

# ***A model for leveraging social learning technologies in corporate environments***

*Robin Yap, LLB, MSc, DM*

*Phronetic International, Canada, robin@robinyap.com, <http://www.robinyap.com>*

*Joost Robben*

*Stoas Learning, The Netherlands, jrn@stoas.nl, <http://www.joostrobben.nl>*

## **Abstract**

How are you leveraging your social learning technologies to engage your employees? This research-in-progress paper will provide a model to assist in determining how social learning technologies in the workplace can be leveraged to engage, build relationships, and enhance the learning of individuals in corporate environments. An exploration of how trust and human resource development theories can contribute to the development of social capital in organizations and the web technologies that bind them frames this model. Two concurrent case studies in Canada and in the Netherlands are currently being conducted to identify the viability of this model in the workplace.

## **Keywords**

Trust, social capital, network learning, social networking, web 2.0

## **Introduction**

The social network society is upon us. In 1954, J.A. Barnes coined the term *Social Network* in references to a map of the relationships between individuals, indicating the ways in which they are connected through various social familiarities ranging from casual acquaintance to close familial bonds (Feltman, 2009). A half a century later, and with the Internet as the catalyst, the dynamics of the relationships from these social networks have changed. A quick look at Facebook's (a social networking website) 400 million users alone (Della Cava, 2010) and one realizes that social systems on the web have become a dialoguing platform amongst its like-minded participants (Hempel, 2009). This dialoguing is akin to what Marsick and Volpe (1999) define as learning in a "non-institutional context as the discourse integrates everyday life and experiences with an internal or external change produced by an inductive process of reflection and action as a participant interacts with another." This informal learning interaction can either be purposeful or accidental.

Wilson (2009) indicated that 50 percent of the United Kingdom's Internet users are predicted to visit social networks at least once a month by 2013 and some office workers claiming to spend at least 30 minutes a day on such sites, the need for professionals to engage with the phenomenon is inevitable.

## **Social Networks in the Workplace**

For decades researchers have been examining learning within organizations (Argyris & Schön, 1978; Huber, 1991), the nature of organizations as social communities or networks (Kogut & Zander, 1992, 1996) and the learning that emerges from social networks within organizations (Mavin, 2004; Bottrup, 2005). A scan of the literature from major databases (eg. ProQuest, EBSCOHost, Eric, Emerald) over the past three years indicates a

breath of academic and professional research in social networks, networked learning, and social network technologies.

Our research aims to posit a model leveraging social learning technologies in corporate environments as it supports the organization's human resource development (HRD) processes. This model will then be used in two concurrent case studies in two continents to determine its applicability, reliability, and effectiveness.

## Model for leveraging social learning technologies in corporate environments

The theoretical framework of the model for leveraging social learning technologies in corporate environments incorporates fundamental trust and the resulting relationship building that occurs, networked learning in social platforms of the available technologies within the context of the profiling, connecting, and sharing concepts, and the shared content within the structural, cognitive, and relational dimensions resulting in knowledge productivity and enhanced social capital.

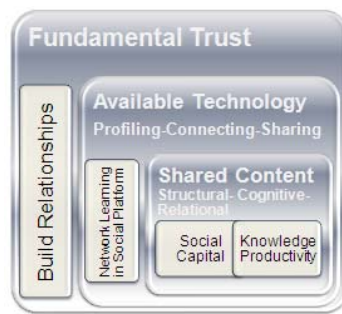


Figure 1. Model for Leveraging Social Learning Technologies

## Trust

The concept of *trust* has been studied in many areas including sociology, business, psychology, law, economics and political science. There exists deep research on *trust* including the usage of logic to create models of trust (Demolombe, 2004; Jones & Firozabadi, 2000; Jøsang, 1997; Millen & Wright, 2000) the adaptation of psychological comprehension of trusting behavior (Giorgini, Massacci, Mylopoulos, & Zannone, 2005), the use of definitions of trust to drive systems-based approaches to the management of trust relationships (Viega, Kohno, & Potter, 2001) and Huotari & Iivonen (2004) and Feltman's (2009) research on trust being the Internet's most integral component.

