

**Building Thriving Communities of Practice with Social Learning Technologies**

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## **Building Thriving Communities of Practice with Social Learning Technologies**

### **Introduction**

Water is essential for all life. Where water flows naturally, or is strategically collected and distributed, life will flourish. Water is to life as knowledge is to an organization. When knowledge flows efficiently, the organization can function in an effective way, but when knowledge is withheld or restricted, it impacts productivity and limits the success of individuals, teams, and the organization as a whole.

In many corporate environments today individual and team working processes limit interaction among community members and peripheral communities. Issues of redundancy, low visibility of the development process for projects, and inefficiencies related to non-collaborative and time-consuming design processes greatly impact the sharing of reusable knowledge. Critical knowledge used by employees to complete their work is developed and delivered as individual documents attached to emails, or posted to intranet-based document repositories in locked formats. Interactivity on the web through social learning technologies, also referred to as web 2.0 tools, can play a central role in the the development of a Community of Practice within a multi-national, highly-diversified corporation. These tools mediate interaction between individuals and teams spread across distances, providing transparency and promoting social knowledge building for increased efficiencies and reduced duplication of effort.

Communities of Practice hold the key to maintaining quality and efficiency across teams, business units, organizations, and industries. The formation and nurturing of these communities requires thoughtful planning, supportive structures and tools, and a light-handed approach to management. While not easy to accomplish, building a thriving Community of Practice is essential to competitive viability in today's fast-paced corporate environment. In effect these Communities of Practice lay the pathways for knowledge to flow efficiently throughout creating a learning organization.

## **Knowledge Building in Today's Fast-Paced Corporation**

Corporations today are moving faster and faster to get new products and services to market to remain competitive, retaining and growing market share by attracting an ever expanding customer base. A critical factor to success in this rapidly changing environment is highly efficient and effective methods of employee knowledge building and sharing to support all aspects of a new product or service. Schmidt (2005) in his study of what he terms 'Knowledge Maturing' points out that traditional methods of employee development can not keep pace with "ever accelerating product and service lifecycles," causing such issues as delays in the release of products and services, or lower quality and service (Introduction section, ¶ 1 ). It is critical that innovation and knowledge building must closely pace each other for success (Schmidt, 2005).

An understanding of what knowledge is as compared to information alone is essential for any study of knowledge creation within an organization. Dixon (2000) asserts that information is data that has been recorded, analyzed, and is accessible for use. Knowledge, on the other hand, "is defined as the meaningful link people make in their minds between information and its application in action in a specific setting" (p. 13).

As 'traditional' methods for employee knowledge building lose their value within corporations, new methods built upon more collaborative and community-centered processes are taking shape. Schmidt's (2005) "Knowledge Maturing Process" includes five phases, the emergence of ideas, community formation, formalization, ad hoc training, and courses. Within the software industry, where product release cycles are extraordinarily fast, knowledge may not mature to the point of formal courses. "It is important to note that in many cases, the knowledge does not advance to the latest phases, but rather stays at the early phases until it turns out to be obsolete" (Schmidt, 2005, 2 Knowledge maturing process section, ¶ 7). Organizations that continue to adhere to traditional knowledge maturing processes run the risk of losing a competitive advantage when knowledge building and sharing processes do not keep pace with product development and release cycles.

## **Knowledge Building As Community Process**

In order to retain competitive advantage, the need for community building, and the culture and tools necessary to support this process, has become essential for the learning and subsequent success of an organization. Communities form the basis of learning within an organization through shared experience, knowledge, and drive to a common goal. According to Riel and Polin (2004):

The community derives its cohesion from the joint construction of a culture of daily life built upon behavioral norms, routines, and rules, and from a sense of shared purpose. Community activity also precipitates shared artifacts and ideas that support group activity and individual sense-making. (p. 18)

It is through the daily effort and work toward a shared goal that common knowledge is gained by the employees in the organization. This process requires that individuals and teams take the time to stop and reflect upon the actions taken toward completion of a goal in order to learn from that experience and understand what contributed to either the success or failure of the effort (Dixon, 2000).

This model of developing common knowledge is supported by the social constructivist theory of learning, which asserts that learning is a social process, based on experience, and situated within a given context (Lave & Wenger, 1991).

Individualized methods of working that reduce visibility, or limit social knowledge building, inhibit individual and community learning and ultimately impact the organization as a whole. While community knowledge building takes place in all organizations, those that recognize the value of this process and take steps to support and develop community interactions increase their potential of remaining competitive. In order to achieve their knowledge building and sharing goals, many organizations have successfully created Communities of Practice.

According to Wenger, McDermott, and Snyder (2002), “Communities of practice are groups of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” (p. 4). Within and across an organization many such Communities of Practice (CoP) exist that, through a process Lave and Wenger (1991) term “legitimate peripheral participation,” provide a way for new members to participate with existing members within a particular context. Lave and Wenger (1991) describe a Community of Practice as fundamental to the formation of knowledge as it creates the structure through which an organization knows itself. In other words a community must exist for knowledge to begin to be shared and retained within a given context.

### **Communities of Practice: Structure, Development, and Types**

Communities of Practice are all based on three primary structural components: Domain, community, and practice. The domain refers to the area of interest for the members that they all share in common. The community is the basis of the individual connections and relationships within the group and, as with any relationship, trust and respect are key to successful interactions. Finally, the practice relates to the shared artifacts of the community, such as documents, stories, or tools. Each of these components must be nurtured for the ongoing success of the Community of Practice (Wenger et al., 2002).

Wenger et al. (2002) identify five stages of community development:

1. Potential: Loose connections between individuals and groups holding the potential for organizational value as a community.
2. Coalescing: Coming together as a community.
3. Maturing: Growing in membership and depth of knowledge.
4. Stewardship: Active, conscious development of shared knowledge.
5. Transformation: Ending, changing focus, or continuing on in current form.

Many Communities of Practice exist within organizations but may not be evident. Wenger et al. (2002) identified five relationships that communities may have within formal organizations: Unrecognized, which are unknown to the organization and possible to members as well; Bootlegged, which are comprised of and only known to a select group; Legitimized, where the organization has recognized the value of the community; Supported, where the organization provides resources to the community; and, Institutionalized, which are a formal functioning part of the organization.

According to a 2000 APQC study of CoPs, there are four types of communities that exist within business organizations. These include, helping communities where participants share knowledge to help each other in their roles; knowledge-stewarding communities that manage a body of knowledge for use by others in the community; best-practice communities that create and share information related to best-practices and guidelines for use by members; and, innovation communities that focus on the creation of new ideas. These communities range from informal to highly structured organizations that form based on the needs of the organization. The benefits of CoPs for an organization can be both strategic and quantitative, including areas such as innovation, standardization, retention of intellectual capital, shortened decision making time, cost savings, and revenue generation (Blashka, 2006).

### **Community Knowledge Building Mediated By Technology**

In addition to the necessary structural components, a Community of Practice also relies upon tools to foster and support community interaction and value creation. Schmidt (2005) asserts:

With the emergence of communities, an important step in knowledge maturing takes place: a common terminology is developed. Typical tools used in this phase are collaboration platforms and wikis, enabling communities to easily exchange their views and work together on common artefacts. This working together on a common subject area is the primary form of learning. (2 Knowledge maturing process section, ¶ 3)

With this assertion, Schmidt (2005) brings to light essential tools to the effective functioning of communities within corporations, namely web 2.0 resources such as wikis, blogs, sharepoints, discussion forums, online databases, and any number of existing and newly emerging web-based tools. A distinguishing factor in web 2.0 tools is the high accessibility by which they are characterized, allowing those traditionally considered consumers of web-based content to now rapidly produce and widely distribute their own content. Web 2.0 tools capture of the spirit of the internet as imagined by pioneer Tim Berners-Lee who first envisioned the web as a read/write media (Tredinnick, 2006). Web 2.0 tools and resources are also described as social learning technologies within the context of this report.

### **The Case For Change: Knowledge Building Enabled by Web 2.0**

The traditional approaches to designing learning materials suited the needs of the business and product life cycles of the past very well. However, within recent years the speed of development and desire to rapidly get new products to market has increased the occurrence of situations whereby product support personnel have not had appropriate time to fully engage with and learn the new technologies themselves. The shortened timeline creates a challenge for learning and development teams to provide quality learning materials in a short time using 'traditional' methods of design and development. In order to stay competitive, Schmidt (2005) claims it is essential that all aspects of the business are able to meet the demands of rapid product life cycles. Adding to the urgency for change is the emergence of a new category of products, dubbed "Software as a Service" or SaaS. These products are characterized by rapid development and release cycles as compared to traditional desktop software products. This increased speed of release and update demands that employees have learning materials on a just-in-time basis and with very short notice to the learning and development team to create the necessary learning materials.

Over time, multiple solutions and tools have been introduced to attempt to overcome the traditional, often cumbersome and inefficient design methods with mixed results. Most tools, such as online databases, tracking changes in Microsoft Word documents, and using Adobe PDFs with notations enabled, fall victim to pitfalls such as version control, restrictive development processes, and organization, storage, and retrieval challenges. Drawbacks to this model are many, including individualized working processes, multiple tools and process steps, and 'locking' of information within the file format. Updates and changes to learning materials are cumbersome and difficult to track and involve processes that stifle both innovation and efficiency. Bernoff (2008) described the problem in this way:

You e-mail me the latest proposal for my comments. I comment on it and send it back to you and the other people on the list. But somebody else had a comment, too, so I'm already working on an obsolete version. Maybe next time I'll wait until the end, so everybody else can get their comments in and I can go last. Except if we all do that, nothing gets done. (p. 30)

### **Barriers to Collaboration**

Even when the desire for collaboration exists within a Community of Practice, traditional design and communication methods limit visibility into the details of the specific project and ultimately undermine efficiency. At times, this limited view is exacerbated by individuals who desire to only share complete, or nearly complete, work even during the development phase of a project. With the rapid nature of business, these tendencies lead to bottlenecks and process inefficiencies that lead to delays and missed delivery dates. Bernoff (2008) provides one possible solution to these challenges that was implemented recently by a particular software development company stating, "They realized that the problem was that everybody was working on the same stuff, but that stuff was scattered and wasn't easy to find. So they started a wiki" (p. 30).

