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In this issue:

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Keywords: blog, weblog, learning journal, global IS, videoconferencing

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EDSIG activities include the publication of ISEDJ, the organization and execution of the annual ISECON conference held each fall, the publication of the Journal of Information Systems Education (JISE), and the designation and honoring of an IS Educator of the Year. • The Foundation for Information Technology Education has been the key sponsor of ISECON over the years. • The Association for Information Technology Professionals (AITP) provides the corporate umbrella under which EDSIG operates.

Global Media: Incorporating Videocams and Blogs in a Global IS Management Class

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Abstract

This paper reports on the results and lessons learned from a pilot project to incorporate blogs and desktop video into a course on Global IS Management. The main purpose of the project was for students to have a simulated experience of working together on distributed, or "virtual," global teams. The paper discusses the pedagogical goals of the class and how the two technologies were intended to support those goals. It provides brief overviews of the technologies, and then discusses the outcomes of incorporating them into the class. Blogs are web logs that can serve as on-line learning journals, and as vehicles for student reflection as well as interaction. The blogs did not engage the students as much as expected, perhaps because they used free blog sites and were hesitant to post their thoughts for the entire world to see. The students incorporated remotely located team members via video into team presentations to their classmates. They encountered some technical challenges and bandwidth limitations, but this technology did engage the students as well as provided them with valuable technical experience and helped them develop on-line communication skills. The videocams should prove particularly useful for distance learning courses, in providing students with visual interaction with their instructor and each other that they might not otherwise have.

Keywords: Blog, learning journal, global IS, videoconferencing

1. INTRODUCTION

An increasing number of organizations are becoming global in scope, providing products and services, conducting operations, and employing workers across national boundaries (Friedman, 1999). Information and communication technologies (ICTs) serve as a critical component in making such organizations successful (Boudreau et al., 1998). Within and between these organizations, an increasing proportion of work is accomplished by "virtual" project teams that interact primarily via ICTs (Lipnack and Stamps, 1997; Townsend and DeMarie, 1998).

Companies form teams to bring company-wide resources to bear in solving problems and accomplishing tasks. Virtual teams offer companies the opportunity to bring employees' diverse skills, knowledge, and experience together even though they are not collocated. Even collocated teams, however, are presented with challenges such as developing group cohesion, resolving conflict, and identifying, agreeing on, and achieving shared goals (Hackman and Morris, 1975). Reliance on electronic communication makes these activities even more challenging. Today's and tomorrow's graduates need to learn not only how to work on teams, but to work on teams across time and geography using ICTs, appropriately and effectively. They need to learn how to work within a global organizational context, and how to apply ICTs to support the goals and activities of these transnational enterprises.

This paper describes a pilot project which incorporated emerging technologies, specifically Web Logs and desktop video cameras, into a course in Global IS Management, in an effort to simulate the use

of ICTs in global virtual teams. The paper begins with a description of the goals and background of the project. It presents an overview of the course and its pedagogical objectives, provides brief overviews of Web Logs and desktop video, describes the implementation of the technologies in the context of the course, and then concludes with lessons learned and implications for future research and educational practice.

2. PROJECT BACKGROUND

Although Global IS Management is not an explicit knowledge area addressed by IS curriculum models (Gorgone et al., 2002), we believe, as supported by the discussion in the previous section, that it represents an increasingly important knowledge area for Information Systems majors. At our university, it is an upper division elective that is taken by most IS majors to satisfy their International coursework requirement, although it is open to any students who have the pre-requisites. The course has several purposes. One is to prepare students to work in global organizations, by increasing their knowledge and awareness of other countries, regions, and cultures. They need to develop an understanding of the multiple dimensions and challenges of conducting international business: economic, cultural, political, legal, structural, technical. The Global IS Management course further emphasizes the essential role of Information Technology (IT) in supporting the goals and activities of transnational enterprises. Finally, the course should serve to develop the students' skills in using electronic communication technologies needed for global teamwork, so they can not only deploy it effectively themselves, but also serve as pro-active leaders in implementing best practices in the use of ICTs throughout their respective organizations.

