In this issue:

Virtual Teams: Preparing Students for Global IT Management: An Empirical Exercise on Three Campuses in Two Countries

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Abstract: Outsourcing has been a major discussion topic for several years. It is common to pick up any IT trade publication and not see some article about managing global IT or IT outsourcing or IT offshoring or even the news briefs about a US company setting up some information technology operation in India or China or another locale. Outsourcing is tied to global teams or to 'virtual teams'. This paper describes how three campuses experimented with "Global Virtual Student Teams" as an approach to learning about outsourcing, outsourcing management and virtual communications. One of the campuses was in Belarus and two were in the United States.

Keywords: virtual teams, outsourcing, IS curriculum

EDSIG activities include the publication of ISEDJ and JISAR, the organization and execution of the annual ISECON and CONISAR conferences 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.

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Abstract

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1. VIRTUAL TEAMS

The Online Business Dictionary defines "Vir- tual teams" as an entity in which its "…members interact primarily through elec- tronic communications. Members of a virtual team may be within the same building or across continents" (BusinessDictionary.com). Monalisa (2008) stated "Geographically dis- tributed design teams have become crucial". Bergail, Bergiel, and Balsmeier (2006) note: "In today's market, global virtual teams are not the exception, but the rule as companies expand into the global market." King (2007)

supports that concept in her comments: "Face-to-face teams are no longer the norm in global business". Branson (2008), Har- ville (2007), McLean (2007), Tran (2007), Edwards (2004), and Brennan (2005) have discussed various aspects of virtual teams.

Christine King suggests some reasons for the growth in virtual teams (2007). "With the dramatic increase in the price of oil, global travel has decreased, making the re- liance on global virtual-team even greater". Bergiel, et. al. (2006) writes: "In today's economy, the organization that is able to

rapidly create teams of talented people to respond to customer needs is the one that will be the most successful." Tran, Latapie (2007) state: "developing capable virtual teams is challenging but critical in today's global economy."

2. VIRTUAL TEAM SUCCESS FACTORS

Goodbody (2006) conducted research into what are critical success factors in Virtual Teams. She found three such critical success factors: (1) Team formation; (2) Trust and collaboration; and (3) Team communication.

For the team formation critical success factor, Goodbody (2006) found that there needs to be clear sponsorship; goals of the virtual team need to be clear; team members need to possess the 'right' knowledge and skills to make the project successful; the project needs to be aligned with the company's goals (not a low priority project; there needs to be a successful kick-off meeting (well planned – laying out the goals of the team and the project); there needs to be an understanding of cultural differences; and the establishment of a team identity.

For the trust critical success factor, Bergiel et al (2008) noted "Trust is at the foundation of all successful relationships" and "For virtual teams to succeed, they need to build and foster their relationship carefully and intentionally". Bergiel also stated that "getting a team together physically is perhaps the best step a manager can take to enhance communication and trust between its members and minimize the sense of isolation". They suggest that even with teams that cannot get together physically that even a video meeting, an image or picture might help to view each other as partners (Bergiel 2008). With the ability to have web cameras and virtual meetings from the low end (Skype or GoToMeeting) to very sophisticated high end virtual meetings (like Cisco's Telepresence), the ability to interact and build trust has been enhanced. Goodbody (2006) also states that consistency, celebrating achievements, and the encouragement of team collaboration (rather than a defensive climate) helps to build trust.

The third critical success factor according to Goodbody was "team communication." She suggests using appropriate technologies. In her research, she used weekly teleconferences, e-mail, and ad hoc telephone calls. She also suggests sharing information and agenda items at least 24 hours prior to a meeting so that all participants are aware of issues. Kazim Isfahani (2002), writing in CSO Magazine stated: "Similarly, the effective use of communication, especially during the early stages of the team's development, plays an equally important role in gaining and maintaining trust."

3. OUTSOURCING

Virtual Teams are at the core of outsourcing. Four well known, senior IS professors studied offshoring prospects and challenges in their paper "Information Technology Offshoring: Prospects, Challenges, Educational Requirements, and Curriculum Implications" (Davis 2004).