### **Social Learning Technologies**

Social Learning Technologies, or web 2.0 tools such as wikis, are being increasingly leveraged by corporations as collaborative platforms to increase efficiency, partner across teams, and support rapidly changing business demands. Tapscott and Williams (2006) share this view:

Just as the new Web is revolutionizing media, culture, and the economy, it is reshaping organizations and workplaces in a profound way. Peer production and co-creation are not just happening in online communities and networks like MySpace, Linux, and Wikipedia. Increasingly employees are using blogs, wikis, and other new tools to collaborate and form ad hoc communities across departmental and organizational boundaries. (p. 240)

Wiki use for increased collaboration within corporate settings dates back to the WikiWikiWeb, which "...was developed in 1994 by Ward Cunningham in order to make the exchange of ideas between programmers easier" ("WikiWikiWeb," 2008, ¶ 1). Hasan and Pfaff (2006) share reports of companies like IBM, the Disney Corporation, and British Telecommunications using wikis as tools to collaboratively build and share knowledge.

A key to wikis and other social learning technologies is their ability to enable distributed cognition processes by mediating interactions between individuals across time and space.

Smith (1999) reinforces this idea, “People think in relationship with others and use various tools. Different cognitions will emerge in different situations” (Situated learning section, ¶ 2). This collaborative ability inherent in these systems supports collective thinking processes through which shared knowledge is built.

### **Motivation to Participate: Risks and Rewards**

However, simply launching a wiki, or any tool in and of itself, will not immediately solve important business needs related to knowledge sharing and create a Community of Practice. Nielsen (2002) as cited by Buffa (2006) noted that “If a company’s organization is bad, if there is too much social friction, employees will not share knowledge and the solution to the working better problem can not be improved or solved by a magic tool” (2.2 Intranet: the employee’s point of view, ¶ 2)!

This being said, wikis and other Information and Communication Technology, referred to as ICT, have been shown to improve access to and sharing of information among “knowledge workers” by cutting through barriers of time and distance (Hendriks, 1999). Breaking down these barriers becomes a part of the necessary cultural transformation that must also accompany the introduction of social knowledge building tools to ensure adoption and long-term sustainability within a Community of Practice.

The motivation to participate in knowledge building within a virtual community is essential for success of the effort (Ardichvili, Page, & Wentling, 2003). Motivation can be seen in relation to the perceived or actual risks and benefits associated with participation. The risks and benefits associated with the use of wikis for knowledge building and sharing within a corporate setting can be analyzed from the perspective of both the corporation and individuals involved in the process.

From an individual perspective, risks may include loss of time invested contributing content, loss of ownership of work, loss of competitive advantage, and risks to reputation, among others. From a benefit standpoint, a recent study has shown that wiki users identified three primary benefits to participation in corporate wikis: making work easier, helping the organization to improve, and enhanced reputation (*Corporate wiki users: Results of a survey*, 2006, August 21-23). Of these three benefits, ease of work and organizational improvements were seen as the most notable reasons for participation in a wiki within a corporate setting, with improved reputation as a lesser factor (Majchrzak, Wagner, & Yates, 2005).

Dixon (2000) indicates that for knowledge sharing to be successful there must exist a tie to personal benefit, particularly of the type that you get from helping someone directly:

Little personal benefit comes from contributing to a database that is accessed by others with whom I have no connection and moreover from whom I am unlikely to hear. A database is like a black hole. It gives nothing back—no thank you, no smile, no sigh of relief, no enthusiasm on the other end of the line. (p. 8)

For the corporation, a move to include wikis as a knowledge-sharing collaboration tool can bring a risk in terms of time, effort, and quality of information. As wikis are used more widely within



corporations for knowledge workers to build and share knowledge there is a risk in inaccurate or misleading information being created and disseminated across the organization. (Tredinnick, 2006) As the shared knowledge of an organization is often a key factor to differentiation and competitive market position the risk to the corporation can be significant.

As with any business decision, considerations of the return on the investment in terms of limited resources must always be made when knowledge building and sharing processes are selected. Bukowitz and Williams (2000) have identified two conditions of knowledge sharing for an organization that indicate whether the investment in time and money necessary to create and support knowledge sharing tools and processes is worthwhile. One condition is that the process of employees engaging in building and sharing knowledge must lead to innovation. The other condition requires that any created knowledge be shared openly throughout the organization such that new information may be culled from the source and used profitably by the company. Only one of the conditions is necessary to ensure that the investment is of value.

Along with the risks of sunk costs, there are also enormous risks from a cultural perspective for a corporation as participation may simply not happen. Applying technology alone, in the shape of wikis and other social knowledge building tools, will not change an organization's culture. Tredinnick (2006) suggests that for tools such as wikis to thrive within a corporation, employees must believe that they will not be putting themselves at risk personally by contributing. For the use of web 2.0 tools to be successful within a corporation, the culture should be such that contributing to shared knowledge tools is not seen as unique, but rather the standard operating procedure for all.

In spite of these risks, the growing body of literature indicates that wikis provide an effective way for an organization to increase collaboration, extend the usability of knowledge, and improve processes (Majchrzak et al., 2005). In the book, *Wikinomics*, Ross Mayfield, CEO and founder of Socialtext, a software company that provides wikis and other social technologies to corporations, shares his opinion of why wikis work saying, "[Wikis and other collaborative tools] have very different properties, because they ask users to share control, and that actually fosters trust. The more participation that you have... the greater quality you'll have in a project, in the same way that open source works" (Tapscott & Williams, 2006, p. 254).

While wikis are being identified by researchers as key to successful knowledge sharing within corporations, there are alternatives, such as sharepoints, blogs, forums, and other tools, such as proprietary knowledge bases. Another alternative to the use of any one tool on its own is the concept of combining multiple, complementary collaboration tools to increase effectiveness. This allows for more than one collaboration style to be leveraged to meet varied business needs. Bringing together multiple tools in this way allows participants to engage in the method that best suits their preferences and styles (Drakos, 2006).

### **Summary of Findings**

The use of social learning technologies has been shown to greatly enhance the effectiveness and efficiency of collaboration between work groups. These tools help remove or reduce barriers to knowledge sharing and increase access to and re-usability of information within and throughout

corporate organizations. When balanced with the cultivation of social and community-oriented activities, the thoughtful introduction of a wiki, or other social knowledge building and sharing technology, is a way to close gaps in space and time between knowledge sharers within a corporation, both aiding in the creation of and sustaining the ongoing growth of a Community of Practice.

### **Knowledge Building in my Workplace**

My field of action is a multi-national software corporation with approximately 8000 employees. My role is that of an instructional designer on a learning and development team that supports multiple business units within the corporation. In this role I have noted a lack of transparent, social, collaborative methods to build and share knowledge in the process of developing employee learning curricula.

While knowledge building and sharing processes overlap broad organizational boundaries and involve dispersed teams, my research is focused on my direct team which consists of 14 individuals including myself. The following demographics describe this team: Equally comprised of men and women. Age range between 30 and 65, with a median age of roughly 45 years. The team is comprised of nine instructional designers, two media specialists, one content developer, an administrative support professional, and a manager. Within the instructional design role there are individuals that also specialize in particular areas, such as reporting, or facilitation.

The members of my team interact with one another in the creation of employee learning and development materials in support of business goals. This constitutes formal and informal project assignments that may involve anywhere from one to five or more team members. Knowledge building and sharing in support of meeting project requirements currently involves a variety of disparate tools and methods. The primary design tool for Instructor-led Training (ILT) materials is Microsoft Word documents that are created by an individual, shared via email to team members, and/or Subject-Matter Experts (SMEs) for their editing, then returned to the original designer for final revisions and formatting. From there the documents are distilled into Portable Document Format (PDF) files, which are subsequently loaded into an online database. These PDFs are then accessed by anyone needing to apply the content. Design processes for web-based learning are similar, with multiple emails for feedback and input being exchanged between the designer and SMEs prior to moving the content to a web-based content development tool.

These silo-like approaches to building knowledge content create bottlenecks and inefficiencies while designers wait for responses and attempt to piece together feedback provided by various reviewers who are not aware of the feedback of each other. This introduces redundancy and unnecessary work on the part of the designer and reviewers. Other issues related to this approach include limited access to source material and questions of content integrity based on multiple existing versions. Moving to community development processes supported by social learning technologies will assist in addressing many of the issues.

## **Research Question**

The over-arching action research question which I am pursuing is:

If I encourage collaboration through the use of social learning technologies, will it contribute to the development of a thriving, sustainable Community of Practice?

## **Research Method**

The method of research applied to study this question was Action Research. Using this method, the researcher seeks to improve his/her own practices and, in the process, promote a positive change within his/her field of action. This process of improvement of personal and community practice is in service to the goal of better aligning the values of the field of action to those of the researcher. In this way Action Research, unlike other forms of research, is a participative process that results in both a change within the individual doing the research and a change within the field of action (Riel, 2007).

The process of Action Research follows action-reflection cycles in which the researcher studies a problem in his/her context and plans an action to address the problem. The researcher takes the action, collects evidence of the action outcomes, and then analyzes and reflects on the evidence in order to gain a deep understanding of the impact of the action. Based on what is learned through this process a subsequent action is selected and applied to continue to address the problem. This process is iterative in nature as the researcher may apply any number of cycles to the problem. Reflection is at the core of Action Research and is the process by which the researcher gains a deeper understanding of how his/her actions are seen, and reacted to, by others. By reflecting on evidence of the action from various perspectives, the researcher begins to develop the ability to predict the outcomes of future actions and understand the interaction of forces within his/her field (Riel, 2007).

