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Collaboration and Cultural Issues: An Exploratory Study in Global Electronic Commerce

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Abstract

During the Spring of 1999 more than 100 students, in California, Finland and Hong Kong, participated in a unique project that investigated the effectiveness of teaching electronic commerce by letting the students participate in an electronic commerce planning exercise involving 30 real companies, each working with 2 virtual foreign subsidiaries. Each participating student played a dual role, one time as a member of the headquarters (HQ) team and twice as a subsidiary member. Various communication and collaboration modes were used.

Three major objectives were perused: First, the benefits of such collaboration in term of learning electronic commerce and global trade were assessed. Second, various communication and collaboration methods were evaluated. Finally, the participants' cultural climate was assessed and analyzed. While we postulated few hypotheses, most of the study was exploratory.

The major findings of the study were:

- 1) Students in different countries exhibit significantly different levels of satisfactions from the experiments and perceived the benefits of the learning experiences differently.*
- 2) The cultural climate in each country has not changed as result of the experiment. However, several of the cultural differences among countries detected by Hofstede more than a decade ago are still valid.*
- 3) The major difficulty in such collaboration was due to time zone differences rather than to cultural or language differences.*

Key terms: Electronic commerce, globalization, cultural differences, group work

1. Introduction

Experiments and field studies regarding group support, usually in a decision room, have been going on since the mid eighties (e.g., see Jessup and Valacich, 1993; and McGrath and Hollingsheed, 1994). Then attention has been shifted to research on using groupware to support groups of people working together in different locations (e.g., see Alavi et al., 1995; Tung and Turban, 1996). In the mid 1990's studies were directed both to the support provided by the Web (e.g., Workentin et al., 1997; and Dennis and Wheeler, 1997), and to global teams (e.g., Jarvenpaa and Leidner, 1998; and Snow et al., 1996). Initially, experiments were intended to investigate the effectiveness of different group support technologies on the process of members working together. It is only since 1997 that pioneering efforts were reported in connecting these experiments to electronic commerce (Jarvenpaa and Leidner,

1998; Jarvenpaa, Knoll and Leidner, 1998; Masetti and Lobert-Jones, 1998; Walden, Carlesson and Turban, 1998; and Walden and Turban, 2000).

Recently attention is given to cultural aspects of electronic commerce (e.g., Cole and O'Keefe[2000]). The research described here posses certain unique characteristics. These are:

- The students were in 3 countries (actually in 3 continents)
- The students worked with real companies that expressed desire to go global with EC
- The research concentrated on cultural issues as well as on teaching effectiveness of EC

The research was intended to examine three hypotheses through a quasi experiment. In addition we explored several related issues including the impact of groupware an the collaboration process and the perceived benefits and inhibitors of these kind of experiments.

The remaining parts of the paper are structured as follow. In part 2 we present the hypotheses and the research issues we explored. In part 3 we present the methodology. Parts 4 and 5 present the results, combined with appropriate discussion. In part 6 the limitations of the study are described. Part 7 concludes the paper.

2. Research issues and hypotheses

This research was structured to test three hypotheses and explore several areas related to collaboration of students in different countries regarding electronic commerce.

The hypotheses are:

- H1 There will be significant differences among students in different countries with respect to their satisfaction from working in dispersed groups.
This hypotheses is based on the finding of Hofstede (1991) that people in different countries exhibit cultural differences. Furthermore, based on GudyKunst (1997) it is reasonable to assume that people from different countries will be associated differently with electronic communication.
- H2 There will be significant differences among students in different countries with respect to the perceived learning of electronic commerce in general and global electronic commerce in particular.
- H3 There will be no significant difference of the cultural attitudes of students as results of working 4 months with students in other countries. This hypothesis is based on considerable research which concluded that culture is deeply rooted in people and does not change easily (Hofstede, 1991). In addition, we explored several issues related to use of technology to support group work.

3. Methodology

To test the above hypotheses and to investigate the research issues we conducted a quasi-experiment during the spring of 1999. We used questionnaires to measure participants' perceptions and cultural dimensions.

3.1. The participants

The following classes participated in the experiments:

- Two MBA classes at California State University Long Beach (CSULB) (25 and 19 students respectively) taking an information technology class.
- One undergraduate, senior class, taking a one-year course in EC at Abo Akademi University, Finland (24 students).
- One Master of Arts class, taking an EC course at City University of Hong Kong (36 students).