They noted five major issues:

1. The economic and business logic for information technology offshoring

2. The dangers in offshoring information technology activities

3. The effect on the information management function of responsibility for supervision and management of offshoring

4. The effect of offshoring on information technology job opportunities in organizations

5. Changes to the curriculum in management of information systems to prepare future IS/IT managers to manage Offshoring.

Of their five points, we will focus on the last one. They note:

"Information system programs at business schools, for the most part, continued to strive for a balance between theory and application. The outsourcing phenomenon created a wider diffusion of IT jobs throughout the U.S. economy but did not require a fundamental change in skill sets. Offshore production reduced the cost of hardware and that in turn increased demand for software and information services. The next wave of productivity growth is expected to come from globalization of IT services" (Mann 2003).

For the U.S. economy, an international value chain should increasingly produce less expensive software and services, making information technology more affordable overall. That in turn creates opportunities for individuals to custom tailor information services to the specific needs of businesses.

The previous discussion of the offshoring phenomenon points the direction in which IS/IT curricula will have to change. In fact, they may have to change in several competing directions simultaneously. On the one hand, the ability to coordinate the products of several different software vendors implies considerable technological sophistication. On the other hand, working with offshore vendors will require greater sensitivity to and understanding of cultural differences between the countries involved.

Furthermore, managing outsourcing and outsourcing contracts will become a major skill need. Thus, it will not be easy to devise a curriculum answering all of these needs within the limited number of courses generally available. […] However, we suggest that principles, issues, methods, and case studies concerning offshoring will need to become part of the general IS curricula.

Thus, Davis (2004) notes the "next wave of growth comes from globalization of IT services". They also note that students will need to understand cultural differences and interaction with global counterparts.

William King, one of the co-authors with Davis (et al) and also a founder of the Association of Information Systems (AIS), also wrote on offshoring [King, 2005]. In particular, he notes:

> "First, outsourcing / offshoring must be treated as a major and central IS paradigm. It can no longer be thought of as in interesting appendage to basic IT.

> Second, the specific skills of relationship and contract management, risk assessment and management, technology and vendor assessment and systems implementation and integration, including software testing, and the role of IS planning in strategic business planning must be given central focus in curricula. These are typically not major foci of today's curricula.

This means that IS students will need to understand negotiation techniques, contract law, contract change management and develop the 'softer' skills involved in partnering and developing trust between partners. Strategic issues such as understanding the sort of benefits that may be expected from various kinds of possible 'strategic alliances' with vendors will become essential. Vendor selection, which has not been central to IS will become of greater importance" (King, 2005).

The analysis of King's paper suggests that 'soft skills' need to be strengthened – with the development of trust and partnerships.

The authors agree with the previous authors that we are living in a global IT marketplace. Multinational companies have existed for years, but with the rapid expansion of the Internet, global communications are available – even for small and medium sized businesses.

Sensitivity to cultural and global issues are important as well as the development of trust, partnerships and interactions. Rapid and relatively cheap communications contribute to this global IT marketplace. BUT … how do we prepare students for the global IT marketplace? That is our next focus.

4. IS EDUCATION AND GLOBAL VIRTUAL TEAMS

We have seen a discussion of virtual teams, what they are and what critical success factors have been identified for them, and also looked at outsourcing. As IS educators, the question becomes "How do we prepare our students for the world of virtual teams"?

In the paper "Information Systems, Offshore Outsourcing, and Relevancy in the Business School Curriculum" (Tastle et. al., 2007) discussed implications of globalization on the Information Systems curriculum. As part of their conclusion, they suggested several options for incorporating global / outsourcing issues into the IS2002 model curriculum. One of the suggestions made by the authors was to "Retain the IS2002 Curriculum, but incorporate outsourcing assignments and topics as appropriate" (Tastle, 2007). This is the concept of "context-based learning", where using a context in delivering learning. Such an approach is to help students understand some of the bigger picture issues.

The remainder of this paper looks at how three campuses conducted an experimental study into globalizing the Information Systems curriculum with a team collaboration effort across three campuses and two countries.