To support the reflection process within my Action Research Project, I maintained research notes that were updated twice a week in an electronic log or “blog.” These notes included detailed descriptions of observable evidence within my field of action, a reflection on the events, and a subsequent conceptualization of the reflection to further gain perspective and a deeper understanding of the action outcomes.

Three action-reflection cycles were completed during the course of my Action Research Project:

- cycle one involved the introduction and advocacy of the use of a wiki as a tool to mediate social knowledge building for employee learning content;
- cycle two focused on team dialogue and learning regarding the concept of a Community of Practice, and the use of a specific social learning technology, the SharePoint; and,
- cycle three included individual interviews with each member of my team to understand current and future planned use of the SharePoint, gauge comfort level and understanding of the concept of Communities of Practice, and investigate future measures of success for both the SharePoint and the forming community.

## **Cycle One: Knowledge Building with a Wiki**

### **Introduction**

The primary action research question which I am pursuing is focused on my role in fostering the development of a sustainable Community of Practice within my work team. This focus is broad and includes many possible approaches that might be tied to different outcomes and variables. These include a variety of tools and processes and concepts related to building a Community of Practice and what that means within my organizational context. In order to begin my research I chose a specific tool and process through which my initial action could be taken: The use of a wiki to build and share learning content.

The research question used for the initial cycle of my project was:

If I design and implement the use of a wiki to develop and maintain employee learning materials, will it result in reduced development time, less redundancy, increased transparency, and higher quality of materials?

This question is broad and includes many areas of evaluation. I will be focusing primarily on the reduction of redundant work processes and increase of transparency to the design processes. Measuring development time in a meaningful way given the uniqueness of each project is challenging as is determining the actual "quality" of the materials. In these cases I will be discussing any and all qualitative indicators within the course of my research into my action that may point to improvements in these areas.

### **Process**

To better align the values of my team with my values I took the following actions: 1) I discussed using wikis to collaboratively build learning content with my manager who was supportive and asked me to bring the concept to my team right away; 2) I brought the plan of using a wiki to my team during a team meeting where we discussed the value of this approach. A list of pros and cons was created and the decision of the team was to pilot this method with some upcoming learning events. While the entire team was not completely convinced, most were in support of the pilot and after weighing the pros and cons, the decision of the team was to proceed.

The primary reasons that I saw a wiki as a solution to the problems I noted were due to the availability of the technology, transparency of the tool including history, and the relative ease of helping others begin to learn to use the tool based on the simplicity of editing.

### **Action Outcomes**

The first two months following the meeting about piloting the use of wikis for developing learning content were the most active in terms of new wiki content creation. This was partly due to the natural business cycle which includes a large number of learning events from September through December and partly due to the newness of the approach. During this time we focused on use of Wikis to collaboratively build and share content which has led to the use of this type of content being widely accepted by the a large percentage of my direct team as well as leadership within the business. Rather than simply piloting the process with one learning event, a large

amount of learning content continued to be actively built within the wiki with Subject Matter Experts (SMEs) and leaders from outside my team also joining in to add and update content. In the past this had been done through various methods, including meetings, emails, and Microsoft Word documents with track changes enabled.

Wiki participation clearly increased through the action of introducing them as a tool for collaboratively building employee learning materials and there was a significant amount of action mediated between the members of my team who engaged in the use of this tool. Even with this success there is more involved in developing a Community of Practice (CoP) than common use of a knowledge sharing tool. One property of a CoP is that participation is not normally driven by institutional requirement but rather by some degree of shared, voluntary interest. Wiki participation was voluntary and several members of my team chose not to use this tool for any aspect of their job. Some of the resistance to participation in using the wiki was seen to be due to a reliance on other processes and tools and some resistance might be related to cultural norms of privacy leading to closed processes. This norm of privacy may be rooted in fears of job security based on the use of tools and processes that are limited in terms of access and skill level for most members of the team.

The analysis of forces for and against change in my work context, that was completed during the study and plan phase of my initial action-reflection cycle, has proven accurate as the individuals that were most initially resistant to the concept of wiki use within our team have continued to remain resistant and have not actively engaged in the use of the tool.

My action yielded three main reactions among my co-workers. 1) There were those that quickly embraced the new collaborative processes and began to actively use and promote them without additional input; 2) There were others open to the concept but for various reasons did not actively engage in the use of social knowledge building processes supported by wikis; 3) Finally, there was a small group of people who resisted the move to using new tools to mediate connections between people within our team and across our organization. I believe the latter group formed out of fear; fear of new tools and processes which may seem odd or difficult to master or fear of the loss of perceived job-security based on methods of practicing based upon highly specialized knowledge. These reactions did not equate directly to groupings on my team in all instances. In the case of those that did embrace the use of the wiki there was a connection formed as they were also primarily working together collaboratively on projects. Team members that were open but not actively engaged, and those that resisted the new process did not form a constituency and were seen as individuals in their response to the action.

While those resistant to the change were vocal, they constituted on a small percentage of the team and my main interest was in the second group identified above - those open to the new approach but who have not yet gained the self-momentum necessary to identify them as full members of a Community of Practice within my team. While evidence of what Lave and Wenger (1991) term "legitimate peripheral participation" is clear, ongoing participation within this group is primarily based on outside influence rather than internal motivation to pursue social knowledge building processes and tools for most individuals on my team. The results of a survey taken of my team regarding wikis and collaboration were interesting as most indicated that

intrinsic motivation was most important to them in participating, which would lead me to believe they do not yet see how they can "help the 'bigger team' win" by using a wiki or similar tool.

Overall I have seen much progress in the results of my action both internal to myself and externally in my team and outward into my organization. I still have a great deal of work to do to further understand the full impact of the change within my team and organization. However, one thing is very clear, the use of wikis for fast, collaborative knowledge-building is more evident now than it ever was in the past. A main challenge is in letting go of previously held methods and reaching out to the new. Adoption of a new way of working is difficult as there is a period of time when the new ways and old ways overlap and it can appear to be more difficult. This has been true in my environment as some continue to hold onto methods ingrained in the culture over many years, including large amounts of email communication and the use of relatively static media, such as Flash-based training modules, PDFs, PowerPoint and Word documents.

While any change can be difficult it is particularly critical that my team and organization overall be adept at managing and embracing change. I often hear leadership speak of the ability to lead change as essential to the future of our company and I believe this is becoming more true every day. With the ever increasing speed by which technology is advancing, our own products and services are being designed, developed, and delivered at such a rate that all supporting functions must learn to work in new ways to keep up. Whether a wiki is the answer in the long run is not the issue, but being technologically literate and able to quickly learn and apply new tools will be necessary for any knowledge workers within my organization.

### **Evidence Collected**

The evidence that I was able to collect during the first cycle of my Action Research Project was in the form of discussions with team members, communication in emails, high-level participation results from the wiki, and qualitative and quantitative survey results. The following is a break down of my evidence by type:

### **Team Discussion and Recognition**

Much of my evidence was collected through discussions with members of my team and teams that we support in our processes. This evidence was collected within regular reflection blog entries in order to capture how it affected both myself and those with whom I interact. It was through this process that I experienced some of the most observable changes both in my own thinking and in the thinking of others within my team. Over the course of my initial action there were several interactions that indicated a growing acceptance of wikis. During a meeting with leadership from our outsource partners at the end of September one of them said, "The wiki is the key," when referring to the learning wiki that we created for a recent training event at work. At that time one of my colleagues who had assisted in creating the learning wiki also indicated approval of the effort. During the monthly staff meeting in September I was acknowledged for my work in introducing Wikis into my team's development process. During the staff meeting the same colleague also recognized another team member for their efforts in developing the wiki. In October I was again recognized by a different team member for collaborating with them in building content on the learning wiki. Both of the public recognitions I received included references to the speed (efficiency) with which the content was developed using the wiki.

## Email Correspondence

Email conversations provided a way to capture direct input and feedback on the use of Wikis in this new way for my team. From September through December 2008 I received a number of emails from across our organization that referenced the use of the new learning content wiki. The reasons for these emails included: awareness of new content, requests for updating or adding content, sharing of materials with other teams, requests for assistance with wiki content, or the email may simply have included a link to an existing wiki page for reference. There were a small subset of the emails that were directed specifically to the work that I had done with Wikis. For example, on September 9, 2008 a colleague thanked me for my efforts to move our team to the use of Wikis. There are also five specific occasions where I was referred to as an expert in wiki use and pointed out as a source of knowledge.

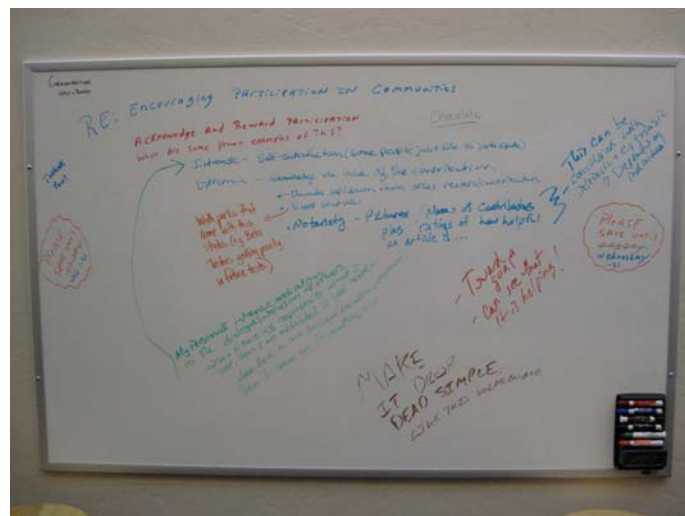
## Observable Behavior

Much of the evidence that I collected was through observations of others within my work place and was documented in my Action Research Blog. The following narrative includes examples of these noted observations:

When I began my Cycle One in August, 2008 I participated in a team meeting where I suggested the use of Wikis to build and host learning content. The team took some time to weigh the various benefits and risks of this option and decided to move forward and pilot this method with an upcoming project. A few months later, in October, I was using the wiki to take notes during a meeting and one of my team members attending the meeting stopped the meeting to focus attention on how effective this process was and pointed to it as one of the unanticipated benefits of having the wiki available. Later that same day, I overheard another colleague discussing how a wiki might be used to manage a learner Q & A process as it could easily be updated and shared with the team.