3.2. Design of the experiment

The groups

We created 30 multinational corporation planning committees (MNCPC), one for each a real world company (12 in California, 12 in Hong Kong and 6 in Finland).

Each MNCPC group was composed of 3 teams: an HQ and two foreign subsidiaries (FSR). If the HQ was in HK, for example, it had one subsidiary in Finland and one in California. (see Figure 1)

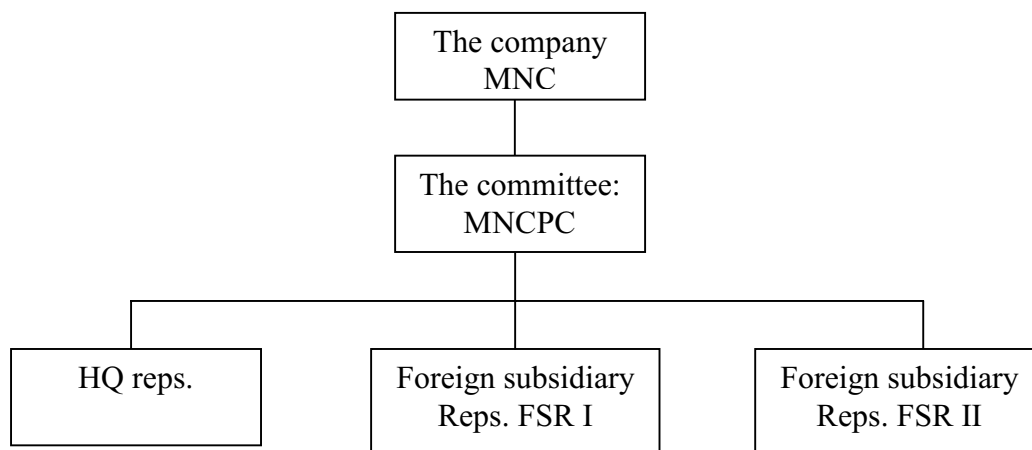


Figure 1. The virtual company structure

The teams

Each of the participating countries created 12 teams of students ranging in size from 2-5. Each team played a dual role:

- For about 5 weeks each team represented headquarters (HQ) of the MNCPC in the country where the students were. In several cases one of the students in the group actually worked at the participating company.
- For another 5 weeks each team played the foreign subsidiary representative (FSR) of the MNC in the MNCPC. Each student played this role twice. One time with each foreign country.

The mission

The mission of the MNCPC was to prepare a business plan for the companies to expand operations overseas. It was assumed that: 1) Each company wants to increase its sales by 50%, 2) that the increase will be in international sales, 3) the increase will be due to electronic commerce, 4) the increase will occur in the next 2-3 years. (These assumptions were relaxed for some companies for which the goal was unrealistic)

The business plan

Each MNCPC was supposed to prepare a business plan composed of analysis of the structure, functional areas, supply chain management, finance, legal etc.

3.3. IT group support tools

Each group (MNCPC) used:

- 1) E-mail
- 2) A chat room in which the HQ and its subsidiaries met, at least once in real time
- 3) Group Web site
- 4) Personal Web pages for each team and/ or each member

In addition, the groups in each country shared a class Web site designed to facilitate the whole project. This site was accessible to students from the other countries.

3.4. Required Tasks

The subsidiaries were supposed to provide consultation to the MNCPC about selling electronically in the foreign country. The MNCPC were supposed to analyze this information and then integrate it in their planning document.

3.5. The Research Instruments

Two questionnaires (filled out anonymously) were used:

a) Virtual Team Project Questionnaire

This questionnaire included 23 questions and was administered at the end of the course. The questionnaire was a modified version of a questionnaire used in previous experiments (see Walden and Turban, 2000).

b) Cultural Profile Questionnaire

This instrument included 9 statements. It was adopted from questions included in the Hofstede (1991) studies. This questionnaire (see Appendix) was administered both at the start and on the last day of classes.

3.6. Method of Analysis

The statistical analysis included computations of means and standard deviations. Both t- and Z-tests were used to test differences between the groups and ANOVA test was used to test differences among the 3 countries. Also differences due to gender and age were checked.

