2009

Designing and evaluating an interactive video website for organizational learning

Stefan Hrastinski
Uppsala University, stefan.hrastinski@dis.uu.se

Therese Monstad
Uppsala University, therese.monstad@dis.uu.se

Follow this and additional works at: http://aisel.aisnet.org/ecis2008

DESIGNING AND EVALUATING AN INTERACTIVE VIDEO WEBSITE FOR ORGANIZATIONAL LEARNING

Hrastinski, Stefan, Computer and Systems Science, Department of Information Science, Uppsala University, Box 513, 751 20 Uppsala, Sweden, stefan.hrastinski@dis.uu.se

Monstad, Therese, Media and Communication Science, Department of Information Science, Uppsala University, Box 513, 751 20 Uppsala, Sweden, therese.monstad@dis.uu.se

Abstract

The interest in audio and video technologies has surged as IT infrastructures and network capacities have improved. Surprisingly, there have been rather few studies on such emerging technologies in organizational settings. In this research-in-progress paper, we explore the impact of the use of an interactive video website, comprising videos promoting a company's core values, on organizational learning. More specifically, we intend to study how the use of a video website affects the awareness of a company's core values and whether this will also influence the behaviour of the employees. Two web surveys are being designed for the study. The first survey was conducted prior to introducing the video website. In this paper, we present initial results from the first survey. We are currently in the process of designing a follow-up questionnaire in order to assess cognitive and behavioural effects of introducing the video website. As a complement, we will also conduct interviews and observations of how the video website is used.

Keywords: Video website, information technology, organizational learning, cognitive development, behavioural development, internal communication.

1 INTRODUCTION

IT is increasingly used for internal communication. Often, employees drive this development by, for example, communicating with colleagues through instant messaging systems. In other cases, IT is introduced and promoted by the management of an organization. In the study of this paper, the management of a biotechnology and medical company decided to introduce an interactive website with functionality that is similar to YouTube. Figure 1 shows a screenshot of the website. Employees can watch and rate videos, post questions and share opinions regarding the content. We will refer to this technology as a *video website*. Notably, the interest in audio and video technologies has surged as IT infrastructures and network capacities have improved (Krishna, 2007). Surprisingly, there have been rather few studies on such emerging technologies in organizational settings. Videos that give a background to and describe the core values of the company have been produced. The reason for focusing on the core values was that the management felt that the awareness of the values, and how the values can guide work, needed to be improved. Over the last few years, the founder and management felt that the company stagnated and that the spirit of the enterprise had been lost. By implementing company core values with the overall focus on the entrepreneurial spirit, they believed that the employees' attitudes and behaviour could improve. Also, they hoped that the employees would become more innovative.
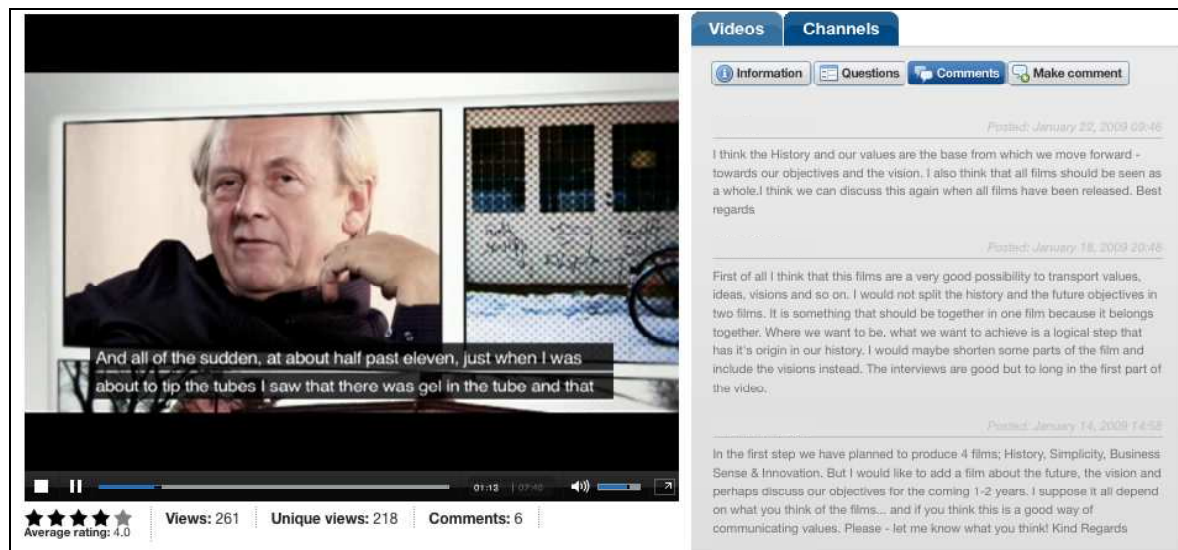