A large majority of the students at the project institution are traditional age students, and management concepts can sometimes be abstract, dry, and difficult for them to connect to their personal experiences. Thus, we strive to increase their opportunities for hands-on, active approaches to learning. Some of the pedagogical approaches used in this course include: 1) assigning the students to work on teams to develop a Web site that presents research on an assigned region or country, 2) using on-line discussion tools for responding to course readings, and 3) participating in synchronous chats on specific assigned topics. This project sought to increase those active learning opportunities by integrating Web logs (blogs) and desktop video cameras as additional pedagogical tools.

Although students in a traditional classroom have opportunities to work on teams, they often do not experience the additional challenges and benefits of communicating primarily electronically. This project required students in the Global IS Management class to communicate, collaborate, and coordinate their projects via ICTs, by using on-line courseware (WebCT), blogs, and video cameras for coordinating and collaborating on team projects as well as for individual learning. Many companies incorporate videoconferencing support for project teams, appreciating the additional communication richness provided by visual non-verbal communication and social interaction needed for more effective interaction. This project used desktop video cameras in order to provide students with at least some limited experience in learning to use the range of tools that they will encounter in the global workplace. Table 1 lists selected learning objectives from the course syllabus specifically targeted by implementing the blogs and video cameras.

Table 1: Pedagogical Goals

Student Learning Outcomes

Upon successful completion of this course, students will be able to:

- Explain **how** and **why** businesses use Information Systems (IS) to operate globally
- List and **discuss international business issues** that affect global IS implementation
- **Discuss cultural, physical, structural, and technical boundaries** that must be addressed in order to build and maintain global information systems
- **Compare and contrast the differences in global and local ICT needs** and infrastructures between regions of the world
- Work on project teams that **simulate distributed global teams** and describe issues facing distributed teams

3. WEB LOGS

What is a web log, or blog? A blog is a personal Web site that allows the owner to write entries and display them to the world via the Web. The entries are posted in reverse chronological order such that the most recent one appears first. These entries can include hyperlinks and images, readers can submit comments, which are then available to other readers, and many blogs generate searchable archives. Although a blog can be created from scratch using HTML, most blogs originate from software applications developed expressly for this purpose, both on public Web sites (e.g., blogger.com, or livejournal.com), or downloadable and installable locally (Fichter, 2003). The simple, friendly interfaces make it easy for anyone to quickly create a blog, and the number is growing exponentially. Recent attempts to count the number of blogs on the Web estimate at least 15 million in existence (see technorati.com or blogcount.com). Although no doubt some are created and seldom if ever used, many have become frequently visited political and journalistic sources of current information, public discussion, and entertainment (e.g., instapundit.com and wonkette.com).

Blogs in Academia

A number of universities are implementing blogs locally for numerous purposes, including development of learning communities (e.g., *UThink* at the University of Minnesota, blog.lib.umn.edu), recruitment of prospective students (e.g., Wharton MBA, diaries.wharton.upenn.edu), for dissemination and discussion of individual faculty research and other creative endeavors (Glenn, 2003), and to support individual courses in a broad range of fields (Ferdig and Trammell, 2004);(Huffaker, 2004).

The use of blogs for pedagogical purposes is based on a more traditional approach to learning, that of Learning Journals, also known as Learning Logs. Learning logs can be structured for use in a variety of ways, but the main purpose is to stimulate the student's reflection on the course content and to make the students more explicitly aware of their own learning, by having them articulate it through writing regularly in a log or journal (Moon, 2000). The instructor can then review the log, assess the student's learning, and optionally provide feedback. Learning logs represent an approach known as active or discovery learning in which the students construct their own knowledge, are thus more engaged, and in turn are more likely to retain the knowledge they now own (Vygotsky, 1978).

Du and Wagner (Wagner, 2003; Du and Wagner, 2005) describe the extension of this concept to Blogs, by pointing out that when students post their reflections on-line, they can more easily be shared by other students (as well as the instructor), who can easily add comments. By having access to each other's blogs, they can learn from each other (Zhu, 1996). The theoretical result is shared knowledge construction (Damon, 1984), which further enhances the depth and retention of learning.

