside the business world. Collaboration and community building applications are, indeed, becoming a key component of many knowledge management initiatives. They can increase the ability of employees, especially from different locations, to develop stronger bonds and a sense of community.

In the face of the tremendous challenge of fostering knowledge sharing within and across companies we also need to highlight the concept that precedes the web and online communities, but that is also greatly benefiting from these technologies: Communities of Practice (CoP)s which was originally coined by the organizational theorist, Etienne Wenger. Communities of Practice (CoPs) consist of people who are informally, as well as contextually, bound by a shared interest in learning and applying a common practice. CoP members may be part of the same department, belong to different areas of a company or even to different companies and institutions. Members may create semi-open "clubs," where membership is based on relations of high trust and on the contribution that each person brings to the community or network (Wenger & Snyder, 2000). The term CoP refers to the ways in which people naturally work together and/or associate with others. It acknowledges and celebrates the power of informal communities of peers, their creativity and resourcefulness in solving problems, and their ability to invent better, easier ways to meet their commitments. What holds CoP members together is a common sense of purpose, the needs of individuals to connect with others that share similar experiences or learning goals and, ultimately, each member's real need to know what the other members know" (Brown & Duguid, 1991).

Some organizations that are knowledge intensive, such as consulting companies (like McKinsey, Bain and Accenture, for example), have been fostering the development of global CoPs for a long time. Most organizations, however, have yet to pay close attention to CoPs. This is starting to change. Recently, a number of leading organizations (for example Xerox, World Bank, IBM, HP, Siemens, Shell, Texaco, etc.) have started to recognize the contribution that such networks can make towards the creation and diffusion of knowledge and have started to formally support CoPs. According to the research firm Gartner (2001), by 2004, formally supported CoPs will be prevalent in more than 50 percent of Fortune 500 enterprises.

This trend probably derives from the conclusions of Wenger & Snyder (2000), about the many benefits of CoPs. According to them, communities add value to organizations in many ways. They:
-   Help drive strategy;
-   Start new lines of business;
-   Solve problems quickly;
-   Transfer best practices;
-   Develop professional skills;
-   Help companies to recruit and retain talent.

Based on our own research and case studies, we would add the following possible types of contributions:
-   Win new businesses more quickly;
-   Better serve existing clients;
-   Develop stronger relationships with clients;
-   Facilitate integration of acquired companies and in post-merger efforts;
-   Reduce cross-functional and cross-location cultural barriers;
-   Improve organizations' social capital;
-   Reduce costs;
-   And, play a significant role in merger and acquisition activities

It has also been argued that knowledge shared within a particular CoP may not get shared beyond the members of the CoP. Dorothy Leonard Barton (1995) has researched the impact of communities on knowledge sharing and has shown how isolated communities tend to get stuck in ruts, with core competencies turning into core rigidities. Her research found that external cultural stimuli are needed to help propel a CoP's or an organization's corporate culture forward. Without these external stimuli, it is very easy for CoPs to be blinded by the boundaries of their own limited view. By linking diverse communities, with different belief systems and evaluative practices, in a cohesive meld, organizations can challenge the narrow belief systems of each individual community and ensure that knowledge is moved around.

Thus, the ability to organize, capture, and disseminate the knowledge of particular CoPs throughout an organization is at the core of successful KM efforts. Increasingly, a company's ability to survive and outperform others requires the continuous linking of distinct CoPs and the synthesis of collective and organizational knowledge. By supporting or institutionalizing strategically relevant CoPs, firms can codify chunks of the knowledge carried by employees and, more importantly, promote focused organizational learning and innovation. It is a well-known fact that meaningful connections take individuals to levels of creativity well beyond what they would reach in isolation. Learning, as John Seely Brown and Paul Duguid have emphasized, is a social act (Brown & Duguid, 2000).

4. RESEARCH RESULTS

The eleven cases analyzed are quite different: in the scope and stage of their KM initiatives and the development of online knowledge-sharing communities, the size of the organizations involved (from large multinationals to strong local players), and the particular industry represented. The major results and the various lessons (from multiple perspectives) for each detailed case study has been published in a book format in October of 2002 by Butterworth Heinemann: "Realizing the promise of corporate portals: leveraging knowledge for business success" (Terra & Gordon, 2002). Despite the differences in the cases, we strongly believe that a number of commonalities have emerged. Thus, this paper provides a summary of "lessons learned" that, we believe, apply to most organizations interested in developing online communities. Indeed, we believe that there are twelve lessons that can be applied to the development and support of most successful online communities. They are the following:

3.1 Establish a sense of identity for the community

A sense of identity can be created through the establishment of a clear purpose and specific goals and objectives for the community, as well as through the development and fostering of a sense of history for the community. Let new members know how the community got started, who was involved in the beginning, etc. It is also important to create a strong messaging and branding effort (with adequate visual cues). This plays a critical role in reminding members of their affiliation and promoting the goals and values of the community. In many cases, such as Hill & Knowlton, Bain & Company, Siemens and Texaco, there is a system and personnel in place, to capture and publicize anecdotes of good knowledge-sharing within the organization. Through regular e-mails and postings in the online communities these success stories do not go unnoticed. There is a strong belief in these organizations that these actions help foster a sense of identity, expected behaviour and increase participation. We also noticed that many organizations developed a good branding strategy for their communities. Easy to remember names with strong personalities were, therefore, often introduced ("IAN, which stands for Intellectual Asset Network" - Context Integration; "GXC" or Global Exchange Network – Bain & Company; "ELVIS" – Eli Lilly; Sharenet – Siemens; PeopleNet-Texaco; Eureka-Xerox).

3.2 Online communities need a strong communications plan

We have learned that launching online communities require important behaviour changes and dedicated champions. In various successful cases, such as Texaco, ADC, Siemens and Serpro, we saw a concerted effort of the KM teams and other champions from different areas. Indeed, our research suggests that multidisciplinary teams are extremely important for successful KM implementation. In the cases analyzed, we saw multidisciplinary teams working together not only to develop the infrastructure, but also to publicize, train and motivate people throughout the organizations. They worked with employees in general, but also with a number of early-adopters and or communities that helped disseminate concepts and remind other employees. In some of the most successful cases, the rollout and key improvements (new functionality or added content areas) were also often preceded by significant internal communication, including posters, newsletters, communication booths, local training sessions and gatherings (with the presence of senior management) and e-mail communications.

3.3 Develop the rules of engagement for the community

Moving to an online community is like moving to any new environment: people need to learn the rules of participation or the "netiquette" of the community (e.g., when and how to contribute). The leader(s) of the community should curb any activity that is against these pre-determined principles or that does not belong within the context of the community (Context Integration, for instance, has a prominent section in its knowledge portal about appropriate behavior called "Social Contract". Siemens has something very similar that it calls "Quality Guidelines" and Texaco called it PeopleNet's Statement which laid out very clearly the expected behavior from users of the system). Indeed, it is clear that many organizations will need to extend

existing traditional "team dynamics training" to include "rules for online collaboration". It is a big mistake to think that people will naturally know how to behave online.

3.4 Common language and simplicity of usage is essential for success

Investing design time on simplification for valuable knowledge sources and then to work with end users to understand further their unique personal or community requirements is a more valuable approach to execution than posting a wealth of content that no one uses. It is important to understand how employees conduct their work and when and how they look for other sources of knowledge. It is advisable to do a careful "audit" of each business process and knowledge domain before doing any development work. The end result of the audit process becomes a set of taxonomies and structures that closely fit an organization's business and users' needs. It also means less time and money spent on costly reworks. One of the important lessons at Bain was not to implement web applications just because it was easy to do so. For instance, the company could have easily added, for instance, chats, instant messaging and discussions forums in their knowledge portal. However, after careful analysis of how work is conducted and how knowledge is shared and created, the KM team decided that it was not the right time to implement these tools. Ideally, users should use a minimal number of "clicks" and strolling to find the information they need. Hyper-linking should provide different paths for users to find the same information. The graphical design and layout should be clean (not "crowded") and convey the overall tone of the company's brand-positioning or support the identity of the specific community towards whom it is geared. Regardless of the application or component being implemented, it's highly advisable to get input from users and content- creators very early on.

The development of ShareNet at Siements provides the best example of the above affirmations. In order to design a system that would work, ShareNet was developed in a very collaborative setting. A steering team was formed, with close to forty sales representatives and marketing professionals from many different countries and types of customers. This team started with what some managers at Siemens consider to be the foundation of KM: "Know your processes well". In this case, the selected team developed detailed maps of the sales processes (defined as core process) and linked each step and/or aspect of the process to specific "buckets" of knowledge. These buckets of knowledge were derived after extensive interviews with sales and marketing professionals. These professional were asked directed questions such as:
- "How does your process work?"
- "What are the important sources of knowledge that you need to do your job?"
- "Why have you been successful in your projects?"

After these interviews, the ShareNet central team was able to cluster the relevant sources of knowledge into specific "Knowledge Objects" such as "Technical Solutions", "Functional Solutions", "Customer Knowledge", etc. Once agreement was reached, the ShareNet team started to develop a series of prototypes while periodically asking future users how they would like the information and knowledge buckets to be presented.