Figure 1. Screenshot of the interactive video website.

Many scholars have stressed the importance of *values* and their effect on organizational performance over the years (Baum, Locke & Kirkpatrick, 1998; Collins & Porras, 1996; Ferguson & Milliman, 2008; Lencioni, 2002; Pattakos, 2004). Core values can be defined as describing what is important for a company and they can be used to guide employee behaviour (Ferguson & Milliman, 2008; Lencioni, 2002). A thorough implementation of carefully prepared values can lead to success while meaningless values might be highly destructive (Lencioni, 2002). Our case company has decided that it is time to enhance the employee's knowledge about the company core values with the purpose to regain the entrepreneurial spirit in the company. In order to do so the core values, "simplicity", "professionalism" and "innovation", are being presented in four videos. In the first video, the history of the company is presented and it is emphasized that the core values have been important over the years, ever since the company was established. The founder of the company set up the business through these core values. The remaining three videos each present one core value.

In this research-in-progress paper, we explore the impact of the use of an interactive video website on organizational learning (OL). More specifically, we intend to study how the use of the video website

affects the awareness of a company's core values and whether this will also influence the behaviour of the employees. While there is some literature on the relationship between IT on OL (for a review, see Robey, Boudreau & Rose, 2000), the relationship between emerging technologies, such as Web 2.0 technologies, and OL has not been sufficiently explored. We extend previous research that has mainly been focused on text-based knowledge management systems, such as knowledge repositories of best practices, and communication systems, such as e-mail and groupware (Kane & Alavi, 2007; Robey et al., 2000).

While there are a number of competing theories that attempt to explain development, learning and change in organizations, the OL field has consistently emphasized these processes over the years (Argyris & Schön, 1978; Fiol & Lyles, 1985; March, 1991). The basic building block of most theories and models of OL is *cognitive* and *behavioural development* (Fiol & Lyles, 1985; Templeton, Lewis & Snyder, 2002). Cognitive development is commonly referred to as learning level (Fiol & Lyles, 1985) and can be described as developing shared understanding among members of an organization (Hedberg, 1981). Behavioural development is commonly referred to as change level (Fiol & Lyles, 1985) and can be described as the change of behaviour and actions of members of an organization (Argyris & Schön, 1978; Daft & Weick, 1984). Similarly, Argyris and Schön (1978) differentiate between espoused theories, i.e., theories we can state verbally, but which do not necessarily affect our behaviour, and theories-in-action, i.e., theories that actually affect our behaviour.

To explore the effects of the interactive video website on OL, we investigate the effect on cognition and behaviour, because these are established concepts and make it possible to extend previous research. This makes it possible to validate previous research in a new setting, contribute to developing a cumulative research tradition, and enables deeper exploration of foundational ideas (Kane & Alavi, 2007). More specifically, we explore how the video website can support or hinder cognition and behaviour, and posit the following questions: How and why does the use of the video website support or hinder an increased awareness of the company's core values? How and why does the use of the video website support or hinder improved behaviour?

In the section below, previous research on IT, interactive video and OL is reviewed, and it is reflected on possible effects of using the video website. Then, the research setting and methods of the study are discussed. In the fourth section, we present initial results based on the first of two surveys. We conclude by discussing the next steps of our study.