4. DESKTOP VIDEO CAMERAS

Videoconferencing has been used for decades in support of organizational communication and team collaboration, as well as for distance education (Pugh, Parchman and Simpson, 1992). The main drawbacks to more widespread application are the high cost and bandwidth required. More recent developments in electronics have produced inexpensive cameras intended for individual desktop use, widely available for $50-100 each. As part of this project, we purchased 20 video cameras, which include built-in microphones and which connect via commonly available USB ports. The cameras are intended to rest on or near the desktop computer, pointed at the user's face. Each user needs a camera and the same peer-to-peer software application, which connects the two users together over the Internet. An example application is chat software, such as AOL Instant Messenger, or hosted public Web sites such as *CUWorld.com*, which focuses specifically on video chat.

For this project we selected *Sightspeed* (www.sightspeed.com), which is inexpensive (offers a free demo download), easy to install and use, and has a friendly, simple interface. With *Sightspeed*, the camera and the software must first be installed and configured on each user's desktop or laptop. The users exchange e-mail addresses in advance, and these e-mails are added to a list

of potential contacts, similar to instant messaging. As with most applications, the screen displays a window for both sender and receiver, once they are connected, and the users can then chat via voice and text.

Videocams in the Global IS Course

For the class, each team of 3-4 students checked out two of the cameras for the duration of the semester. They were instructed to practice communicating among themselves, and/or with the instructor. As part of their team presentations to the class, which occurred periodically throughout the semester, one team member presented his or her part via videocam from a remote location (home, dorm, work, etc.).

5. OUTCOMES AND DISCUSSION

Based on a brief survey administered at the beginning of the course, most students had surprisingly little or no knowledge or experience with either blogs or video conferencing. Thus, simply incorporating them into the class provided them with technical skills and experience with both types of collaborative tools, similar to other tools they are likely to encounter in the global workplace. Using the blogs simulated Intranets, common in many organizations for communication among global employees, while the challenge of communicating with each other and presenting their research to the class via electronic media such as video cameras, provided a simulation of the technical and communication issues faced by virtual teams. Table 2 maps how the two innovations supported the desired students' learning outcomes (from Table 1).

Blogs

The blogs offered the opportunity for the students to discuss organizational, technical, and social issues encountered by businesses and individuals when conducting business globally and implementing supporting information systems. Individual students displayed significant reflection, critical analysis, and articulation of their learning from the course materials (see Appendix A for examples of student entries). However, the blogs did not seem to engage the students as much as anticipated, nor was there a lot of interaction between students. The students were invited to use whatever tools they liked to create their blogs; most of them chose *blogger.com*. The disadvantage of using a public Web site is that whatever they wrote was out there for the whole world to see. We speculate that a good proportion of these traditional-age students, mostly IS majors and thus possibly inclined toward introversion, may have been hesitant to expose their ideas to such a general audience. Also, in future, we need to develop better pedagogical structures for stimulating blog submissions. Peer or cooperative learning requires structuring the interactions among the students to take on roles of peer tutors and mentors on specific tasks (Topping, 1992). Developing and analyzing critical thinking on-line also requires a more structured approach (Noordink and Naidu, 1994) than we used initially.

Table 2 – Support for Learning Outcomes

Learning Outcome	Vid cam	Blog
Explain how and why businesses use Information Systems (IS) to operate globally	x	x
List and discuss international business issues that affect global IS implementation		x
Discuss cultural, physical, structural, and technical boundaries that must be addressed in order to build and maintain global information systems	x	x
Compare and contrast the differences in global and local ICT needs and infrastructures between regions of the world		x
Work on project teams that simulate distributed global teams and describe issues facing distributed teams	x	x

Another solution is for the university to install a local implementation of blog software, requiring authentication as a valid member of the university community and thus limiting

the potential audience, as exemplified by a few of the institutions mentioned above.

Video Cameras

As expected, numerous technical obstacles arose during the students' presentations. In spite of admonitions to work these out ahead of time, some of the students clearly had not, and class time was sometimes needed to reconfigure audio and video functions at both ends of the video conference. Students supplemented their remote communication with cell phones to configure the remote connections. Dial-up bandwidth was entirely inadequate, but even when there were broadband connections at both ends, Internet traffic during the business workday appeared to affect the speed and quality of transmission, which the students had not experienced during the weekends when most of them prepared. However, for the most part the students had fun, found the experience engaging, and learned both skills and concepts.

An additional benefit of the video camera was the opportunity to provide a guest lecture from a consultant, located in different part of the country, who served as a project manager for an offshore IT sourcing project. This was directly relevant to a course module on offshore sourcing. The guest lecturer had downloaded and installed *Sightspeed*, and provided the students with an opportunity to interact with someone they might not otherwise have been able to encounter, at minimal cost.