## Trust as foundation of social capital

According to De Laat (2006) it is important to support collective learning through social learning technologies by focusing on the group dynamics that are needed to organize and coordinate learning. From the literature we have seen trust as a repeating factor that is of major influence in sustaining social capital; the definition of which will be discussed in this study (cf. Daniel, Schwier and McCalla, 2003; Putnam, 2000; Nahapiet and Ghoshal, 1998). Many authors (Kouzes & Posner, 2008; Ciancutti & Steding, 2000) argue that trust constitutes a solid basis for new types of relationships. Huotari & Iivonen (2004) sees trust as a factor that is often appreciated in a different way when interactions are in online environments.

### *Building relationships*

Harris (2002) identifies trust-based interactions or dialogues as “fundamental to building relationships and learning.” Discourse and relationships go hand-in-hand and active open dialogue translates into “collective inquiry that will eventually emerge and lead to insights.” The insights support building relationships that is fundamental in a trust-based interaction; a necessary element in our model for leveraging social learning technologies in corporate environments.

## **Web-based Technologies**

Over the past years, the internet has evolved from a medium where information was transmitted and consumed towards a social platform with services that enable people to create content and connect with others. An often mentioned term in this respect is the rise of "Web 2.0". Although there has been a lot of debate on this term as it is often seen as a buzzword or marketing tool (Siemens, 2006), it is mostly used as an indicator for the movement towards the use of social web services. Examples of these services are social networking sites like Facebook<sup>1</sup>, weblogging services and microblogging services like Twitter<sup>4</sup>. From the popularity of eg. social-networking services, especially among youngsters (Robben, Wognum and Meelissen; 2007), interest from educators and learning specialists has grown to use these services to facilitate learning processes. Some of these services already point their strategy for corporate use. These are, for example, LinkedIn<sup>5</sup> (social networking) and Yammer<sup>6</sup> (microblogging). Also, various products are offered for organizations to build and sustain online social networks on its own configuration such as Elgg<sup>7</sup> and Mahara<sup>8</sup>. These products enable individuals to create personal profiles and search and connect with others. Often other functionalities for communication and reflection are offered. E-mail-like functions and message-walls are often seen as well as blogging functionalities. Individuals can use blogs as their personal (reflective) journals. The ability for organizations to install and use social learning technologies from their own configuration can prevent users from outside the organization to access internal content; A strategy that may increase the feeling of a “safe environment” although potentially could also limit the possibilities of connecting with others outside the organization.

As a result from the technology centered interest in these services, implementation strategies are often focused on technology alone. It needs to be questioned what factors determine the successful use of these technologies. For this paper, we will focus on technologies that facilitate virtual social networks for sustaining and developing social capital in an organization. This process can be divided into three dimensions (a) profiling, (b) connecting, and (c) sharing.

### **Profiling**

Individuals can use all sorts of web-based technologies to profile themselves. In the context of corporate usage, people typically share information about their professional lives. Examples are contact information, employment history, expertise and education. In addition, individuals can share more personal information as well, such as interests, hobbies and memberships. Berlanga, Bitter, Brouns, Sloep and Fetter (in press) have shown that employment history, interests and expertise are considered as the most important information in a profile. Either to represent the self as well as to view in ones other profile. An important feature, in relation to the issue of trust, is the ability to either show the profile to all public, or keep it as private. If a profile is set as private, only “friends” – connections in the social network – will be able to view the profile.