2   INTERACTIVE VIDEO AND ORGANIZATIONAL LEARNING: LEARNING THROUGH TRANSMISSION OR INTERACTIVITY?

In this section, we first review research on IT and organizational learning and then discuss the potential impact of interactive video on learning. The section is concluded with a reflection on to what extent the interactive video website might support transmission versus interactivity.

2.1   Information technology and organizational learning

The relationship between IT and OL is receiving an increasing amount of attention because of the potential to affect organizational outcomes positively. In the literature on IT and OL, there are two streams of research: studies that apply OL concepts for implementing and using IT in organizations and studies focused on the design of IT applications to support OL (Robey et al., 2000). This study contributes to the latter of these streams, by designing and evaluating a video website for OL.

Information supports and stimulates learning and therefore it has been argued that IT can enable and facilitate OL (Janson, Cecez-Kecmanovic & Zupančič, 2007; Robey et al., 2000). IT can effectively be used to support attributes of OL, such as acquiring, sharing, modifying, interpreting and storing information and knowledge (Templeton et al., 2002). Differences in OL when using IT can be related to characteristics of employees, such as individual learning rates (Kane & Alavi, 2007; March, 1991). For instance, IT may support OL in some situations (e.g., with fast learners) but may be ineffective or even hampering in other situations (e.g., with slow learners). IT has been described as a double-edged

sword, because it has the potential to both help and hinder learning (Kane & Alavi, 2007; Robey et al., 2000). Previous research suggests that successful use of IT as support for OL is dependent on the intertwining of both technical and organizational factors.

The right IT-enabled learning mechanism employed under the right conditions can benefit OL. However, the wrong mechanisms for particular conditions can be detrimental (Kane & Alavi, 2007). Thus, IT and its effect on OL can only be fully understood by examining the ways it is activated in organizational contexts (Leonardi, 2007). Members of organizations often use IT in different ways than managers or system designer intended (Orlikowski, 1996). By adopting the social information processing model (Salancik & Pfeffer, 1978) when studying how organizational members use media, scholars found that members of a work group shared similar attitudes toward IT and use IT in similar ways (Fulk, 1993; Fulk, Steinfield, Schmitz & Power, 1987). Another study by Fulk (1993) found that social influences on attitudes toward IT and the use of IT are consistently stronger if members of a work group are highly attracted to each other than if they feel low attraction to their work group. However, these social constructivist models are not deterministic, which means that they do not presume that social interaction is the sole explanation for acknowledged attitudes and behaviours toward certain IT (Fulk, 1993).

Particular tools, such as information repositories, where information can be stored and retrieved, promote homogeneity and tend to result in improved learning for the short term. Other tools, such as online communities, which connect employees who share common interests, promote heterogeneity and exploration and tend to lead to better long-term results, but are less effective for leveraging knowledge in the short term (Kane & Alavi, 2007). Robey et al. (2000) argue that communication technologies are useful for supporting organization-wide communication, which may support questioning of static assumptions and creation of new knowledge.

2.2   Interactive video and learning

As noted in the introduction, the interest in audio and video technologies has surged as IT infrastructures and network capacities have improved. However, there have been remarkably few studies on such emerging technologies in organizational settings. Studies that focus on organizational settings and emerging technologies emphasize the tremendous impact of emerging technologies on the interaction between corporations and their stakeholders, e.g. employees, shareholders and customers (Argenti, 2006; Vielhaber & Waltman, 2008). When reviewing research, we learned that most recent studies on video focused on technical issues, video conferencing or the use of video in educational settings. A number of studies on YouTube and similar technologies are also emerging, although we did not find such studies in organizational settings.

In a literature review on learning from video, Cennamo (1993) identified three key factors that can be expected to influence the mental effort of users. First, characteristics of the media, such as the content of the videos and the questions for discussion, may affect learning. Second, characteristics of the user, such as the perception of the usefulness of interactive video, may affect learning. Third, characteristics of the task, such as the purpose interactive video is used for, may affect learning.