For this first implementation of this project, students were told they could use whatever software they wanted. In future, to reduce uncertainty, they will all be required to use the same application. Extra time must be allocated for student presentations, in anticipation of technical glitches.

6. CONCLUSIONS

This paper describes a project that implemented two emerging technologies, web logs and desktop video cameras, into a course in Global IS Management. We have shown how the technologies were used to support course learning outcomes, and we have described the project goals, justification, theoretical foundations, practical implementation, and lessons learned.

IS educators should benefit from this case study when considering new ways to make some types of course content more relevant to the students' personal experience, and new tools to increase active learning and cooperative learning. These tools are already being used in a variety of academic settings and applications, and provide significant potential to support distance education and virtual learning communities, two educational approaches of increasing interest around the world.

In future implementations, we plan to develop a research design that quantitatively tests the relationships between the pedagogical methods, tools, and students outcomes. Finally, we intend to use this pilot project as a proof of concept for future endeavors to facilitate student interaction not only with their own classmates, but with students at partner institutions around the world, providing richer opportunities for raising their awareness of cultural diversity and increasing their skill in distributed, multi-cultural communication.

7. ACKNOWLEDGEMENTS

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APPENDIX

Class Blog – Instructions to Class (See http://metablog.blogspot.com)

MetaBlog
Wednesday, October 13, 2004

Grading
e - Especially good
g - Good
s - Satisfactory
u - Unsatisfactory
m - Missing

posted by DrB @ 1:54 PM 1 comments
Monday, September 13, 2004

Getting Started

INFO 465
On-line Learning Journals, AKA Blogs (Web Logs)

This semester you are required to use a Blog to reflect and articulate what you are learning in this class. Your first post is due Monday September 20 by midnight and every Monday thereafter. Some weeks I will give you specific questions or topics to respond to, and other weeks you should simply describe 2-3 things that you've learned or found interesting the past week regarding Global IT.

What is a Blog? A Blog is simply an on-line journal, where an individual shares their reflections with others.

You should post to your Blog at least once a week. You may review your classmates' blogs and post responses to theirs as well. Your Blog may include links to interesting relevant Web sites as well as relevant images.

Here are two sites where you can set up a blog (for free). However, there are other sites as well, such as geocities, so you are not limited to these.

http://www.blogger.com/start

http://www.thefreecountry.com/webhosting/freeblogging.shtml

Examples of Student Work

Student 1 (in response to a video shown in class about Communication Across Cultures)

...

There was another scenerio when a female was sitting down with her male boss and asked abut her performance and he talked about her performance based on her gender instead of actual achievements as he would have had it been a male asking about his performance.

Out in the business world you see a little bit of everything. It's embarassing however to know that differences and prejudices still exist. One of the most recent experiences that I struggle with although it is somewhat amusing is working with male counterparts in the IT field. I work on the

IT committee at my organization and sometimes we call in consultants. Quite often the consultants are white males, so when I walk through the door of my director's office with my arm extended for a handshake, you can just see the shock on their face. They ask questions and make little comments later on like, well how did you get this position, you must be very smart, etc. In choosing this field, I knew I would be going against the grain and would have to deal with prejudices being a minority and female.

Student 1 (in response to readings about anti-globalization issues)

…

For the issue of human and labor rights, I believe it is a very important issue; however it should not inhibit globalization. The solution to this is, just as the article says, certifications or standards, which can be applied to products in the market place, leaving it up to the consumer to decide which product is ethically correct. For the issue of environmental safety, I believe it is a very serious concern, as there is no real international authority to enforce environmental safety standards. This is dangerous because companies have been able to move operations to under-developed countries with little regulation, corrupt governments, and low labor costs. However, as the article brought up, globalization does hurt the environment in the short term, but in the long run it can generate monetary funds to help clean the environment. And lastly for the issue of job loss, it is very real and is continually being felt by Americans day to day. I believe that globalization does have a negative affect upon domestic employment since many U.S. companies have expanded their businesses globally their jobs have gone to other countries as well. But then again on the other side, foreign countries' companies also have set up branches in the United States thus proving that globalization can be beneficial to all countries through increasing employment levels.

…