5. PREPARING STUDENTS FOR THE GLOBAL MARKETPLACE

The authors suggest two approaches for preparing students for the global IT marketplace – the academic approach of lectures, assignments, and academic understandings; and the practical approach of interacting with other students on a global basis. The authors decided on using both approaches, but in an experimental format.

The three campuses involved in the study were Quinnipiac University in Hamden, Connecticut USA, Ithaca College in Ithaca New York, and the Belarusian Trade-Economic University of Gomel, Belarus. Dr. Andrei Semeniuta from the Belarusian Trade-Economics University of Gomel Belarus had been a Fulbright Professor from Belarus to Quinnipiac University, working closely with Dr. Bruce White from Quinnpiac University. Dr. White had also worked with Dr. William Tastle from Ithaca College, and Dr. Semeniuta had also visited Ithaca College and had presented a lecture To Dr. Tastle's classes. These colleagues discussed the weaknesses in globalization studies in the Information Systems curriculum as well as the establishment of virtual teams.

Belarus was one of the technology leaders in the former USSR. With the breakup of the Soviet Union and independence for Belarus, some interesting (and drastic) changes occurred.

The three colleagues decided on a "Global Virtual Team" (GVT) experimental group. Each professor picked two students to participate in this pilot program. For the two students from Belarus, each was picked because of sufficient English language skills. (None of the American students knew any Russian).

6. TECHNOLOGY ASPECTS

In the information technology world, technologies continue to be introduced for free or cheap collaboration. For the GVT, three

technologies were used: Skype, the Internet Voice over Internet Protocol (VoIP) communication service; G-Mail – Google's mail platform (so all would have a common interface); Google Docs – a collaborative document sharing platform from Google. Other technologies were studied, including Wikispaces (as a collaborative document sharing technology); Zoho – an online suite of collaborative tools.

In order to see if students could interact on a global basis with the available tools, the three professors (using interactive internet tools) developed the 'Global Virtual Team' project.

The initial proposal (developed by the professors using Google Docs and with verbal collaboration through Skype was as follows

Statement of objectives of this initial project

Global collaboration is here. With worldwide broadband access, communication is virtually instant. Companies already are using virtual teams – with employees from multiple sites collaborating together on projects. This initial project will lay the foundation for future such collaboration with such items as:

Technical solutions for communication (such as)

- Skype for verbal / voice communication (and two-way visual communication)
- Google Docs for virtual files
- Wikispaces for jointly developed files / documents
- Other technical issues

International issues:

- Cultural issues
- Language issues
- Time differences (Belarus is 7 hours ahead of eastern US time)

Collaboration issues:

- Expectations
- Documentation of effort
- Desired results
- Working through difficulties
- Defining success

Evaluation / Future projects

- Evaluation
- Developing the next projects
- Moving to the next platform / experience

7. PROJECTS

As a pilot project in global virtual teams, two initial projects were planned and completed.

Project 1

To become familiar with each member of the team, the team members were to introduce themselves to each other team member. Using the internet based mail system from Google (Gmail), the students each give a little biographical information about themselves. The other students were to interact with greetings, questions and interaction.

Project 2

The second project was to use an internet based sharing tool to create collaborative documents. This time, the students used the document collaboration tool from Google – Google Documents (or Google Docs). The tools used in this project were Skype / Google Docs / Zoho and Wikispaces.

Three teams were created for this project.

Team 1 did an analysis of Google Docs.

Team 2 did an analysis of Zoho and Wikispaces for collaborative document / file sharing.

Team 3 did an analysis of Skype for communications, including visual (face-to-face) communications.

The documents they created were then shared on Google Docs between all members of the GVT and the three professors.

8. DISCUSSION

This project was a good first effort into exposing students to global virtual teams. There was no true face-to-face communication (other than the two students from each campus), although there were verbal interactions (using Skype) among the team. The students from the three campuses had not met each other previously. Communication and document sharing was done using free Internet based technologies. The professors were pleased with this initial effort. Students also expressed pleasure at working on a global basis as a method of gaining understanding in both global issues as well as technological issues.