Previous research has indicated that visual information is more memorable and that the combination of audio and visual information can increase comprehension and retention (Baggett, 1984; Kozma, 1991). These findings are supported by a more recent study with 147 psychology students. This study reported that digital video was more effective than text for presenting real-life situations in order to enhance learner satisfaction, comprehension and retention (Choi & Johnson, 2007). In studies of a management course and an English course, it was argued that digital video promoted contextual aspects of learning (South, Gabbitas & Merrill, 2008) and emotional involvement in the learning process (Hakkarainen, Saarelainen & Ruokamo, 2007). South and colleagues (2008) argue that digital video can provide situated cognition, i.e. connecting knowledge to relevant activities, contexts and cultures in which it is used (Brown, Collins & Duguid, 1989). When they compared video with a face-to-face setting, it was concluded that the first setting was characterized by learning through reflection, while the latter setting included more collaboration and conversation. In a study of YouTube, Lange (2008) suggested that social network technologies may need to support publicity or privacy depending

on different individuals' and groups' social needs. She argued that technical features could beneficially give users control in deciding whether to create public or private interactions, which may stimulate participation.

Drawing on the above, the use of the interactive video website has the potential to promote homogeneity and short-term learning of the company's core values. OL theorists have, however, argued that mass communication, such as video messages, or mass meetings where managers communicate core values, are often not sufficient. Top-down communication is then applied and the transmission view on communication is in focus. Members of the organization commonly hear very different things in these situations and therefore the expectations of management are often not met (Schein, 1993). Successful organizational change communication is instead based on the creation of opportunity for the organizational members to be part of the communication and contribute to the organizational framework (Langer & Thorup, 2006; Weick, Sutcliffe & Obstfeld, 2005). Weick (1979) has gone as far as to argue that communication constitutes organizations and that people organize in order to solve equivocal information. A transmission view, i.e. top-down communication with the idea of the organization as a single body and the management voice as the one and only (Langer & Thorup, 2006), would in that sense be fatal for the organization. In order to avoid the transmission view, our case company has encouraged the members of the organization to ask questions and discuss the content of each video. Questions, such as how a particular aspect of the core values can be implemented in daily work, are suggested for discussions on the website. Thus, the interactive features of the website have the potential to, but will not necessarily, support discussion and exploration of ideas.

3   RESEARCH SETTING AND METHOD

The company studied in this paper is a biotechnology and medical device company that primarily develops, manufactures, markets and sells medical products. It was founded in 1987 and has grown rapidly ever since. The company has more than 700 employees in 20 countries, with 480 at the company's head office and production facility in Sweden. Traditionally, meetings have been organized regularly which most staff has attended. However, as the company has grown, these meetings have turned into information meetings with a transmission view in focus, i.e. management is informing the staff but there is little room for discussions and questions from the staff. The management is therefore searching for new communication forums where questions and feedback from the staff are better supported and encouraged. This has included the use of an intranet and, more recently, the introduction of an interactive video website described above and four video productions. The website and videos were produced by a small company specialized on video, audio and website development. A video website was preferred over streaming video, because of the potential to support discussion and contributions from employees. The videos describe the company core values and include employee stories. The reason for focusing on the core values was that the management felt that the awareness of the values, and how the values can guide work, needed to be improved. With these stories, employees transform tacit knowledge about company core values into more explicit and usable knowledge by giving examples on how they implement company core values into their daily work. The employees are given the opportunity to comment on the videos, ask questions and rate the content. Currently, it is not compulsory to use the website and the discussions are not moderated. It is possible to give anonymous comments, although all participants so far have at least stated their first name. The question is if the interactive video website can support OL and lead to greater integration of company core values into the daily work (Weick et al., 2005).

3.1   Questionnaires

Two web surveys were designed for the study. The first survey was conducted in October 2008 prior to introducing the video website. The second survey is planned to be conducted in August 2009, after the introduction of the website and the four videos. By comparing the results of the surveys, it will be possible to explore the effects of the use of the video website on OL. The development and validation

of measures of OL is an important research contribution in itself as the most critical area of importance has been argued to be the development of methods for measuring OL and the impact of learning on organizations and their performance (Lyles & Easterby-Smith, 2003). A new video will be released every second month. The first questionnaire collected descriptive data describing the respondents and their preferred modes of communication. It also included measures on cognition and behaviour in relation with the company's core values. The second questionnaire will also include measures on interactivity and employee satisfaction when using the video website.