After initial observation we noticed significant differences between the two California classes for reasons that we will discuss later. Therefore, we conducted a separate analysis for each of the California classes. We use the following abbreviations:

CAL 1 = class 1 of CSULB

CAL 2 = class 2 of CSULB

FIN = Finland

HK = Hong Kong

4. Results and Discussion the Virtual Team project.

Demographic Data

The gender and age distribution of the participants by country is provided in Tables 2 and 3.

Table 2. Gender Distribution

	Male	Female
CAL 1	13	12
CAL 2	9	10
FIN	16	5
HK	22	13

Table 3. Age Distribution

	22-30	31-40	Over 40
CAL 1	14	5	0
CAL 2	17	8	0
FIN	21	0	0
HK	12	18	1

Previous experience in Internet-Related group projects (Q # 5)

Results are shown in Table 4.

Table 4. Previous Internet experience (1 = little, 5 = a lot)

CAL 1	1.95
CAL 2	1.20
FIN	2.52
HK	2.69
Overall	2.15

There were significant differences between the two CSULB classes. Also, Hong Kong and Finland students were significantly more involved in such projects. Possible explanations are the research orientation of City University and Abo Akademi, the availability of software and hardware that support such projects in HK, and the IT-oriented academic climate both in HK and Finland.

Hypotheses testinga) Hypotheses H1

Three sub hypotheses were checked regarding satisfaction.

Several questions were asked regarding satisfaction from the experiment.

a) Satisfaction with the work of the subsidiaries

Students in CAL 1 and HK were significantly more satisfied than students in CAL 2 and FIN. One explanation is that CAL 1 played the role of HQ first while CAL 2 played it toward the end of the semester, when it was more difficult to reach the students who were preparing for their examination. Cultural differences may be the reason for the significantly higher satisfaction rate in HK, which was found consistently in the other questions.

b) Evaluation of the project

Three dimensions were investigated. The results are shown in Table 5.

Table 5. Overall evaluation (1 = high, 5 = low)

Aspect	CAL 1	CAL 2	FIN	HK	Overall
Interest level	2.74	3.12	2.95	2.34	2.74
Challenge	2.26	3.12	2.95	2.42	2.68
Effort invested	2.26	2.48	2.52	1.91	2.25

In general, the project was found somewhat interesting and challenging. However, the general sentiments indicated that the project “too demanding”.

Significant differences were found as follows: HK found the project to be most interesting. Both HK and CAL 1 found more challenge in the project and believe they invested more efforts in it.

c) Willingness to participate in a similar project in the future

The answers to this question provide another indication of the general level of satisfaction. Results are shown in Table 6 (on a scale 0-4).

Table 6. Overall satisfaction (1 = most satisfied, 4 = least satisfied)

	Mean score
CAL-1	2.57
CAL-2	2.88
FIN	2.81
HK	2.17
Overall	2.55

The results indicate that the participants were not greatly satisfied with the project. This is the lowest rating we achieved in comparison to the previous three experiments. One explanation could be the complexity of the task and the pressure from playing the dual role.

Significant differences were detected in:

HK students were significantly more satisfied than FIN ($p = .002$), CAL 1 ($p = .03$) and CAL 2 ($p = .000$).

No other significant differences were detected.

Based on the results of the three part we can accept the first hypothesis.

Future studies need to be conducted to find the causes of these differences.

d) Learning electronic commerce and global electronic commerce H-2

This hypothesis was also divided into 2 sub hypotheses:

a) Learning about global trade

Due to the heavy schedule and the concentration on communication and collaboration we canceled the creation of a planned global EC knowledge base. This is probably the main reason why the learning of global EC was perceived to be about neutral (2.98). The exception is again HK where significantly more learning was perceived (see Table 7 and 8).

**Table 7. Learning about global trade
(1 = high, 5 = low)**

CAL 1	3.10
CAL 2	3.56
FIN	3.30
HK	2.33
Overall	2.98

**Table 8. Usefulness of EC learning
(1 = most useful, 5 = not useful)**

CAL 1	2.74
CAL 2	3.52
FIN	3.43
HK	2.33
Overall	2.93

while cultural differences may contribute for the differences, other explanations are possible.