9. CONCLUSIONS

As a first effort, the three information systems professors felt the effort was worthwhile. The students showed that it was fairly easy and straightforward to establish global virtual teams and for those teams to collaboratively create documents. Students gained insights into some of the issues involved with global communications and working with others from two countries (and most notably from one where English is a second language).

This was a small start. With three professors and six students, it established the concepts that (a) students from different parts of the world could work together; (b) free tools for collaborative interaction were available and sufficiently sophisticated to support global teams; and (c) interaction across state and national boundaries can occur on the collegiate level.

The most notable fault was not having face-to-face communications. In discussing the outcome through a Skype conference call, the three professors on two continents suggested finding technologies for face-to-face communications. It was noted that Skype allows for two individuals to interact face-to-face currently for free, but will not handle more than two. Other software and hardware packages have come on the market that can handle multiple face-to-face participants, although not free and not in the budget for most campuses.

10. DIRECTIONS, SUGGESTIONS AND LIMITATIONS TO THIS STUDY

The three professors would like to continue this study on a larger scale in spring 2009. This would involve several classes from at least five campuses (two from the United States, one from Belarus, one from Iceland and one from Australia) working on collaborative projects / assignments / documents using Internet based tools.

There was an obvious limitation to this study with only three campuses and only six students. The authors suggest that this can and will be expanded in the future. We encourage others to join with us in the next iteration.

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APPENDIX A – STUDENT BIOGRAPHIES

Serj Kuznetsoff – Gomel University of Economic

Hello! My name is Serj Kuznetsoff. First of all I would like to excuse for possible grammatical mistakes. Unfortunately, I have no sufficient practice in English.

I'm a newcomer in this project and I'm very glad to join Global virtual team.

In my first message I'll tell a little about myself. I was born and raised in Gomel. It's a city of Belarus. I love the city and my Motherland.

I'm a student of an economic faculty. My specialty is an Accounting. Also I'm interested in the Analyses of Economic Activities. Besides studying, I'm fond of sport and travelling. I have a lot of friends because it's very easy to get on with me.

Today I was offered to take part in the project. I accepted this offer with a great pleasure. The idea of communication with foreign student is very fascinating for me. Thus I sincerely hope and believe that our communication will be creative and it will bring the results. In other words I sincerely believe in the success of the project.

It's necessary to add some words from my point of view about the aim of this project. You know that it's not clear. But I think it will turn out in the working up of the effective methods of team-work of people who are in a big distance from each other. But it's our global aim. And at first I think we should estimate the efficiency of the different available means.

Serj Kuznetsoff

Stephanie Elowson - Ithaca College,

Hello everyone,

I hope this e-mail finds you all well. Feifei and I (the two Ithaca College students) met with our professor Professor Tastle to check-in on our progress for this project.

One suggestion the three professors had made was for us to begin experimenting with some of the communication technology. One of the easier things that we can do to start is work on collaboration through Google documents.

Feifei and I have both created a GMail Account (an e-mail account through Google). Here are our new e-mail addresses:

StephanieElowson@gmail.com

fhuang48@gmail.com

Please use these e-mail accounts from now on. If everyone else can create a Gmail account as well and add us as contacts we can begin collaboration. There is a feature of Gmail called "Documents" which would effectively allow us to begin communication collaboration.

"Documents" allows you to work on a document, presentation, etc. and share it with other Gmail users that you have as contacts in your address book. Those who you grant access to your document then have access to change the document, make additions to it...basically collaborate with you on it.

For example, I started a document, and gave access to Feifei and PROFESSOR B. On their own time, they can go into the document and make changes/add to it. Then when I go back into my document, their additions and changes will be there. We'll work on the document together.

I think this would be a great first step for us to take, which also wouldn't be effected by the time difference.

If you have any questions about setting up a Gmail account, please feel free to contact me and I can help.