For *cognition*, we drew on the concept of cognitive development (Fiol & Lyles, 1985), defined as developing shared understanding among members of an organization (Hedberg, 1981). Shared beliefs play a vital role for enabling the improvement of actions across an organization (Senge, 1990). However, cognitive development does not necessarily reflect behavioural development (Fiol & Lyles, 1985). For example, in the study of this paper, the use of the video website might support an increased awareness of the company's core values but this does not necessarily mean that the organizational behaviour will change. The measure included six items and achieved a high level of reliability (Cronbach's alpha = 0.88). For example, one item stated: "I can describe the company's values for a friend".

For *behaviour*, we built on the concept of behavioural development (Fiol & Lyles, 1985), defined as the change of behaviour and actions of members of an organization (Argyris & Schön, 1978; Daft & Weick, 1984). Behavioural development does not necessarily reflect cognitive development (Fiol & Lyles, 1985). For example, in the study of this paper, the use of the video website might stimulate employees to reflect on work practices, but behavioural changes do not necessarily reflect the company core values. We created eight items. The measure achieved a high level of reliability (Cronbach's alpha = 0.83). For example, one item stated: "I work on the basis of the company's values".

In the second questionnaire, we will also include a measure on *interactivity*. In order to understand the influence of the video website on OL, it is important to understand whether they use it in an interactive way. The use of the video website might support heterogeneity, where employees contribute and share ideas, which has been argued to be one of the key dimensions of OL (Robey et al., 2000). The measure will mainly include items adapted from Webster and Hackley's (1997) survey instrument. For example, one item is: "I was comfortable when communicating on the web site".

We will also include a measure on *satisfaction*. It is important to assess whether employees enjoy using the video website. If employees do not want to use the website it is unlikely that it will support OL. The measure will mainly include items adapted from Webster and Hackley's (1997) survey instrument. For example, one item is: "In the future, I will try to avoid using the web site" (reverse-coded).

It was estimated that 450 employees were located at the Swedish site when the first questionnaire was distributed. Out of these, 280 employees completed the questionnaire, representing a response rate of 62 percent. Their mean age was 40 years with ages ranging from 24 to 63 years. The mean for duration of employment at the company was 5 years, ranging from 0 to 17 years. Sixty-one percent (n=170) of the respondents were women.

3.2   Interviews and observations

Rather than simply surveying whether OL took place, we also want to explain why the members of the organizations were affected by the video website initiative. Individual interviews will be used in order to include opinions that employees often prefer to express in more private settings (Silverman, 2006). We will continuously observe how the video website is being used. Comments and discussions on the video website are stored and can subsequently be analyzed. We also have access to quantitative data, such as how many times each video has been accessed.

4 INITIAL RESULTS

The management of the company believed that employees were not aware of and affected by the company's core values, which were underlying reasons for why they decided to produce a website with videos. However, as displayed in Table 1, the cognition measure indicates that employees are aware of the core values (M=5.2). This was especially apparent when asked whether they felt they had good knowledge on the company's values (M=5.8). As shown in Table 2, the mean for the behaviour measure was slightly lower (M=5.0). Many employees felt they worked on the basis of the company's values (M=5.4) and that these values could influence the company's future positively (M=5.5). An interesting finding is that the means were much lower when respondents were asked if it is difficult for employees to work on the basis of the values (M=4.1) and if they think that most employees work on the basis of the company's values (M=4.3).

	Mean	Std. Deviation
I have good knowledge on the company's values.	5.8	0.9
I can describe the company's values for a friend.	5.3	1.2
I can describe the company's value "simplicity" for a friend.	5.1	1.4
I can describe the company's value "professionalism" for a friend.	5.1	1.3
I can describe the company's value "innovation" for a friend.	5.2	1.3
I think that most employees at the company are aware of the company's values.	5.1	1.3
Total	5.2	1.3

Table 1. Descriptive data for the cognition measure (n=280).