One explanation could be that the HK group was composed of graduate students who were also in an EC class. Also, the students were non-business majors (in a Master of Arts program), so their general level of knowledge of business was lower, and they had a chance to learn more. Different university cultures, instructors, and technology support could have been contributing factors as well. Finally, international trade

heavily influences the HK economy, so students in HK may be more interested in the topic. The same could be true for Finland, but to a lesser degree. Further research is needed.

b) Learning about Electronic Commerce

Similarly to the answers to the previous questions, students on the average expressed neutral opinions in regard to learning about EC. However, significant differences existed both between countries and within California.

Significant differences were detected between the two CAL classes ($p = .016$). One explanation is that class #1 played the role of HQ in the first five weeks, while class #2 did it in the last 5 weeks. As a result there was more pressure on class #2 (had to “chase” the subsidiaries), which made the participants less satisfied in general.

California class 1 expressed significantly more satisfaction than Finland ($p = .026$).

As in all previous cases, Hong Kong students were significantly more satisfied than any other group, especially more than CAL 2 ($p = 0$) and Finland ($p = 0$).

Based on the above results we can conclude that hypothesis H2 has been accepted.

e) Changes in culture

We measured the cultural climate before the beginning of the experiment and at its end. No significant differences were found in any of the variables. Thus, H-3 is accepted.

Results of the exploratory study

a) Perceived Difficulties

Perceptions of the levels of various categories of difficulties are shown in Table 9.

Table 9. Perceived difficulties (1 = many, 5 = none)

	CAL 1	CAL 2	FIN	HK	Average
Due to time zones	2.06	2.16	2.09	2.00	2.07
Due to cultures	3.58	2.92	3.05	3.00	3.09
Due to languages	3.65	2.96	4.19	3.63	3.59

The most cited difficulty was due to time zones; culture differences seemed less of a problem and language seemed to be even less of a problem.

Significant differences were detected between CAL 2 and FIN in the language issue.

b) Rating the Instructions for the project; (1 = excellent, 5 = poor)

The rating was CAL 1 = 3.16, CAL 2 = 3.4, FIN = 4.10, HK = 2.65, overall 3.20.

Significant differences were as follows: HK perceived the instructions to be significantly better than the instructions perceived in FIN and in California. Also, younger participants found the instructions to be significantly poorer than older participants did. ($p = .002$) These effects may be confounded because Finland’s age was significantly lower than that of HK and California.

c) Usefulness of various IT support technologies

Four IT support technologies were used. Table 10 shows how the participants rated the usefulness of the various technologies.

Table 10. Value of IT technologies (1 = high, 5 = low)

Usefulness level					
Technology	CAL 1	CAL 2	FIN	HK	Overall
e-mail	1.16	1.84	1.14	1.69	1.50
Internet Web sites	2.39	2.79	2.38	2.68	2.58
Chat room	3.74	3.04	3.57	2.69	3.16
Class/group Web sites	3.42	3.68	3.7	2.56	3.20

It is clear that e-mail is the most valuable tool. Next were “Internet Web sites” that the participants used for research. Both chat rooms and the class/group Web sites were not used much and received only average ratings. The reason why chat rooms were not used as frequently as we expected was mainly due to the time differences among the countries, which made scheduling of the chatting difficult.

Significant differences were found as follows: 1) FIN and CAL 1 valued e-mail significantly more, but chat rooms and the class Web site were most favored in HK.

Also, it is interesting to note that one of the only two significant gender differences in the entire study was found in the chat room. Females valued the chat room more than males ($p = .04$).

d) Project Limitations

Perceived limitations are shown in Table 11. (in %)

Table 11. Perceived limitations (in %)

Limitation	CAL 1	CAL 2	FIN	HK	Overall Ranking
Administrative	19.05	8.82	7.69	7.50	Few problems
Social (communication)	23.81	26.47	11.53	20.00	Problems
Technological Internet usage	9.52	5.88	0.00	7.50	Least problems
Schedule (Timing)	28.57	17.64	34.61	57.5	Most problems
Others	19.05	41.17	46.15	7.50	Many problems

The time schedule seemed to be the most limiting factor (because each team had to play a dual role, the allotted time was short, and time also lost in communication).

There were significant differences among the countries with respect to the schedule issue.

e) How realistic was the project

The results are shown in Table 12.