---

<sup>1</sup> <http://www.facebook.com> <sup>4</sup> <http://www.twitter.com> <sup>5</sup> <http://www.linkedin.com> <sup>6</sup> <http://www.yammer.com> <sup>7</sup> <http://www.elgg.org> <sup>8</sup> <http://www.mahara.org>

## Connecting

The aim of online social networking sites is to maintain and organize relations (Berlanga, et al. in press). The actual connecting to others is then among its core functionalities. One of the main mechanisms that social networking sites typically offer to find connections, are recommendations. Based on the information provided in the profile, e-mail address books and connections of already connected “friends”, recommendations are automatically made for new to make connections.

## Sharing

When connections are established and members have formed networks, content can be shared with the network. Several social networking services also incorporate tools to share content. Weblogs can be used to share (reflective) observations and content can be discussed in discussion boards or comment walls. Also, more specialized services can be used to share content. Tools like Twitter and Yammer are so called microblogging tools. Microblogging tools can be described as networking tools with an emphasis on sharing short messages, mostly bound at 140 characters. Typically, most individuals share what they are doing at that current time (Java, Song, Finin, Tseng, 2007) like eg. “writing on paper for networked learning conference”. Emerging research suggests that users are also using Twitter for the informal sharing of content (Honeycutt and Herring, 2009). In our view these social networking tools offer great opportunities for the sharing of content, in corporate environments as it is embedded in a social context.

## Networked Learning in Social Platform

Goodyear, Banks and Hodgson (2004) describe networked learning as "learning in which information and communications technology (ICT) is used to promote connections: between one learner and other learners; between learners and tutors; between a learning community and its learning resources". The use of online materials alone is not sufficient, networked learning always involves interaction between people, whether synchronous, asynchronous, or both (Goodyear, et al. 2004).

One method of networked learning is Wenger’s (1998) “communities of practice” (CoP). The concept is a useful perspective on Human Resources and Learning professionals. A growing number of people and organizations in various sectors are now focusing on communities of practice as a key strategy to improving their performance. Whether they exist as a social gathering or technological network, the sharing of expertise and the creation of new knowledge, often tacit in nature, is a central tenet of a CoP’s existence (Lave & Wenger, 1991). Human Resources policy makers leverage Wenger’s CoP concept as it allows a framework for informal organizational learning (Mallon, 2009). There are clear parallels with organizational learning and the knowledge-centric organization, and few would dispute the potential benefits that CoPs can bestow on the individuals making up these communities and the organizations that these CoPs reside in (Wenger & Snyder, 2000; McDermott, 2002).

## Shared Content

### Knowledge productivity

Stam (2007) indicated that *knowledge* is the most important resource for organizations to survive; a notion stemming from Grant’s (1996) and Spender’s (1996) knowledge-based theory. Stam (2007) indicated that the knowledge-based theory gives “extensive elaborations on the nature and definition of knowledge and the way it

should be managed.” The concept of knowledge productivity is based on the belief that the “competitive advantage of organizations does not come from knowledge itself but from the ability to make knowledge productive” (Stam, 2007).

Within our current economy, knowledge is (becoming) the dominant factor for the improvement and innovation of products, services and processes. The ability of an organization to be so called "knowledge productive" is more and more crucial for its survival. De Jong and Kessels (2007) describe knowledge productivity as: "the ability of individuals to identify, gather and interpret relevant information, using this information to develop new skills and then to apply these skills to improve and radically innovate operating procedures, products and services".

In organizations, “people are increasingly sharing, discussing, and negotiating knowledge through computer networks, therefore stressing the social nature of learning (De Laat, 2006)". Within the socio-cultural perspective on knowledge it is argued that the construction of knowledge lies within social interaction among employees, such as might be found in work related learning networks as networks of practice and communities of practice. If we view knowledge from a socio-cultural perspective we could argue for HRD to strongly emphasize on the development of *social capital* in the organization.

### **Social capital**

Putnam (2000) differentiates between physical capital as referring to physical objects and human capital referring to properties of individuals. Social capital refers to “connections among individuals, social networks and the norms of reciprocity and trust that arise from them (Daniel, et al., 2003)."