Another observed behavior occurred when a colleague used a shared dry-erase board in a community hallway at work to capture input on "Encouraging participation in communities." The image below shows the board and the free-form nature of the input. This board was posted for about one week in January of 2008. See Image 1.

Image 1:



## Wiki Participation

While detailed wiki usage data is not readily available over the entire time of my initial cycle, Table 1 includes data from the learning content wiki which was created at the start of my cycle and provides a look into the amount of activity that has taken place and the participation from my team in this process. This new wiki was created for my team on August 27, 2008 with a snapshot of wiki usage taken on February 15, 2009.

Table 1:

Type of Usage	Count
Team Members Who Have Logged Into the Wiki	9 out of 13*
Total Unique Wiki Users	98*
Total Page Views	98803
Total Page Edits	2374

\*Excluding myself

Note: Viewing of wiki content may be done without logging into the site, logging in is required in order to edit or add content.

## Survey Results

A survey was created and sent to my team to collect both quantitative and qualitative data related to both the use of Wikis as well as gain an understanding of current sentiments regarding collaboration. Participation in the survey was strong with 97 individuals starting the survey and 90 completing it for a completion percentage of 92.8%. This group represented a larger audience than was initially planned in my survey request, however the data is easily filtered by participant job role allowing discrete analysis to be done for a given group. The primary groups that were targeted through this survey were learning and development teams and business unit leadership. Of that group there were 26 respondents to the survey, 8 of which self-identified as members of my direct team.

While the larger data set has provided some directional input for subsequent cycles, the primary group that is the focus of my action is my direct team. This group is made up of 13 individuals beside myself, one of whom is my manager and one of whom is the administrative support individual for our team. Of the 13, eight responded to my survey, for a completion percentage for this population of 61.54%.

This group of eight individuals included seven Instructional Designers and one Facilitator/Trainer. The age range of participants in my study group was between 30 and 69 years of age with the majority (6 of 8) identifying themselves as being between the ages of 30 and 49. There were slightly more male respondents than female (62.5% to 37.5%).

A cross-tab was created based on respondent's positive or negative response to a question about adding to or changing the wiki. While it was no surprise that individuals that had not added to or edited wiki content were not as confident in their ability to do so, what was interesting to note were the collaboration responses. Those who had not engaged in adding to or editing wiki



content also indicated a slightly lower levels of agreement regarding collaboration processes and tools currently available and in use by the team. Also, these individuals provided far less responses to open-responses questions on the survey itself. The detailed cross-tab data, as well as a note explaining a data correction issue, are available for review on my Action Research Website: <http://www.danieljwood.com/action-research/cycle-one>

One of the areas of response that stood out on the survey was the question, "Please indicate which one of the following items would be the most important to you as a motivation to sharing your knowledge with others using a tool such as a wiki:" 75% of those responding indicated that their own satisfaction in contributing to the success of the "bigger team" would be enough to motivate them to participate. The intrinsic motivation is seen as the strongest motivator to participation, which corresponded with what I found in the literature on the topic of individual benefits seen as motivators to participation that indicated "...the benefits are primarily organizational and work-related" (Majchrzak et al., 2005, p. 101).

### **Cycle One Reflection**

My interactions with my team through the first cycle of my ARP has helped me to understand more about the motivating forces behind most resisters to the wiki and it has allowed me to find ways to align with them and help introduce them to using wikis within their current context. This is an ongoing process and will take longer with some, and may not happen for everyone. As a high percentage of my team indicated on the survey that they are motivated by helping the "bigger team" there appears to be a connection between seeing the use of the wiki as a pathway to that goal. My belief is that until someone personally has a chance to build something they see as useful, on the wiki, they will not see the value of this tool.

The reasons for resisting the use of the tool could be many. For some it may be a challenge in learning the new tools, for others it may be a feeling that there is not enough time to use the tools as they are seen as additional work rather than a way to work more efficiently. There are some on the team that may be resistant just for the sake of standing their ground with their current methods. This could be about pride, a sense of ownership, fear of new things, fear of looking bad if they are not good at the new tools, or just a true disinterest in them. Each of these relates to the type of culture that exists within my team and the greater organization and whether the emphasis is placed on individual success or recognition of collaboration and shared knowledge building over silo-like approaches to working.

### **The Changes Within**

The Action-Reflection process of my Action Research Project has yielded noticeable changes in me over the past several months. In the past I saw myself reacting more aggressively to perceived or real resistance of others to my ideas and found myself forming opinions about what I thought was motivating this action without seeking deeper understanding. During the course of this initial cycle I began to move to a place of curiosity about reactions to my actions and to seek further evidence and clarity so that I could try a new approach in an effort to see results that were more in line with my values. In the future I believe I will continue this approach of curiosity and work to gain understanding of why a particular approach did or did not have the desired affect in my context.

Through the process of deep reflection I have gained a clearer understanding of the motivation behind my own actions and the internal reasons for the way I respond to the actions of others. It has been enlightening to begin to recognize the patterns of behavior that I have developed through the years, and how my own perception can be a stumbling block to progress. I am learning that by using reflective processes I can approach what I would previously have considered challenging situations and not be triggered, but rather come with a sense of curiosity and a desire to learn.

I believe others are seeing me in a different light as well, based on this change, as I have responded positively to situations that had been points of frustration for me in the past. A few colleagues have remarked about the more positive outlook I have taken to negativity, or even the direct challenge of some of my efforts. Based on input from others, my colleagues seem to normally view me as someone who is easy going and positive, although they have also seen what can be trigger points for me. I desire to continue to form my professional identity around a thoughtful demeanor and remain open even in light of direct challenge. Reflective practices tied to my actions are helping me in this process.

My thinking has been evolving over the course of my Action Research Project as I am growing in my appreciation for and desire to encourage social constructivism within my work place from a different perspective. In the beginning of my project my action was about trying something new that I felt would have a positive impact. After working on my project for the past several months and engaging closely with my team in the process I find my actions coming from a much deeper alignment with my personal values, and that even my values are becoming clearer. When I work with members of my team now I have a desire to understand what would be beneficial to them in using social knowledge building tools.

I value my relationships with those I work with and find that the building of a Community of Practice is largely about the way others are included into the community. As we read in Smith (1998) learning is about being a part of the club. The new way in which I approach my thought processes around interacting within my team is oriented toward helping others become a part of the club of social knowledge building tools. Through my research about my topic and within my organization I am seeing myself develop a healthier view of my organization and the potential for development and improvement. Working through the steps of the project and understanding from the research what types of obstacles may exist helps to validate my findings and allows for a realistic approach that helps reduce feelings of disappointment if something does not go as intended. I see myself becoming a much more positive person, both in terms of internal thought processes as well as the outward expression of my thinking.

## **Cycle Two: Adding New Social Knowledge Building Tools**

### **Introduction**

Toward the end of my first Action Research Project cycle my team gained access to a new collaborative web 2.0 technology in the form of Microsoft SharePoint 2007. After reflecting on my initial action and the impact it had, both within my team and to my personal growth, and considering the tool changes that took place within the context of my work I selected the following as the research question for my second cycle:

If I provide learning and support to my team about communities and the use of a SharePoint, will it increase the participation in the use of the SharePoint as a tool to mediate social knowledge construction between team members and with members of the larger organizational community?

### **Changes in Action Research Project Context**

While the primary context of my Action Research Project has not changed since my initial cycle, the addition of access to Microsoft SharePoint 2007 has changed the context to a certain extent. While my team retained the existing MediaWiki, the availability of this new tool created an opportunity for enhanced interaction as it supports additional functions beyond traditional wiki pages including discussion forums, web-part pages, document storage and management, workflow tools and process, and an improved user interface with more access to familiar editing tools.

Another shift in my context will be the inclusion of some discussion of how my action is rippling out into the larger context of my organization, beyond my initial team, in a way that seems to be creating a positive pull for members of my team. While my primary goal was to influence the members of my direct team to utilize web 2.0 collaborative tools to better collaborate with each other, there is the link to the broader community to consider. As the Community of Practice is intended to expand beyond my initial team it is essential to begin looking at how this part of the process is also developing and where the connections are being formed.

### **Action Outcomes: Implementing Sharing Tools within the Community**

The action I sought to study for my second cycle was to provide a learning event for my team that helped define the context within which the SharePoint might be applied. To support this, the learning event also included a discussion of the broader concept of Communities and then focused on the basics of how to use the SharePoint. The goal was to increase interest in, and use of this tool. Prior to hosting the event, a 20-minute discussion was held during one of our team meetings where my team was asked to brainstorm what they would like to learn about the communities with which we engage and also what they would like to learn about using the SharePoint. Participation in this discussion was good and yielded a list of items to consider including in the learning session.

A primary reason for choosing to host a learning session for my second cycle is based on my belief, through reflection on my previous action, that there was not a solid understanding within my team of the concept of Communities, particularly Communities of Practice, and that the newness of the SharePoint tool was restricting members of my team from engaging in its use.

Smith's (1998) work supports my belief that understanding is essential to help with the learning process, "The official theory of learning says that we have to learn something in order to understand it. Once again, this is totally contrary to fact. We have to understand something in order to learn it" (p. 35). As this quote indicates, when something is unknown it is difficult to learn. For many members of my team the SharePoint technology was largely unknown, or not well understood, and by holding the session they gained a better understanding of what the tool can do, which will help them to begin to learn it as well. The same is true of the exposure to concepts related to communities.