3.5 Lead by example and make sure critical mass is developed rapidly

Frequent participation by community leaders in the activities of the community (especially if the leader is also a domain expert) will certainly prompt higher levels of participation by members of the community at large. Bain & Company's successful implementation is attributed, to a great extent, to the many hours that its most senior partners have dedicated not only to planning the project, but also to contributing with content themselves. The company also focused initially in areas of content that were strategic and where a relevant mass of expertise was available within the firm.

3.6 Quality of content is more important that quantity of content

If an online community is to focus on knowledge flows, it is very important that people trust the information that they receive; otherwise users quickly disregard the tool. One of the remarkable things about the most successful online community implementations is their stringent quality focus. In large organizations, in particular, any online collaborative tool can easily become a "dump" and quickly lose credibility if employees do not trust the information available in the system. In the cases analyzed a number of practices

and policies focused on keeping only high quality references content. A few good strategies that we uncover were the following: A validation process to let employees upload content to a wide audience was basically in place in all cases; Detailed and easy to use feedback mechanisms improves the quality of existing documents and helps to quickly exclude references that have low-value (particularly important at Bain, Siemens and Xerox). By doing this, users add value to the original documents. Sometimes they disagree with the conclusions or tips of existing documents, sometimes they add new context or simply confirm its usefulness. Anyhow, after a number of iterations, the original documents usually have their intellectual capital enhanced by the contributions of others; Finally, moderators or knowledge brokers can play an important role by constantly monitoring usage and interviewing users to find ways to improve the quality of content.

Some of the most advanced companies have realized that perfect timing adds significant value to Knowledge. In order to be successful in highly competitive environments, and also to better serve customers, employees need to be able to tap the organizational knowledge very rapidly. In some cases, it might be a matter of hours; in other circumstances, the requests may be treated as routine learning. This might be a straightforward concept, but most companies do not pay as much attention to how perfect timing improves the quality of content. Perfect timing is achieved through a combination of personalized notification, quick content management process and ability of employees to direct their requests for help according to different levels of priority (Context Integration and Siemens case, in particular, are good examples).

3.7 New members need special attention: from invitation to introduction

This involves alerting users of events, reminding them of the benefits of the community and its the rules of engagement, and inviting those that are absent to contribute if they feel their participation could elevate the level of discussions. It is particularly important to greet, coach and get new members up to speed. In the online environment it is quite easy to have newcomers to come, check in a few times, and then never show up again. At Bank of Montreal (integrated with their training initiatives) SERPRO, Hill & Knowlton, Siemens, Bain & Company and Context Integration senior management and senior management of the Knowledge Management team travelled extensively through their many different offices letting people know about the communities. At Hill & Knowlton, Bain and Context Integration every new employee goes to detailed training on how to use the KM systems and participate in online communities.

3.8 Allow both centralized and decentralized community creation

Organizations deploying online communities may take two complementary approaches to foster community creation: (i) they can provide pre-defined community environments (with targeted content, list of individuals, collaboration tools, etc) that are carefully, strategically and centrally planned or (ii) they can provide the tools that allow like-minded individuals to easily set-up their own communities. ADC, Eli Lilly and Hill & Knowlton, for instance, adopted both strategies. They created a few core communities that were strategic (based on existing core competencies and/or target industries), such as the "Health Community" in the case of Hill & Knowlton, and also implemented solutions that allow communities to be easily set-up. In the case of Hill & Knowlton, for instance, communities can be created by linking emails and messages in real-time and distributing them to folders according to users' own interests (users have the ability to direct their messages and also to pre-select topics they are interested in). At ADC, they provide "plug & use" capabilities that allow almost anyone to quickly set up communities with applications such as calendars, discussions forums, whiteboards, notification, etc. Finally at Eli Lilly a number of pre-web communities were carefully studied and supported before launching the software applications to support online communities. After the launch, however, other communities could be freely created without management direct support.

3.9 Participants need to develop an online identity

Identity is key for fostering human connections. Most companies in our studies supported some kind of online identity and reputation development. Detailed, accurate, updated and meaningful profiles of users help spark connections and create the required level trust amongst participants. Firms are clearly documenting subject matter expertise, where they were, how to reach out to them, what knowledge they knew and what

kind of particular interests they have. A number of organizations also realized that people tend to collaborate more with others if the relationships become somewhat more personal. In some cases, it may even include photos and personal information such as hobbies (this is the case, for instance, at ADC, Eli Lilly and Texaco.). Expertise maps, in many instances also included databases with lists and descriptions of the competencies of individuals both within and/or outside the organization.