Ensuring that knowledge is productive requires individuals within the organization to connect and thereby develop social capital. One way of enabling knowledge productivity is by enhancing the human capital’s social experience and expertise thereby enhancing the organization’s social capital. Social capital can be described as a network of connections between individuals, based on trust, respect, appreciation, reciprocal appeal, integrity, transparency and shared norms and values (De Jong & Kessels, 2007). Putnam (2000) sees “social connections among human capital resulting into social networks with their norms of reciprocity and trustworthiness.” In order to be knowledge productive, organizations need to create a working environment that stimulates their employees to find, create, and maintain their connections. Several authors stress the value of social capital to the organization (Huysman and Wulf, 2006; De Jong & Kessels, 2007). Social capital becomes a valuable asset to the organization and, as argued in Huysman and Wulf (2006), “the higher the level of social capital, the more communities are stimulated to connect and share knowledge”.

Nahapiet and Ghoshal (1998) describe three clusters within social capital: (1) *structural* dimension, (2) *cognitive* dimension, and (3) *relational* dimension. The structural dimension in social capital is about who you can reach (ties) and how you reach them (configuration). The cognitive dimension refers to the shared codes, language and narratives that people have or don't have in a network. The relational dimension embodies the social construct of the network. It is about trust, norms, obligation and identification. One of the most important but also difficult to measure aspects in social capital. From our experience in consultancy praxis, we find that learning technologies are often implemented with a focus on structural dimension. Cognitive and relational aspects of social capital are often forgotten to pay attention too.

The dimensions within social capital (Nahapiet and Ghoshal, 1998) have been used by de Jong and Kessels (2007) to explore how HRD can contribute to the development of social capital in organizations. We hereby build on their work to briefly identify opportunities for using social technologies to facilitate these processes.

***Structural dimension:***

As de Jong and Kessels (2007) have argued, HRD can play a supportive role to create a safe environment for individuals to meet each other. Social web technologies can enable people to connect with peers in their network, hereby creating this online environment where individuals can meet each other. Social technologies like online social networking tools can enable individuals to create personal profile pages. Most technologies offer the ability to form groups that provide controlled environments for people to interact. This could provide more safety and trust. Technology could thus play a crucial role in enabling people to interact, forming the foundation of the structural dimension of social capital in, and outside an organization.

***Cognitive dimension:***

This dimension refers to the shared codes, language and narratives in a network. It is the telling of stories that facilitates the sharing of tacit knowledge (Wenger, et al. 2002). Technology can enable individuals to tell their story to the network and for others to interact and reflect. In doing so, they could develop a shared understanding.

***Relational dimension:***

The relational dimension focuses on the specific relationships that individuals have with each other. Factors as trust, norms and obligations are important in social networks. Especially trust appears to be mentioned by many authors (Daniel, et al., 2003; Putnam, 2000; de Jong and Kessels, 2007; Nahapiet and Ghoshal, 1998; Berlanga, Sloep, Rosmalen and Koper, 2008) It is therefore important that learning activities connect to existing networks (de Jong and Kessels, 2007). Technology can play a role in identifying networks that fit a learner's interest. On the other hand it needs to be questioned how such values as trust form in online (distributed) communities/networks and how it can be leveraged in such communities.

## **Case Study**

Swanson & Holton (2005) correlates lived experience with knowledge creation and the qualitative study using grounded theory of this knowledge creation is the appropriate method in determining the viability of the model we posited in this paper. The researchers will conduct two concurrent qualitative research studies in two corporate organizations, one in Canada and another in the Netherlands.

In the research, the focus will determine how social learning technologies are leveraged in these organizations. Interviews will be conducted among identified participants in the two organizations to determine if, when, and how the social learning technologies intervene to improve or detract from the interaction and learning that occurs while using the social platform.