Along with the concept that learning requires an understanding of the context and tools for my team, I also wanted to build an ongoing dialogue about communities and tools that can be used as a way to mediate interaction between individuals within communities. In the past I had seen a great deal of discussion and debate take place over choice of tool and processes to be used by my team. My desire was to work toward a shared understanding, rather than host an event focused on one concept winning out over another. Dixon (1998) identified talking as an essential piece of the development process for both individuals and organizations stating, "I believe that both individual and organizational development are dependent upon learning and that learning is dependent upon talk; thus, talk leads to learning, which leads to development" (p. 10).

Just prior to hosting the learning session, I held a meeting with the three individuals that I had asked to assist in leading portions of the learning event. These individuals included two that had already been engaged in using the wiki, and to some extent the SharePoint, and were enthusiastic about the new collaborative processes. The third individual was somewhat resistant to the new tools and brought a great perspective to the table in terms of how to evaluate the value of the tools and what the reasons were to move in any particular direction, particularly in tool selection. Working together we created the outline for a two-hour learning event about communities and how to use the SharePoint based on the input from my team in what they are interested in learning about these two topics. My role was that of a host for the event, coordinating the scheduling and assisting in planning the structure. One of my colleagues led a dialogue on communities while the other two led a practical learning session on use of the SharePoint. Participants were encouraged to come to the session with an idea of a project that they felt might benefit from using the SharePoint and also bring their laptops so they may experience how to use the SharePoint first hand and immediately apply the learning. The learning event was held on March 19, 2009 with eight of 13 team members in attendance.

### **Assumptions**

I went into this cycle with the following assumptions: My belief is that by providing the context for collaboration based on a shared understanding of communities and by helping my team learn to use the SharePoint there will be an initial increase in using the SharePoint as a method to socially construct knowledge using outside resources in service to creating learning experiences and materials for employees. Furthermore, I believe that as individuals begin to gain confidence in the use of the SharePoint they will look for additional ways to extend the capability of this tool and subsequently search for more and better tools to accomplish their goals. In this process the understanding and formation of a loose Community of Practice based on use of web 2.0 tools for social constructivist means will begin to show. Challenges will continue to persist by way of

forces reluctant to change for various reasons, however the majority of individuals will grow in their literacy of these tools and processes.

Based on the initial evidence collected in the week since the learning event I have already begun to see a change in my team, particularly for some individuals that had previously not interacted to a large extent in the wiki. This evidence and the observed changes will be discussed in the following section of this report.

### **Evidence Collected**

The evidence that I was able to collect for the second cycle of my Action Research Project was in the form of a pre- and post-learning session survey, SharePoint usage metrics, discussions with team members, communication in emails, and other observational data. The following is a break down of my evidence by type:

#### **Pre and Post-Learning Session Survey Results**

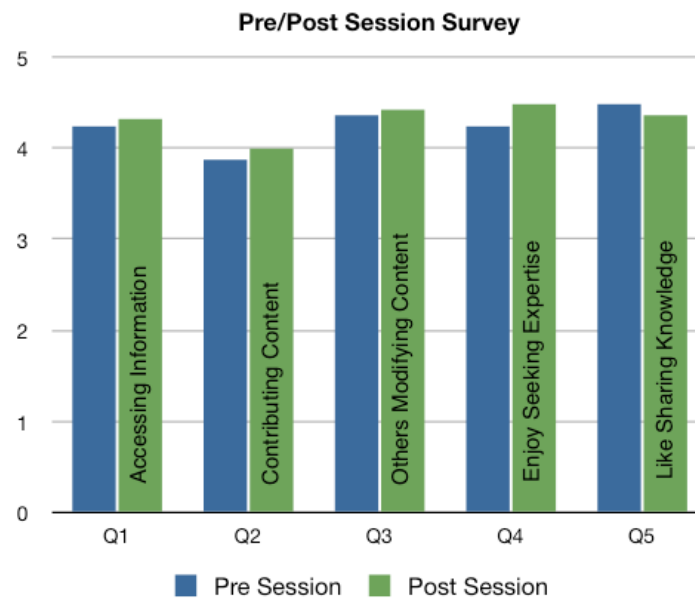
A brief pre and post-session survey was given to those in attendance. This was administered via paper for the six individuals physically in the room and through an online survey tool for the two individuals that attended via teleconference. The choice of survey structure and method of execution was intended to allow for an understanding of current sentiments regarding comfort in using the SharePoint and interacting with others in creating content. The survey was intentionally brief as I did not want to "over survey" my team throughout the course of my Action Research Project and prefer to see the results of my actions through the observational changes that I hope to see within my team.

The survey consisted of five questions and the responses were on a five-point Likert scale from strongly disagree to strongly agree that were coded from one to five with five meaning strongly agreed. The questions were:

1. I am confident in using a SharePoint to access information.
2. I am confident in using a SharePoint to contribute information.
3. I am comfortable with the idea of someone modifying (editing, deleting, adding to, etc.) active content that I have created on a shared, public space.
4. I enjoy seeking out expertise and making connections beyond my immediate work group.
5. I like to share what I know to help everybody.

Figure 1 shows the results of the survey of my eight co-workers. While only small changes were noted between the pre- and post-learning session surveys there was an increase in positive responses in all but one case. The lowest response was regarding comfort in contributing content on a SharePoint. This was to be expected based on the current level of participation within this population in the SharePoint and acts as a validation to putting together the learning session for the tool. There was a strong indication that respondents enjoy seeking expertise and this may relate to the amount of time most of my team spends interacting with Subject Matter Experts (SMEs) in order to build learning content. Only one question showed a decrease in sentiment, which may have been an anomaly, or might indicate nervousness about knowledge sharing based on a growing, yet still immature, sense of what sharing knowledge means from a personal perspective by some members of my team.

Figure 1:



Write-in comments were also encouraged on the survey, please see Cycle Two Report on my website for details at: <http://www.danieljwood.com/action-research/cycle-two>

It was fascinating to note that only one question yielded a lower confidence response after the learning session, "I like to share what I know to help everybody." While the sentiment only declined slightly it is still curious to wonder what may have led to this decline. Is it due to nervousness that sometimes accompanies gaining just enough more knowledge to feel uncomfortable with a concept that when previously unknown was not worrisome? In other words, was initial confidence due to a lack of understanding of what is involved or expected? Or, could it simply be hastiness in completing the brief survey and momentary changes in sentiment that are not of any major significance or consequence to the results?

As this was a short survey and the separation between the pre and post-session survey application was very short I am not going to over analyze the small changes. Rather I am happy with the high-degree of confidence and trust shown through the survey and find the open-ended comments to indicate an overall positive sentiment toward engaging with communities and leveraging the SharePoint as a mediation for this process. Wenger et al. (2002) have indicated that trust is essential to the social connection of the community aspect of a Community of Practice. Seeing a high-degree of trust within the team is also an indication of team understanding of one another.

### **Email Correspondence**

As with my first cycle, email conversations captured feedback and input from my team and others within the organization regarding the use of the SharePoint. I began receiving emails related to the SharePoint starting in December 2008 and continuing through this current cycle in March 2009. The emails included requests for access to specific areas of the SharePoint, assistance in content building, acknowledgment of the use of the SharePoint, inquiries into

specific process steps related to using the SharePoint, and general feedback about the SharePoint. There were also emails with positive comments about ways in which I was using the SharePoint in my work. These included several instances when I created a SharePoint wiki to host shared content for a colleague so they did not have to receive the input in disparate email communications and merge it manually. (See Table 2)

Table 2:

Email Type	Count
Positive reaction (including thank you notes)	9
General question/comment	5
Request for assistance	4
Negative reaction	2

One of the most significant pieces of evidence for my cycle came when I sent a thank-you email to a colleague for adding some nice branding graphics to the site. This colleague was just getting started with the SharePoint and had been resistant to moving to the new tool in the beginning of the process and they were happy that I noticed their work and replied with a positive comment for me taking notice of their efforts. This felt like a good indication of my colleague feeling included in the process, which Wenger (1998) has indicated as important, “Being included in what matters is a requirement for being engaged in a community's practice, just as engagement is what defines belonging.” As a note, I have not received any negative email correspondence regarding the use of the SharePoint by my team.

### Observable Behavior

Throughout my second cycle I continued to use my Action Research notes to catalog and reflect on the observable behaviors of others on my team and within my organization to gain a deeper understanding of how my actions affected those around me and what I can learn from their reactions and subsequent actions. These reflections indicate a steady increase in interest and use of the SharePoint, particularly by some of those who had not engaged in the use of the wiki during my first Action Research Project cycle. This has been a significant change within my field of action. What seems to be remaining the same throughout the narrative created by these reflections is the continued need to prompt most of my colleagues to use the SharePoint when working on knowledge building processes. The data in Table 3 represents a period of time between 12/1/08 and 3/31/09 which encompasses the time frame leading up to and directly after my second cycle action.

Table 3:

Noted Behavior	Count
Expressed interest or positive reaction	6
Request for assistance, help, or input	5
Negative comments or reaction	2

### **Team Discussion and Dialogue**

Discussion and dialogue within my team created much of the foundation for my action. These took place at various times and in various contexts within my daily interactions with my colleagues. Significant discussions were cataloged in my Action Research Reflection notes. Two of the key team conversations related to my second cycle were the pre-learning session dialogue that I facilitated with my team to capture their desired learning outcomes for the Communities and SharePoint learning session and the learning session itself. I was able to use my reflections to capture these events and the impact they appeared to have in my field of work.