All the best,

Stephanie Elowson

Ithaca College

Mike Riddles, Quinnipiac University

Hello everyone,

Welcome to the Global Virtual Team. My name is Michael Riddles (but usually I am called Mike) and I am a junior at Quinnipiac University majoring in Information System Management. I was born in New York City but I was raised in southern Connecticut. I decided to attend Quinnipiac University in Hamden, Connecticut, USA after high school and after declaring my major my experience in the ISM department has been a great one which makes me very excited to be given the opportunity to work on this project.

I look forward to being able to work internationally with students who are about my age so that we can learn from each other's experiences and so that we all benefit from this Global Virtual Team. As stated in previous e-mails the time zone difference is going to be one of the first challenges that our team will have to solve and I am sure it will be sorted out before long. Technology's ability to minimize communications barriers sounds like a good starting direction for the project and I hope that our group can be exposed to and utilize some of the new cutting edge communication technologies.

I look forward to hearing more from everyone.

Sincerely,

-Mike

Andrew Pauxtis, Quinnipiac University

Hello Team!

My name is Andrew Pauxtis and I am currently an Information Systems Management Masters Student at Quinnipiac University. I graduated from Quinnipiac University in 2007 with a degree in Communications and Computer Information Systems. While I have spent the last 4 /12 years in Hamden, Connecticut USA to attend Quinnipiac, I was born and raised in Middletown, NJ, which is about a three-hour car ride south of Hamden. In my free time I enjoy traveling, hiking, golfing, reading and working with the World Wide Web.

I look forward to being on this Global Virtual Team with all of you.

Kirill brought up some important points: the technology IS here - let's figure out ways to use it most effectively and efficiently to complete one common project. If you were to ask me what I think the purpose or goal of this project is, I think the most important takeaway would be creating an outline of processes (a 'guide') so that others could duplicate the methods we use to best communicate with one another. This guide could then be given to students of all majors - from Health Sciences to Literature majors - so that they are encouraged (rather then intimidated) to work in a Global Virtual Team. What ever we decide on, I look forward to exploring the multicultural and technological aspects of this assignment.

I look forward to speaking with each of you in the coming days and weeks!

All the best,

Andrew Pauxtis

Quinnipiac University

Hamden CT USA

Feifel Huang – Ithaca College

Hello everyone,

Welcome to Global Virtual Team. My name is Feifei Huang; I am a senior at Ithaca College majoring in Accounting and Business Administration with a concentration in Finance. I was born and brought up in Southern China. I came to the United States few years ago. I like it here, great educational system.

I am very happy to be here today, I look forward to work with each and every one of you. I have to send a special thank you to Professor Tastle and my wonderful college mate Stephanie Elowson for this great opportunity. I believe it will be a very exciting learning experience. I think the purpose of this project is to see how technology can minimize the communication barriers. We also have an opportunity to learn how people communicate differently in different cultural.

Personally, I think we should first come up with a common time when everyone can meet, so we can use the telecommunication method to see how it works. Since the time zone is different, I think it s not an easy task, but I am sure we can handle it.

Once again welcome to Global Virtual Team.

Cheers,

Feifei Huang

Kirill Bruzgin, BELARUS

Thanks for you letter, Feifei.

I very glad to see so much enthusiasm in you letter. And I agree with your purpose of this project. Stephanie and you have the same opinion that modern technologies can help us to communicate and even a great distance will not be a problem for Global Virtual Team. Stephanie offered to try various methods of communication (e-mail, instant messaging, Skype, video chats). In previous letter you wrote about time zones and you were right we would face some difficulties. There is a file in this letter. If you open it, you will find a model of clocks, that can help you to understand difference in time between us. The picture is not very good, but it is just a model and I think it is rather descriptive and useful. You should choose a day and a suitable time for you and Stephanie and write a letter about it to me. I wrote about it to Stephanie too. After several attempts we will find a suitable variant for all members of GVT (I think we can use this abbreviation for Global Virtual Team). It will be the next step and we will become closer for achieve our goal.

By the way, I was very glad to know that we are colleagues because study economy. I am sure we will find a common topic for conversation. But first of all we should find the best way of communication. And then we will do something together.

Have a nice weekend,

Kirill.