	Mean	Std. Deviation
The company's values influence my daily work.	5.2	1.1
I work on the basis of the company's values.	5.4	1.1
I feel that it is difficult for us to work on the basis of the company's values. (reverse-coded)	4.1	1.5
I think that the company's values can influence it's future positively.	5.5	1.2
I think that most employees work on the basis of the company's values.	4.3	1.4
The company's value "simplicity" affects my work.	5.2	1.3
The company's value "professionalism" affects my work.	5.1	1.4
The company's value "innovation" affects my work.	5.1	1.3
Total	5.0	1.4

Table 2. Descriptive data for the behaviour measure (n=280).

The respondents were also asked how they felt they had gained information about the company's values (see Table 3). Prior to this study, one web video had been distributed to the staff by sending a link by e-mail. In the video, the CEO discussed the future of the company and the company's core values. 116 of the respondents (41%) felt they had gained information concerning the company's core values through web video. The respondents were also asked how they would like to gain information (see Table 4). Most employees preferred other means of communication as compared to web video.

	Frequency	Percent
Mass meeting	161	58%
Intranet	148	53%
Workshop	145	52%
Web video	115	41%
Personal with manager	87	31%
Newsletter	78	28%
E-mail	42	15%
Other	31	11%

Table 3. How employees felt they had gained information about the company's core values (n=280).

	Mean	Std. Deviation
Personal with manager	2.4	1.6
Mass meeting	3.0	1.8
Intranet	3.1	1.6
Email	3.7	2.0
Newsletter	4.4	1.6
Web video	4.5	1.8
Workshop	5.7	1.9
Other	7.7	1.1

Table 4. Preferred means of communication (n=280, reverse-coded).

In Table 5, a correlation matrix is presented. It includes descriptive variables, the cognition and behaviour constructs, and the variables video experience and video preference. Video experience refers to whether employees felt they gained information concerning the company's core values through web video. Video preference refers to the degree employees would like to receive information through web video. A number of strong correlations were identified. Older members of the organization were more likely to prefer web video for gaining information ($r=0.19$, $p>0.01$). Employees with a higher level of education were more likely to state that they had gained information concerning the company's core values through video ($r=0.20$, $p<0.01$). In line with the OL literature, there is a strong correlation between cognition and behaviour ($r=0.37$, $p<0.01$), i.e., shared understanding among members of an organization is closely related with their behaviour and actions (Senge, 1990). A correlation, although it should be noted that it is rather weak, was also found between whether employees felt they had gained information concerning the company's core values through web video and whether they felt their behaviour was in line with the core values ($r=0.13$, $p<0.05$).

	Gender	Age	Education	Years empl.	Video exp.	Video pref.	Cognition	Behaviour
Gender	**1.00**							
Age	.04	**1.00**						
Education	-.06	.01	**1.00**					
Years empl.	.03	**.22****	**-.12***	**1.00**				
Video exp.	.07	.11	**.20****	.09	**1.00**			
Video pref.	-.06	**.19****	-.03	-.01	**.23****	**1.00**		
Cognition	-.04	.03	.03	.11	.11	**-.15***	**1.00**	
Behaviour	-.01	.11	-.05	.07	**.13***	-.04	**.37****	**1.00**

Table 5. Correlation matrix.

* Correlation is significant at the 0.05 level ($p < 0.05$).
** Correlation is significant at the 0.01 level ($p < 0.01$).

5   INITIAL CONCLUSIONS AND FUTURE RESEARCH

The initial analysis of the first questionnaire reveals a number of interesting findings. In general, most employees felt they had good knowledge on the company's values and felt they worked on the basis of the company's values. However, when asked if they believe that their colleagues work on the basis of the company's values, respondents were neutral. Notably, these findings differ considerably from the perceptions of the managers, who believed that the employees had limited understanding of the company's values. It can also be noted that the employees prefer other means of communication as compared with web video. When we have conducted the second questionnaire, we will assess whether their opinions regarding web video have changed.