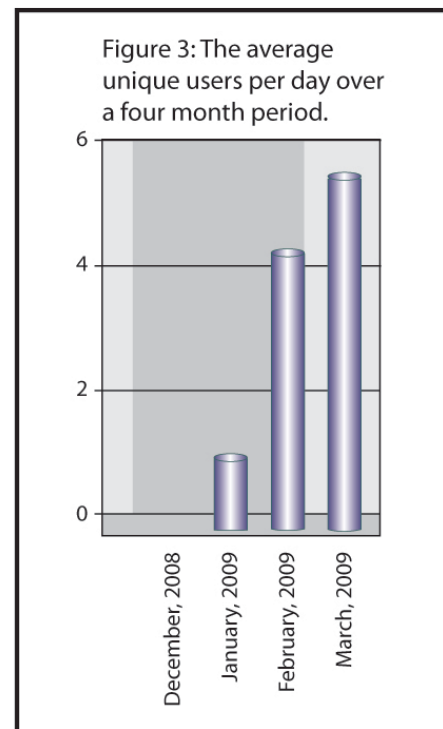
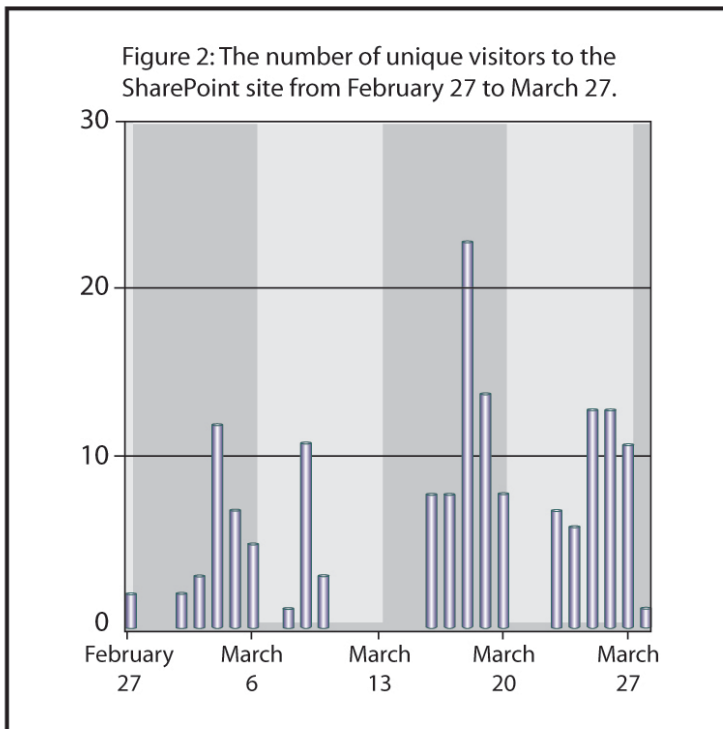
In February I had 15 minutes on the agenda of our team staff meeting and used that time to introduce my plans for a Communities and SharePoint learning session. I had noticed that many individuals on my team did not seem to be knowledgeable of the new SharePoint or how to use this tool. With the help of one of my colleagues I collected what areas of interest my team had regarding the topics of Community and also the SharePoint. In this way I hoped to focus the learning session on the needs of the group. The outcome of the session was a strong list of items to include in the learning session. There were also several positive comments noted by team members about the potential for using the SharePoint for our team processes.

The learning session took place on March 19 and I commented in my research notes as to how happy I was with the results of the session. The session was facilitated by three of my team members one of whom led the Communities discussion with the other two demonstrating some ways in which the SharePoint could be used and also leading some hands-on activities in the SharePoint. I would have liked to see more structure in the session as there were a few moments when some of the participants were losing interest - particularly during the "Communities" discussion. As we moved into the more hands-on portion of working with the SharePoint the energy level picked up quite a bit and there was some good interaction and learning within the group. As my notes reflected, I was happy with the results of the session, and two individuals approached me after the session with ideas for how we might use the SharePoint in our team.

### **SharePoint Participation**

The SharePoint tool provides visibility into data related to use of the SharePoint over a period of time. While it is difficult to assign a specific value to the data in terms of how it may or may not indicate growing participation within a Community of Practice, the results do allow for a comparison, over time, of use of the tool in particular. The following two graphs provide data related to unique visitors to the SharePoint day-by-day for the past 30 days, and on a monthly basis. Figure 2 indicates an increase in unique users on the SharePoint during the week that the Community and SharePoint learning session was held. The week following the session shows an increase in unique users that is generally higher on average than in the weeks prior to the session. Figure 3 indicates a steady increase month-over-month of unique users per day of the SharePoint.





### Cycle Two Reflection

The second cycle of my Action Research Project was much faster than my initial cycle, although there is enduring quality to the action (as with any action) that I will continue to study and gain further insight into over an unforeseen amount of time. The main difference in this case was my focus on a particular aspect of learning for my team, as opposed to a more general question of the adoption of a new tool into our team's processes. I am planning to provide one-on-one learning sessions and interviews for my team as a next step in my process. In this way, I hope to gain a deeper understanding of individual reactions to both the SharePoint and community-building processes and also to engage my team in helping me define how to evaluate the success of these efforts. While this step is a natural extension of what was started with the Communities and SharePoint learning session, I will be looking at this as a distinct action for my third cycle.

As I reflect on the outcomes of my second cycle I find myself invigorated by the initial success that I am seeing in openness to the use of new tools and processes that support the social construction of knowledge. Unlike my initial Action-Reflection Cycle, which was much more about trying to get others to do something by heavily advocating, this cycle was oriented toward the invitation to participate. Lave and Wenger (1991) have described this process of inclusion as legitimate peripheral participation indicating, "It concerns the process by which newcomers become part of a community of practice" (p. 29). During this second cycle I placed an emphasis on encouraging dialogue rather than focusing on discussion or debate of the concept of using the SharePoint and engaging within the communities that exist within our organization. I placed an emphasis on listening as deeply as I could to others, as Isaacs (1999) indicated in his work with dialogue, and avoiding placing judgments on their comments to draw out new ideas and allow others to fully share their opinions and feel more included in the decisions and progress.

By openly bringing my team into the process of building and sharing knowledge about communities and the SharePoint I saw a greater sense of ownership and willingness to participate. This was evidenced by the proactive updating of the team SharePoint by an individual on the team and the positive affirmations to using the new tool and interacting with the broader community to collaborate indicated through the survey responses and observational evidence. True dialogue took place during many of the interactions in this cycle as ideas were expressed and built upon to create a new, shared understanding of who our team was in relation to the larger organization and how we might use new tools to further our opportunities to tie into the overlapping communities that exist. Throughout this process I began to see myself move from a role of "Community and SharePoint Advocate" to the facilitator of opportunities to learn together about the possibilities for collaboration and social knowledge building available to all. This move to a place of facilitation in the social learning context aligns with Dewey's (1938) assertion about the social nature of learning. He states that, "When education is based upon experience and educative experience is seen to be a social process, the situation changes radically. The teacher loses the position of external boss or dictator but takes on that of leader of group activities (p. 59). This shifting role from advocate to facilitator has allowed my team members the room to experience the tool in their own way and share this learning with others. As members of my team begin to discover new methods of using the SharePoint and pass that information on to the rest of the team their willingness to participate in the use of the tool increases in the process.

My initial cycle in my Action Research Project felt much more adversarial at points with a clear distinction between those who embraced the wiki, those that resisted openly, and those that simply found no particular draw to it for a variety of reasons. The approach I have taken in this cycle of enlisting others, allowing room for individual ownership, and creating forums for open dialogue has a completely different feel about it that focuses toward bringing together disparate ways of thinking, rather than creating a divide based on disagreement. This new approach has yielded greater results in terms of tool adoption as I believe the members of my team are feeling welcomed into the SharePoint "club" in a more formal way than with the wiki during my previous cycle. My belief is that this level of welcoming is what has led to spontaneous interaction with the SharePoint by team members that had resisted using the wiki. When others feel they are seen as valuable members of the group with skills and talents that are useful to the team they are more likely to feel empowered and participate. While I am seeing results from a tool standpoint I still feel that I need to look deeper for evidence of a developing Community of Practice forming. This is an altogether more difficult distinction to measure and will be the primary focus of my third cycle. As I look back on this second cycle what stands out most clearly is the new sense of team I see forming around the concepts of Communities of Practice and the SharePoint tool. My first cycle was much more about divided groups using the tool, this cycle has a more cohesive feel as my team has come together in the process through the learning session and now has a more shared understanding of both communities and the SharePoint as a result. Part of a Community of Practice is having a shared history and this helped to begin creating that shared history about these topics.

In terms of my internal development I am continuing to note a more positive approach to situations and a willingness to listen more openly to others as they fully express their thoughts and ideas. The focus we have had this trimester on dialogue versus discussion or debate has helped me to begin to identify areas where I am weak in terms of deep listening and suspending judgment of challenging opinions. It is a slow process as I work to embrace behaviors that encourage the open, non-judgmental building of dialogue with my team and I am grateful for the positive examples I see of this process through my work with my cadre in the OMET program. My Learning Circle, in particular, has been a place where I have seen strong examples of dialogue happening that builds toward not one person's view, but toward a shared understanding constructed through candid, non-combative conversation where individuals are listened and responded to with respect. I would like to bring this type of dialogue into my work through my actions. As I think about my values and how I can bring my work into alignment with them, I see quality dialogue moving up on the list of desired outcomes.

## **Cycle Three: A Dialogical Approach to Community Building**

### **Introduction**

Based on the outcomes of my second cycle action the following research question was used for the third cycle:

If I meet one-on-one with each member of my team to ask how they could see using the SharePoint to collaborate, if they see evidence of a CoP on our team, and for their assistance in understanding how to measure the success of my actions, will it result in increased use of the SharePoint to build shared knowledge and lead to identification of effective measures of success for my Action Research Project?