Table 12. How realistic was the project (1 = very realistic, 5 = not realistic)

CAL 1	3.05
CAL 2	3.84
FIN	3.30
HK	2.71
Overall	3.18

Overall, the participants found the experiment to be not very realistic (mean = 3.18). However, significant differences were detected among the countries. Specifically:

- CAL 1 viewed the project to be more realistic than CAL 2 ($p = .007$)
- HK view it to be more realistic than FIN ($p = .014$) and CAL 2 ($p = .000$)
- CAL 2 view it “more realistic” than FIN ($p = .027$)

It is possible that these perceptions are interrelated with these of the previous two questions and are all influenced by the general satisfaction (or dissatisfaction) level.

f) The three most important benefits

Each subject was asked to list up to three most important benefits that they received from the experiment. Over 200 suggestions were contributed. The contents of the suggestions were analyzed, resulting in 11 categories as shown in Table 13 where the three top categories are shaded. Note that each country has a different idea on what is important. The Finns most frequently mentioned the benefits of “opportunities for research and independent exploration”. However, all countries mentioned “learning the use of technology” relatively frequently. Both HK and the US also listed “learning to cooperate with people in different countries”, and “understanding and enriching the knowledge of EC”, relatively more frequently.

Table 13. Most important Benefits

Most Important Benefits	HK		US		Finland	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Understanding Different Cultures Better	3	3.85	8	8.70	3	9.38
Enhancing Communication Skill	5	6.41	5	5.43	1	3.13
Learning the Use of Technology (Internet, e-mail, Chat room)	14	17.95	28	30.43	4	12.50
Making New Friends	2	2.56	1	1.09	0	0.00
Gaining Practical Experience	5	6.41	6	6.52	3	9.38
Learning to Cooperate with People in Different Cultures	9	11.54	9	9.78	2	6.25
Understanding and Enriching the knowledge of EC	23	29.49	11	11.96	1	3.13
Better Awareness of Cross-border Business	2	2.56	7	7.61	1	3.13
Improving Project Management Skills	3	3.85	5	5.43	2	6.25
Learning to Cooperate among Group Members	8	10.26	6	6.52	2	6.25
Opportunities for Research and Independent Exploration	4	5.13	6	6.52	13	40.63
Total	78	100.00	92	100.00	32	100.00

The three most severe drawbacks

Each student was asked to suggest up to 3 most severe drawbacks they faced during the experiment. Over 200 suggestions were received from this open-ended question. The

contents of the suggestions were analyzed, resulting in 13 categories as shown in Table 14. (The top 3 are shaded.)

Table 14. Most severe drawbacks

Most Important Drawbacks	HK		US		Finland	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
Time Difference	20	28.99	15	14.02	2	5.26
Communication Problems	3	4.35	11	10.28	1	2.63
Lack of Guidances and Examples	2	2.90	8	7.48	7	18.42
Heavy Workload	10	14.49	6	5.61	3	7.89
Cooperation (General)	5	7.25	3	2.80	3	7.89
Cooperation (Within group)	3	4.35	9	8.41	0	0.00
Cooperation (Between groups)	3	4.35	26	24.30	13	34.21
Operational Problems	6	8.70	11	10.28	0	0.00
Fairness on Grading	0	0.00	3	2.80	1	2.63
Lack of Incentive	3	4.35	2	1.87	1	2.63
Cultural Problem (language)	2	2.90	3	2.80	0	0.00
Not Applicable and Useless	2	2.90	3	2.80	3	7.89
Time Limitation (Not enough time)	10	14.49	7	6.54	4	10.53
Total	69	100.00	107	100.00	38	100.00

Again, there were significant differences among the countries as indicated in the table.

g) Gender differences

Only two significant differences were detected due to gender.

- Females sent less messages than males toward the end of the semester ($p = .036$)
- Females were more satisfied with the usefulness of the chat room than males ($p = .04$)

5. Results of the Cultural Climate study

Using three relevant Hofstede's (1991) cultural dimensions of *power distance*, *uncertainty avoidance* and *work centrality*, a 9-item questionnaire was developed for use in this study (Appendix 1). We administered the questionnaire two times: at the start and in the last class meetings. Due to administrative problems we had to combine the results of the two California groups at the beginning of the experiment and to discard the Finnish results at the end, due to a low response rate. The mean results, on a 5 point Likert scale are provided in Table 15.