Rather unexpectedly, older members of the organization were more likely to prefer web video for gaining information, which contradicts research calling for ways to engage the "YouTube generation" (Duffy, 2007). Thus, the relationship between generations and new media are more complex than is often assumed – web video does not necessarily cater the needs of younger generations in organizational settings just because they are familiar with video websites. We have also learned that education might help explain why some individuals felt they gained information concerning the company's core values through web video, while others did not. Although it should be noted that all employees at the company have computer access, one explanation might simply be that employees with a higher level of education use computers to a larger extent than those with a lower level of education who are more likely to work in the production line.

The presented results are based on self-reported data, which probably is the main limitation of this research-in-progress paper. However, we believe that these data give an indication of the impact of the use of an interactive video website on OL. As a complement, we will conduct a follow-up survey, observe the use of the video website and conduct interviews. We are currently in the process of designing a follow-up questionnaire in order to assess behavioural and cognitive effects of introducing the interactive video website. The development and validation of measures of OL is an important research contribution in itself as the most critical area of importance has been argued to be the development of methods for measuring OL and the impact of learning on organizations and their performance (Lyles & Easterby-Smith, 2003). As a complement, we will also conduct interviews in order to better explain the results of the surveys. For example, the results of the surveys can indicate whether the cognition and behaviour of the employees were improved in line with the core values, but they cannot explain how and why this occurred. Combining insights from conducting surveys, interviews and observations of the use of the video website will enable cross-validation of findings through triangulation and a richer, fuller description of the effects on OL. In our further research, we intend to explore questions, such as the following: Which are the cognitive and behavioural effects of using the video website? How do other factors, such as demographic factors, interactivity and satisfaction, influence cognitive and behavioural effects of using the video website?

References

Argenti, P. A. (2006). How technology has influenced the field of corporate communication. Journal of Business and Technical Communication, 20(3), 357-370.

Argyris, C., & Schön, D. A. (1978). Organizational learning. Reading, MA: Addison-Wesley.

Baggett, P. (1984). Role of temporal overlap of visual and auditory material in forming dual media associations. Journal of Educational Psychology, 76(3), 408-417.

Baum, J. R., Locke, E. A., & Kirkpatrick, S. A. (1998). A longitudinal study of the relation of vision and vision communication to venture growth in entrepreneurial firms. Journal of Applied Psychology, 83(1), 43-54.

Brown, J. S., Collins, A., & Duguid, P. (1989). Situated cognition and the culture of learning. Educational Researcher, 18(1), 32-42.

Cennamo, K. S. (1993). Learning from video: Factors influencing learners' preconceptions and invested mental effort Educational Technology Research and Development, 41(3), 33-45.

Choi, H. J., & Johnson, S. D. (2007). The effect of problem-based video instruction on learner satisfaction, comprehension and retention in college courses. British Journal of Educational Technology, 38(5), 885-895.

Collins, J. C., & Porras, J. I. (1996). Building your company's vision. Harvard Business Review, 74(5), 65-77.

Daft, R. L., & Weick, K. E. (1984). Toward a model of organizations as interpretation systems. Academy of Management Journal, 9(2), 284-295.

Duffy, P. (2007). Engaging the YouTube Google-eyed generation: Strategies for using web 2.0 in teaching and learning. Paper presented at the 6th European Conference on e-Learning, Copenhagen.

Ferguson, J., & Milliman, J. (2008). Creating effective core organizational values: A spiritual leadership approach. International Journal of Public Administration, 31(4), 439 - 459.

Fiol, C. M., & Lyles, M. A. (1985). Organizational learning. Academy of Management Review, 10(4), 803-813.

Fulk, J. (1993). Social construction of communication technology. Academy of Management Journal, 36(5), 921-950.

Fulk, J., Steinfield, C. W., Schmitz, J., & Power, J. G. (1987). A social information processing model of media use in organizations. Communication Research, 14(5), 529-552.

Hakkarainen, P., Saarelainen, T., & Ruokamo, H. (2007). Towards meaningful learning through digital video supported, case based teaching. Australasian Journal of Educational Technology, 23(1), 87-109.