### **Cycle Three Action: Increasing Group Participation through Individual Conversations**

My plan for my third action for my Action Research Project is to meet individually with each member of my team and gather their direct input on projects they could personally see using the SharePoint for that would allow for others to contribute and build new knowledge together in the process. I will also be asking for their ideas regarding measures of success for the team in terms of use of the tool and the building of the Community of Practice. The complete process followed and the specific questions asked are posted in the full Cycle Three Report on my Action Research website at: <http://www.danieljwood.com/action-research/cycle-three>

Interviews have been suggested to be a meaningful activity contributing to the success of Community of Practice development, as Wenger et al. (2002) explain:

Interviewing potential members is a very useful way to discover the issues they share and the opportunities to leverage knowledge. Interviews can also serve to introduce the notion of community. This is the first chance to discuss the community's potential value to individuals and to the organization. For this reason, interviews are conducted more as discussions than traditional question-and-answer interviews. These interviews not only identify the potential value of the community, they also begin to identify its potential scope, membership, and hot topics around which to link community members. (p. 79)

### **Assumptions**

I engaged in my third cycle action with the assumption that by showing each team member how they can use the SharePoint themselves to create a space for social knowledge building they will feel an ownership of the process and begin to use this as a way to invite other members of the team to contribute to their efforts. From the standpoint of measures of success I believe I will get many quality ideas for how to show that social knowledge building is taking place within my team.

### **Action Research Project Context**

The context of my Action Research Project has not significantly changed since the Second Cycle. As indicated in my Cycle Two report, there has been ongoing development of the corporate-wide Learning and Development Community of Practice which started as bi-weekly lunch meetings I arranged between my team and two other learning and development teams from other business units. This group has now moved to the legitimized stage within the corporation

(Wenger et al., 2002). Participation by members of my team in this growing community has been evident but not to a high percentage and is being used as a secondary indication of the growth of a more formal Community of Practice within my direct team.

### **Action Outcomes**

The action that I sought to study for my third cycle was how purposeful, personal interaction with each member of my team on a one-to-one basis would translate to increased interest and participation in using collaborative learning technologies, in this case a SharePoint. The action also centered on gauging awareness and understanding of the concepts related to a Community of Practice and to what degree that awareness reflects in community-based knowledge building and sharing activities. Finally, there was a component of measurement included in the action by way of each member of the team providing his or her input on how to best measure the success of my efforts.

The process of meeting with each team member to complete an interview took place over a three-week period and extended several days beyond the initially planned completion date. The extension of the time line was primarily due to priority projects for both my team members and myself, in some cases, that led to rescheduling many of the sessions. In some cases the rescheduling occurred up to three times for an individual.

Each of the interview sessions was scheduled for a 30-minute period and took place in an open area that was semi-private. In all but a few cases the time frame was adequate for a thorough dialogue for each of the three questions. There were three noted instances where the time ran out or other responsibilities did not allow a full discussion of the final question. In these cases the opportunity remains to revisit the question with the individual, as available. Notes for the sessions were captured in writing by myself and the decision was made not to use any technology to capture the interactions. All members of my direct team participated willingly in the interviews and there were no indications of reluctance by any members of the team to engage in the interview process.

Starting during the interview process and continuing from that point there has been an increase in activity around the SharePoint, including requests for assistance in working on specific projects with the SharePoint and proactive use of the tool to build and share knowledge within our team and across the business. The discussion of evidence section will include details of this increased activity.

### **Evidence Collected**

The evidence that I was able to collect for the third cycle of my Action Research Project was in the form of personal interviews, SharePoint participation (usage metrics), informal discussions with team members, and other observational data. The following is a break down of my evidence by type:

## Personal Interviews

The focus of my Third Action Research Cycle was to perform individual interviews with each member of my team. This was accomplished over a period of days between 4/20/09 and 5/5/09. After completing the interviews the data was reviewed, typed, and coded to determine trends and themes within the information shared during the interviews. Full details of the coded data are available for review on my Action Research website at: <http://www.danieljwood.com/action-research/cycle-three>

Key themes presented themselves from the interviews including barriers to participation in the form of time constraints, lack of knowledge of how to use the SharePoint, and affinity-based concerns that restrict participation based on limited interaction between some members of the team. As one of the interviewees stated, participation "relies too much on everybody being friends - not always going to happen." Another interviewee mentioned volume of information on the SharePoint as a barrier which aligned with Wenger's (1998) assertion that, "information by itself, removed from forms of participation, is not knowledge; it can actually be disempowering, overwhelming, and alienating" (p. 221).

The majority of my team believes a Community of Practice exists, and perhaps even several, based on context. Only one team member did not see the team as a Community of Practice, but rather simply a community at this point. The perspective shared was that to some it may be a Community of Practice but that it depended on the "intrinsic motivations." One team member indicated the belief that the practice central to the community was employee development and went beyond specific events.

Based on the research I have completed, my team is largely an "operational team" that also includes "project teams" as the efforts are focused on extrinsic goals and not based on "personal investment" in a common interest. There are indications of sporadic "bootleg" Community of Practice activities between specific team members and based on shared interests and passions that go beyond completion of tasks and projects (Wenger et al., 2002).

The following data points were of note from the interview process:

- 11 of 13 team members have an idea of how they could collaboratively use the SharePoint for a current need. Of the two that did not indicate a current need, both were not resistant to the tool, but indicated they had no immediate need.
- 9 out of 10 team members believe a Community of Practice exists on the team. In this case n=10 as time constraints did not provide an opportunity for three of those interviewed to answer this question. Of the 10 who did answer the one that did not see a Community of Practice did note there is a community, but by their definition they did not see evidence of a true Community of Practice but more work-related team interactions.
- Usage reports and speed to market of learning materials were most often mentioned as measures of success.
- Single-source of knowledge and the ability to share knowledge (collaboration) were most often suggested as perceived values for the SharePoint.

## Observable Behavior

Throughout my third cycle I continued to use my Action Research notes to catalog and reflect on the observable behaviors of others on my team and within my organization to gain a deeper understanding of how my actions affect those around me and what I can learn from their reactions and subsequent actions. These reflections indicate a steady increase in interest and use of the SharePoint for collaborative processes. A noted difference from what was observed in my second cycle was the increase in proactive, non-prompted use, or desire to use, the SharePoint for collaborative projects. The data in Table 4 represents a period of time between 4/1/09 and 5/14/09 which corresponds to the rough time frame of my third cycle. Based on a comparison of data between my second and third cycle the amount of interest and positive response is increasing as I noted more observed behaviors in a shorter amount of time in cycle three as compared to cycle two.

Table 4:

Noted behavior	Count
Request for assistance, help, or input	7
Expressed interest or positive reaction	6

## Informal Discussions and Dialogue

In addition to the formal interviews that were the core action for the third cycle of my Action Research there were also a significant number of information discussions and dialogues that took place with team members. Wenger et al. (2002) note that informal “networking” with community members outside of formal community structures is a key to the ongoing health and growth of the community. Of these informal interactions, many have been collected in my Action Research notes and are reflected in various tables and results within the evidence represented in this report. Many such interactions were not of particular note in terms of detail, but nonetheless were part of the myriad interactions that constitute an observable change in behavior and action within my field of action. Within the context of my third action there was a noticeable increase in positive dialogue associated with concepts of Communities of Practice and the SharePoint in particular.

## Participation in Corporate-wide Community of Practice

In parallel with my efforts to encourage Community of Practice growth within my direct team I have been instrumental in starting a corporate-wide Learning and Development Community of Practice that has moved from the “bootlegged” to “legitimized” form as described by Wenger et al. (2002). The formal sessions for the community are held bi-monthly. From the period of February to May, the average attendance at the events is 13 individuals with my team making up roughly 30% of the attendees. Within the aforementioned dates 6 out of 13 of my team members have attended at least one of these sessions. Participation to some extent by close to half of my team indicates an interest in community activities and involvement.

## SharePoint Participation

The SharePoint tool includes usage reports based on user activity. While it is difficult to assign a specific value to the data in terms of how it may or may not indicate growing participation within a Community of Practice, the results do allow for a comparison, over time, of use of the tool in

particular. The following two graphs (Figures 4 and 5) provide data related to unique visitors to the SharePoint day-by-day for a 30 day period and on a monthly basis. This data may also include users from outside my immediate team. Table 5 includes team-specific results, as recorded in my research notes.

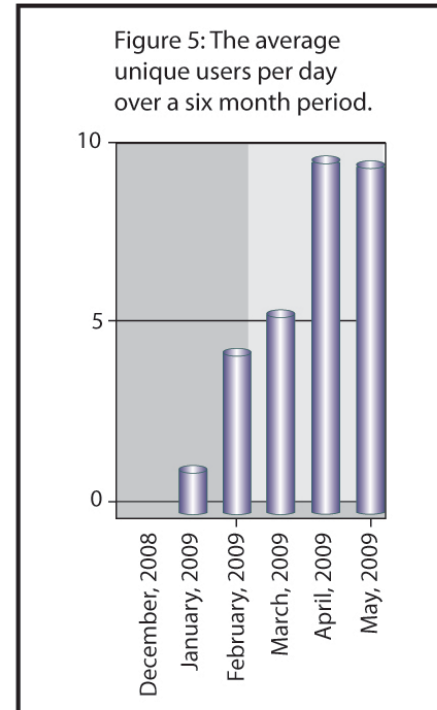
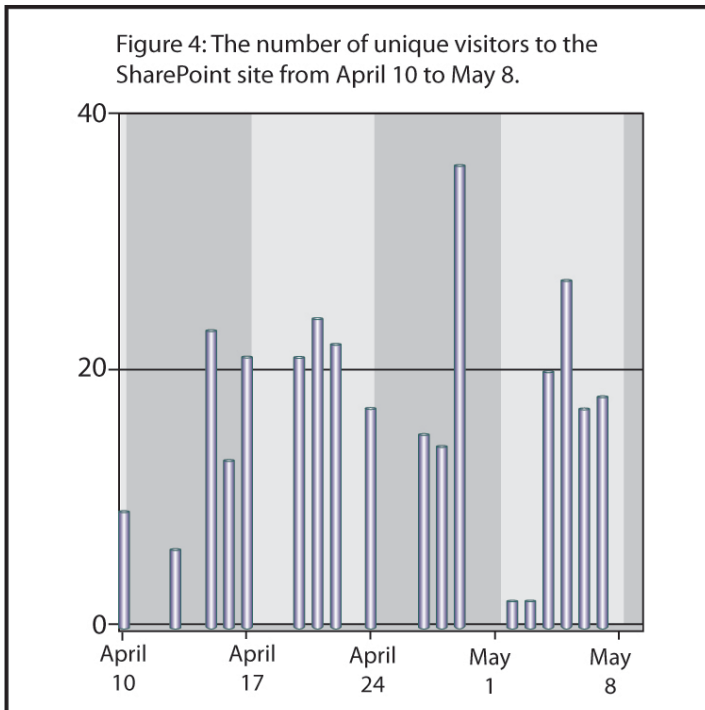


Table 5:

Action	Number	Percentage
Team members who have accessed the SharePoint	13 of 13	100%
Team members who have asked for assistance with the SharePoint	8 of 13	61.54%
Team members proactively using the SharePoint (not seeking input or assistance from me)	6 of 13	46.15%

### Cycle Three Reflection

The third cycle of my Action Research Project brought me to a more personal level of interaction with my team and from this interaction I have seen some of the most significant indications of the change that is taking place outside of myself within my field of action. By sitting down in a relaxed, but structured, session with each member of my team I have gained candid feedback and input about my efforts that will direct my actions going forward as I continue to drive for change that aligns my work with my values. I see this as a further extension of the invitation to participate in both the community and the use of the SharePoint as a knowledge sharing and building tool that I began with my second cycle.