In the Dutch case study the company is a consultancy firm in the field of e-learning technology consisting in total of 115 employees. It is divided in 4 business units (A= 1, B= 52, C=46, D=16). Employees can be typified as external consultants, a large group of people who work often from home or at client's base. A smaller group of people are stationed at the central office. A group employees within the company has started to use Yammer as an informal means of communication. There is at this moment no regulation on the use of Yammer. E-mail and phone are the means of communication provided by the company. The employees that are interviewed are part of the same team of consultants and are all external consultants, they work in business unit C.

In the Canadian case study the organization is the financial industry with 75,000 employees and an enterprise training department of 45 employees all using the following social network technologies: E-mail, Telephone,

Microsoft Office Communicator, Adobe Connect. A subset of 18 employees from this group incorporates the use of webcams to communicate with their colleagues. All interviewed participants come from this subset.

Interview questions will revolve around the three key concepts of the model for leveraging social learning technologies in corporate environments: Trust, technology, and shared content. A sample of interview questions will be similar to Feltman's (2009) "Trust Check Questionnaire." Example given: "What is it you are willing to entrust to them that you consider valuable?" or "Why do you trust them with this?". Similar questions will be posited around technology usage and shared content.

## Conclusions and Summary

This research in progress paper has identified the landscape of social networks, networked learning and social network technologies. A model has been identified to leverage social learning technologies in corporate environments. The methodology for the research study has been presented and will be used in conducting two concurrent studies in two organizations in two continents. Upon completion of the research, the results will be incorporated into this paper.

## References

- Berlanga, A. J., Sloep, P. B., Rosmalen, P. V., & Koper, R. (2008). Ad hoc transient communities: towards fostering knowledge sharing in learning networks. *International Journal of Learning Technology*, 3(4), 443-458.
- Berlanga, A. J., Btter, M., Brouns, F., Sloep, P. B., & Fetter, S. (accepted). Personal Profiles: Enhancing Social Interaction in Learning Networks. *International Journal of Web based Communities*.
- Bottrup, P. (2005). Learning in a network: a "third way" between school learning and workplace learning? *Journal of Workplace Learning*, 17(8), 508-520
- Ciancutti, A. & Steding, T. L. (2000). *Built on trust: Gaining competitive advantage in any organization*. Chicago, IL: Contemporary Books.
- Cross, R. (2003). *Networks in the Knowledge Economy*. Oxford, UK: Oxford University Press.
- Daniel, B., Schwier, R. A., & McCalla, G. (2003). Social Capital in Virtual Learning Communities and Distributed Communities of Practice. *Canadian Journal of Learning and Technology*, 29(3), 113-139.
- Della Cava, Marco. (2010, February 10). Some ditch social networks to reclaim time, privacy. *USA Today*. Retrieved from <http://tinyurl.com/yh2f8mo>
- Demolombe, R. (2004). *Reasoning about trust*. In C. Jensen, S. Poslad, & T. Dimitrakos (Ed.), *Second International Conference on Trust Management (iTrust 2004)*, Oxford, UK (LNCS 2995, pp. 291-303).
- Feltman, C. (2009). *The Thin Book of Trust: An Essential Primer for Building Trust at Work*. Bend, Oregon: Thin Book Publishing.
- Giorgini, P., Massacci, F., Mylopoulos, & Zannone, N. (2005). *Modeling social and individual trust in requirements engineering methodologies*. In P. Herrmann, V. Issarny, & S. Shiu (Ed.), *Trust Management, Third International Conference (iTrust 2005)*, Paris (LNCS 3477, pp. 161).
- Goodyear, P., Banks, S., & Hodgson, V. (2004). Advances in Research on Networked Learning. In *Advances in Research on Networked Learning*, Computer-Supported Collaborative Learning Series (Vol. 4, pp. 1-9). Dordrecht: Kluwer Academic Publishers.
- Harris, C. (2002) *Enterprise in the Connected Economy*. London, UK: Palgrave Macmillan.
- Hempel, J. (2009). How Facebook is taking over our lives. *Fortune Magazine*, 29-56.
- Huysman, M., & Wulf, V. (2006). IT to support knowledge sharing in communities, towards a social capital analysis. *Journal of Information Technology*, 21(1), 40
- Java, A., Song, X., Finin, T., & Tseng, B. (2007). Why We Twitter: Understanding Microblogging Usage and Communities. In *Joint 9th WEBKDD and 1st SNA-KDD Workshop*. San Jose, CA: ACM.