Hedberg, B. (1981). How organizations learn and unlearn. In P. C. Nystrom & W. H. Starbuck (Eds.), Handbook of organizational design. London: Oxford University Press.

Janson, M., Cecez-Kecmanovic, D., & Zupančič, J. (2007). Prospering in a transition economy through information technology-supported organizational learning. Information Systems Journal, 17(1), 3-36.

Kane, G. C., & Alavi, M. (2007). Information technology and organizational learning: An investigation of exploration and exploitation processes. Organization Science, 18(5), 796-812.

Kozma, R. B. (1991). Learning with media. Review of Educational Research, 61(2), 179-211.

Krishna, M. (2007). Realizing the promise of enterprise video communications. Journal of Digital Asset Management, 3(4), 197-208.

Lange, P. G. (2008). Publicly Private and Privately Public: Social Networking on YouTube. Journal of Computer-Mediated Communication, 13(1), 361-380.

Langer, R., & Thorup, S. (2006). Building trust in times of crisis: Storytelling and change communication in an airline company. Corporate Communications: An International Journal, 11(4).

Lencioni, P. M. (2002). Make your values mean something. Harvard Business Review, 80(7), 113-117.

Leonardi, P. M. (2007). Activating the information capabilities of information technology for organizational change. Organization Science, 18(5), 813-831.

Lyles, M., & Easterby-Smith, M. (2003). Organizational learning and knowledge management: Agendas for future research. In M. Easterby-Smith & M. Lyles (Eds.), Handbook of organizational learning and knowledge management (pp. 639-652). Malden, MA: Blackwell.

March, J. G. (1991). Exploration and exploitation in organizational learning. Organization Science, 2(1), 71-87.

Morgan, D. L. (1997). Focus groups as qualitative research. Thousand Oaks: Sage Publications.

Orlikowski, W. J. (1996). Improvising organizational transformation over time: A situated change perspective. Information Systems Research, 7(1), 63-92.

Pattakos, A. N. (2004). The search for meaning in government service. Public Administration Review, 64(1), 106-112.

Robey, D., Boudreau, M. C., & Rose, G. M. (2000). Information technology and organizational learning: A review and assessment of research. Accounting, Management and Information Technologies, 10, 125-155.

Salancik, G. R., & Pfeffer, J. (1978). A social information processing approach to job attitudes and task design. Administrative Science Quarterly, 23(2), 224-253.

Schein, E. H. (1993). On dialogue, culture, and organizational learning. Organizational Dynamics, 22(2), 40-51.

Senge, P. (1990). The fifth discipline: The art and practice of the learning organization. New York: Doubleday.

Silverman, D. (2006). Interpreting qualitative data: Methods for analyzing talk, text and interaction. London: Sage.

South, J. B., Gabbitas, B., & Merrill, P. F. (2008). Designing video narratives to contextualize content for ESL learners: a design process case study. Interactive Learning Environments, 16(3), 231-243.

Templeton, G. F., Lewis, B. R., & Snyder, C. A. (2002). Development of a measure for the organizational learning construct. Journal of Management Information Systems, 19(2), 175-218.

Vielhaber, M. E., & Waltman J. L. (2008). Changing uses of technology: Crisis communication responses in a faculty strike. Journal of Business Communication, 45(3), 308-330.

Webster, J., & Hackley, P. (1997). Teaching effectiveness in technology-mediated distance learning. Academy of Management Journal, 40(6), 1282-1309.

Weick, K. E. (1979). The social psychology of organizing. New York: Random House.

Weick, K. E., Sutcliffe, K. M., & Obstfeld, D. (2005). Organizing and the process of sensemaking. Organization Science, 16(4), 409-421.

Vera, D., & Crossan, M. (2003). Organizational learning and knowledge management: Toward an integrative framework. In M. Easterby-Smith & M. Lyles (Eds.), The Blackwell handbook of knowledge management and organizational learning (pp. 122-141). Oxford, UK: Blackwell Publishing.