Based on the interviews that were completed in this cycle, and the observational evidence that I collected throughout the cycle I believe that my team has several examples of Communities of Practice within its structure. These Communities of Practice overlap and extend outside of my



team to include other individuals and teams based on shared interest or practice, such as reading clubs, and gender and ethnic-based community networks. Where I see the challenge for my team is in legitimizing some of the Communities of Practice and moving them from the "unrecognized" or "bootleg" forms to a more recognizable and formalized place within the structure of the team (Wenger et al., 2002). As noted in the data collected from the interviews there are many barriers to the formalization of these Communities of Practice, including time, issues related to affinity, and issues related to access whether it be distance or ability to utilize available knowledge building and sharing tools effectively.

As I reflect on the outcomes of this cycle I feel very clear on the current state of my team in terms of growing as a Community of Practice and believe I am better prepared to provide the leadership, guidance, and support necessary to continue to move forward in leveraging collaborative web 2.0 tools to participate in knowledge building processes that center on common development interests. Prior to sitting down with each individual on my team I was unclear of the specific views each person had of the efforts I have been taking to advocate and support change within our team. As a large part of Action Research is about becoming better at predicting the outcomes of actions in a given context I believe I have made significant gains in this aspect of the process.

I feel that most of the members of my team are beginning to gain a better understanding of what it means to be a part of a community, beyond the business goals and objectives that create the extrinsic motivation to work together. At the same time I am beginning to see signs of willingness to engage in learning how to use tools that support collaborative processes that can be applied to both project-oriented work and also to build and share community knowledge. It has been a tough balance to maintain between the focus on a concept (Communities of Practice) and a method (social learning technologies). At times I know that the balance leans heavily in favor of the tools and that is something that I will be continuing to keep in mind as I move forward in working with my team.

My belief is that I focused on the tools more than the concepts because that can be an easier place to start, or at least seem to be easier. There is a tangibility to a tool that one can begin to have a conversation and interaction around with almost anyone. When you begin to broach conceptual dialogues it can become more difficult to appeal to each individual. My hope is that I have kept a fair mix between the conceptual and tangible and in the process appealed to each person on my team to at least the degree that they are interested. Based on what I have seen through my third action I believe this to be true.

As I think about the change taking place within myself through the Action Reflection process I have seen growth in my ability to reflect in the moment and react much differently to others than in the past. This change has helped me to learn more than in the past, as I begin to gain a deeper understanding of the motivation and feelings of others, rather than reacting to them without thought or reflection. This change is something that has been even mentioned by one of my colleagues who noted that I have been less prone to being frustrated by situations. I have also noted that I feel much more at ease with each member of my team than ever before, even though I have worked with them all for more than two years now.

A continuing area for me to work on is ownership and a sense of responsibility. While these can be valuable motivators, there are times that I let an over-developed sense of responsibility and/or ownership influence my behavior. In particular, when working with someone on the SharePoint if something does not go smoothly I begin to feel responsible, rather than working together to figure out what might need to be changed, I get nervous that the other person will think the tool is not working well and want to abandon it in favor of something they already know. As I continue to move forward with my team I will be asking for their thoughts and input, rather than making assumptions. In this way I hope to keep a building dialogue that allows us all to learn more in the process.

## **Final Reflection**

### **Drinking in the Knowledge**

Water is the life-giving resource to our planet. Without water there can be no life. To be useful, water must make its way to the places in which it is needed, sometimes on its own, and sometimes with the help of others. In this process growth and life are supported. Like water, knowledge is the life blood of an organization. Without effective knowledge management an organization can't achieve its potential for growth, and in fact will dry up and wither. Social learning technologies act as an irrigation system for an organization, providing a way for knowledge to be collected and shared effectively within an organization, increasing the volume of the natural flow, and allowing Communities of Practice to grow and thrive.

My Action Research project provided me with the opportunity to work with my team to create the pathways within which community knowledge flows and the methods for filtering, and channeling it to those in need of information. Action Research is about change, the change within oneself and the outside change to the field of action (McNiff and Whitehead, 2006). The process of taking a specified action, gathering the evidence of the outcomes, reflecting deeply on the evidence, and thoughtfully choosing the next action has had a profound impact on me. The iterative action-reflection process helped me to gain a deeper understanding of myself, my field of practice, and how my actions affect my team and organization. Through reflection I have noted a change within myself, and through action I have seen a change in my context.

### **The Change Out There**

When I set out on my Action Research journey I had a goal of influencing the growth of a Community of Practice in my team mediated by social learning technologies. In my first cycle I found that I was attempting to make a large change too quickly, introducing and encouraging the use of a new process with only limited dialogue, discussion and debate about whether it should be applied. While this approach brought some changes in methods and processes, it also inadvertently alienated some members of the team based on their feeling that the choice was forced and not appropriate for all. This was in sharp contrast to my goal of creating an inclusive context within which the members of my team would feel drawn to interact in social knowledge building. After collecting evidence and reflecting on my first cycle, I saw the need to renew and bolster my effort to take action that would be inviting to all at an individual level.

As I moved through the cycles of my Action Research project and shifted from a broad approach to advocating a particular tool, to a more personal approach of introducing a concept and a method to act on that concept, I found that there was a change in my team. While I had seen a significant use of the wiki during my initial cycle, it was associated primarily with specific project-based needs at a given moment in time. With the move to focusing on inclusive dialogues relating to Communities of Practice and the use of social learning technologies, I noted a change in the interest of others in seeking out knowledge and their willingness to consider new approaches to community building within the team and across the organization. While there is a continuous need for additional support and encouragement to keep the spring flowing, the change in relationships and the creation of shared artifacts are strengthening the way in which the community interacts.

What I came to know after working through three cycles of action with my team was that I was not creating a Community of Practice, so much as working to formalize and connect the already existing, but untapped community within my team. Once this became clear, it was easier to have dialogues with others about how the community could connect, rather than approaching it as if I was creating something from scratch. In this way, the existing connections and informal knowledge sharing processes could be recognized and acknowledged as valuable so they could begin to be formalized and moved into a tool that allows for effective social knowledge construction.

### **The Change In Here**

I began my Action Research Project with the thought that I would be working to exercise influence within my practice and that much of that influence would come through advocating strongly for my ideas. This advocacy approach is easily seen in the types of reflection that I made during my first cycle, and the types of resistance I found to my actions. While I was working to encourage my team to join the "club" of social learning technologies and Communities of Practice, I was doing so in a way that unintentionally became exclusive. Forced participation, or exclusivity, are both counter to the building of a Community of Practice and, based on research and my own observations, do not foster the type of learning community that will grow and thrive.

Over the course of the three cycles of my Action Research I saw myself expand beyond simply advocating my point to using thoughtful inquiry to build dialogues that invited my colleagues to join in and share their thoughts and perspectives. At the same time, I found the process of regular, deep reflection to be slowly transforming me from reacting quickly to the actions of others, to becoming skilled at in-the-moment reflection. This real-time thought process did not develop right away during my project, rather it was a building process that mirrored my journey to becoming more skilled in reflection itself. My initial reflection process helped me to gain a basic level of perspective on events in my project context, however it failed to get to the deeper, underlying personal experiences and beliefs that might be driving my interpretation of events.

Based on input by my professor, and the thoughtful questions of a colleague at work who is familiar with Action Research, I was able to develop a new model for my reflections that combined an approach outlined by Coghlan and Brannick (2001) in *Doing Action Research In Your Organization* and the addition of a meta level of reflecting. The result was a four-step reflection process including: Concrete Experience - what actually happened; Reflection - how I feel about what happened; Conceptualization - why I believe it happened; Meta-Conceptualization - what might be my underlying beliefs or experiences that are causing me to draw the conclusions I am making about what happened (Coghlan & Brannick, 2001, pp. 39-40). It was the addition of the meta level that dramatically affected the way that I thought about both my own actions, as well as the actions, and reactions, of others. By using this reflective process twice a week, on a regular basis, I slowly saw myself change from reactionary, to more thoughtful and curious. As I began to grow more curious and ask questions that invited others to share in dialogue I also saw my knowledge grow as well as my connection to my team.

### **Where the River Leads**

Through my Action Research I have been able to help my team to build a reservoir for knowledge and begun the process of bringing the community together to fill, use, and share this resource. This is a slow process as we work to bring the streams of knowledge together in a useful way. I will continue to pursue an Action Research approach to encourage the formal structuring of a Community of Practice within my team and have planned for my next action in support of this goal. With the tools I have gained through this past year of research, action, and reflection I feel prepared and ready to continue the journey.

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