- Jones, A. J. I., & Firozabadi, B. S. (2000). *On the characterisation of a trusting agent—aspects of a formal approach*. In *Proceedings of the Workshop on Deception, Trust and Fraud in Agent Societies* (pp. 157–168). Norwell, MA: Kluwer Academic Publishers.
- Jong, T. D., & Kessels, J. (2007). Human Resource Development for Social Capital: An intricate process of knowing. October (pp. 18 - 20).
- Jøsang, A. (1997). *Artificial reasoning with subjective logic*. In *Proceedings of the 2<sup>nd</sup> Australian Workshop on Commonsense Reasoning*. Retrieved January 17, 2006, from <http://tinyurl.com/ykx2cmj>
- Kouzes, J.M., & Posner, B.Z. (2008) *The Leadership Challenge*, 4<sup>th</sup> ed. San Francisco, CA: Jossey-Bass.
- Laat, M. D. (2006). Networked learning. Dissertation, Utrecht
- Mallon, D. (2009, March). *A Social Learning Environment*. Bersin and Associates.
- Marsick, V.J. and Volpe, M. (1999). *Informal Learning on the Job*. San Francisco, CA: Berrett-Koehler.
- Mavin, S. (2004). Viewing learning organizations through a social learning lens. *The Learning Organization*, 11(3), 285-289.
- McDermott, R. (2002). *Measuring the impact of communities: How to draw meaning from measures of communities of practice*. *Knowledge Management Review*, 5(2), 26–29.
- Millen, J. K., & Wright, R. N. (2000). *Reasoning about trust and insurance in a public key infrastructure*. In *Proceedings of the 13<sup>th</sup> IEEE Computer Security Foundations Workshop (CSFW 00)* (pp. 16–22).
- Huotari, M-L. & Iivonen, M. (2004). *Trust in Knowledge Management Systems in Organizations*. Hershey, Pennsylvania: IGI Global.
- Ratten, V. & Suseno, Y. (2006). Knowledge development, social capital and alliance learning. *International Journal of Educational Management*. 20(1),60-72.
- Robben, J., Wognum, I., & Meelissen, M. (2007). Learning environments for the Net-generation learners. In *Conference proceedings of the 8th International Conference on HRD Research and Practice across Europe, 27 and 29 June, 2007*. Oxford.
- Siemens, G. (2006). Enough with 2.0. *January 10, 2006*. Retrieved from <http://www.connectivism.ca/?p=49> at November 13, 2009.
- Spender, J.C. (1996). Making knowledge the basis of a dynamic theory of the firm. *Strategic Management Journal*, 17(Special Issue), 45-62.
- Stam, C.D. (2007). Making sense of knowledge productivity: beta testing the KP- enhancer. *Journal of Intellectual Capital*, 8(4), 628.
- Swanson, R.A. & Holton, E. F. (2005) *Research in Organizations: Foundations and Methods of Inquiry*. San Francisco, CA: Berrett-Koehler Publishers
- Wenger, E., McDermot, R., & Snyder, W. M. (2002). *Cultivating Communities of Practice* (p. 284). Boston, Massachusetts: Harvard Business School Press.
- Wilson, J.(2009). Social networking: the business case. *Engineering & Technology*. 4(10), 54-56.
- Viega, J., Kohno, T., & Potter, B. (2001). *Trust (and mistrust) in secure applications*. *Communications of the ACM*, 44(2), 31–36.