3.10   Recognize levels of participation and develop a reputation system

The recognition and identification of the different levels of contribution (both quantitative and qualitative) of each individual is of particular importance to knowledge exchange communities. Providing ways to gauge individual contributions to an organization' intellectual capital pool and to its online knowledge flow is, therefore, being experimented in a number of cases. At Context Integration, some people are labeled as "gurus", at Bain & Company, documents that are highly rated by the community are displayed more prominently in search results. Both Bain & Company and Hill & Knowlton include a "best-seller" list of documents (and the name of the authors) that have been most accessed by others. In fact, at Bain, a general email message is periodically sent to all consultants highlighting the "top 20" most used documents in the portal environment. This "top 20" list serves not only to direct consultants to those documents that are most useful to their peers, but, by listing the author and office, gives additional prestige to the documents' authors. At Xerox, the company discovered that the technicians were more than happy to add tips to a database because they received credit for their contributions, which enhanced their standing among colleagues. Indeed, when management suggesting attaching financial incentives to the tips, the technicians resisted the idea. They felt this would diminish the value of their contributions.

3.11   Monitor activity and satisfaction level

Active leaders keep good statistics about the participation level of users, areas of the content that are most searched and visited, frequency of contributions. They also conduct, from time to time, offline and online surveys to understand the needs and levels of satisfaction of members. With this kind of data at hand, they can direct their actions to the root causes of occasional problems and/or diminishing participation. Close monitoring was something notes in many of the cases (e.g. ADC, Bain & Company, Context Integration, Siemens, etc). At Context Integration, for instance, IAN's moderator tracks a number of items such as number of postings, number of questions, most active categories, least active categories, most active employees and offices, etc. This tracking systems is closely monitored, well focused on strategic knowledge domains and serves as the basis for rewards and for the company to gauge activity around knowledge creating processes.

3.12   Promote special online and offline events and celebrate success!

Savvy community leaders clearly understand that in knowledge-creating or sharing communities, participation is highly dependent on voluntary participation and that members can only be inspired, not forced, to participate. Consequently, promoting events and celebrating the achievements of the community (online or offline) ignites existing members and acts as advertisements for potential participants who have not already joined the community.

At Texaco's General Engineering Department, the leaders of the "Best Practice-KM" community take this task very seriously. The community achievements (usually stories on how the sharing of best practices has saved the company millions of dollars) are easily found in the community intranet and are also heavily promoted through the company's newsletters, leaflets, internal magazines, etc.

At Siemens since the formalization of the KM corporate initiative, the company has hosted a number of KM internal events. During these events hundreds of employees from different parts of the globe meet to present their own individual initiatives and, when possible, develop coordinated global efforts. One of the key activities involved in the roll-out of ShareNet was a "bootcamp" in Munich in July/August of 1999 with the participation of about 50 ShareNet managers from 15 different countries. During this bootcamp these managers learned not only about the operational side of ShareNet, but also about the "soft side" of the KM principles that were being introduced at Siemens. Each manager was also coached on how to develop a plan

for the rollout of ShareNet in his or her office. Everyone left the bootcamp with a detailed job description, a roll-out plan and, maybe, most importantly, with a trusted network of Knowledge Evangelist (many activities were geared initially at building trust amongst this core group and team building. Since then there was also a ShareNet Manager Conference in December 2000 where all "Knowledge Evangelists" came together and enjoyed the team and trust building activities on top of lots of work.

Many communities also bring special guests from time-to-time to increase participation and attract new members. Siemens is an organization that has learned this lesson. After realizing that the "chat" functionality within its ShareNet community was hardly used, it started promoting worldwide events with senior executives and leading experts.

Finally, at Bain, every six months, a KM recognition award (an Honorary Plaque for Outstanding KM Leadership) is given to outstanding performances of one large and one small office. The recognition involves some extra money for the offices to take consultants to "fun" out of the office activities. Some local offices have also created their "own" rewards and recognition for teams and individuals.

5. CONCLUSION

The lessons presented in this paper highlight that technology plays only a secondary role in the fostering of online communities. Most of the key lessons in implementing online communities are related to issues of leadership, focus, motivation, identity, etc that require detailed attention to people's perceptions and behavior. In order to provide its members with continuous value from relevant content and the interactions with other members an online community also requires careful planning, involvement of senior management and dedicated resources to monitor performance, motivate the participants and rapidly adapt the dynamics, design and rules of the communities. Corporate sponsored online communities are a new phenomenon. The lessons presented in this paper are, therefore, exploratory in nature and need to be analyzed carefully since the understanding of the overall business and organizational impact of such initiatives is also at its very early stage.

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