Table 15. Cultural climate of the participants (mean scores: 1 = strongly agree, 5 = strongly disagree)

Statement #	California (G1+G2)		Finland	Hong Kong	
	Beginning (N=28)	End (N=25)	Beginning (N=18)	Beginning (N=36)	End (N=36)
1.	3.46	3.2	3.5	3.23	3.19
2.	1.93	2.24	1.78	2.43	2.37
3.	2.07	2.28	2.72	2.54	2.37
4.	2.71	2.68	2.16	2.74	2.69
5.	3.21	3.41	3.39	2.97	2.86
6.	2.57	2.76	2.44	2.37	2.26
7.	3.36	3.64	3.11	2.86	2.69
8.	1.43	1.4	1.72	2.09	1.97
9.	4.25	4.08	3.72	3.6	3.23

The differences between the cultural climate in the beginning and at the end of the experiment were tested and found not to be significant with respect to all 9 statements.

We then tested for country differences in terms of perceived cultural climate based on each question. It was found that the California students differed from both Finland and HK significantly in their answer to Q3. This question, which concerns the preferred teaching style is a formative item in the power distance dimension. The California students perceived a lower power distance (less autocratic) than both the HK and the Finland students, consistent with the findings in Hofstede (1991). In addition, the California students differed from HK significantly in their answers to Q7, Q8, and Q9. These three questions are formative items in the work centrality dimension. The California students and the HK students have marked differences on this dimension. The California students regarded leisure time as more important than work. The HK students thought differently. While students in both countries agreed that having challenging tasks at work is important, the California students placed higher level of importance on this aspect. Similarly, while both countries recognized the importance of physical working conditions, the California students attached a higher level of importance to this issue. The results are summarized in Table 16.

Table 16. Cultural differences. (* = p < .05)

Dependent Variable	(I) COUNTRY	(J) COUNTRY	Mean Difference (I-J)	Std. Error	P
#3	USA	Finland	-0.63	0.22	*0.01
		HK	-0.39	0.18	*0.03
teaching style	Finland	USA	0.63	0.22	*0.01
		HK	0.24	0.23	0.31
	HK	USA	0.39	0.18	*0.03
		Finland	-0.24	0.23	0.31
#7	USA	Finland	0.38	0.27	0.16
		HK	0.63	0.21	*0.00
work vs. leisure time	Finland	USA	-0.38	0.27	0.16
		HK	0.25	0.28	0.37
	HK	USA	-0.63	0.21	*0.00
		Finland	-0.25	0.28	0.37
#8	USA	Finland	-0.31	0.18	0.09
		HK	-0.67	0.14	*0.00
challenging work	Finland	USA	0.31	0.18	0.09
		HK	-0.36	0.19	0.06
	HK	USA	0.67	0.14	*0.00
		Finland	0.36	0.19	0.06
#9	USA	Finland	0.45	0.26	0.09
		HK	0.57	0.21	*0.01
working conditions	Finland	USA	-0.45	0.26	0.09
		HK	0.12	0.28	0.66
	HK	USA	-0.57	0.21	*0.01
		Finland	-0.12	0.28	*0.66

6. Limitations of the study

- a) Since the study was mainly exploratory in nature and the students were in three different countries it was difficult to conduct controlled experiments. As this research continues, we

plan to focus on specific hypotheses derived from theory and suggested by our previous findings. Then controlled experiments may be appropriate.

- b) Because of the exploratory nature of the project and lack of hypotheses the questionnaire was designed more to collect data than to support experimentation.
- c) The objective of teaching and learning was not properly addressed in the design and execution of the project. It was very unfortunate that time constraints made it necessary to drop the plan to create a global EC knowledge base as parts of this project.

Ways to address some of these limitations are provided in the conclusion.

7. Conclusion and suggestions for further research

The amount of EC research is increasing very rapidly. Pioneering suggestions for EC research directions were provided by Zwass, (1996) and recently solidified by Shaw (1999). Experimental research in EC is still in its embryonic stage, where much attention is given to issues in consumer behavior and in business-to-consumer topics.

The following are some suggestion for future research in the area of global EC.

- a. Replicate the cultural climate experiment expanding it to cover other cultural issues and to test specific hypotheses.
- b. Conduct experiments with more countries in order to identify country specific variables. (but use simple tasks!)
- c. Investigate the impact of more groupware support. For example in Fall 1999 we used video teleconferencing to facilitate interactions among the participating classes.
- d. The creation of a global EC knowledge base and its use by the students is desirable. It is hypothesized that such a knowledge base can facilitate the learning of EC and global EC.
- e. In all our experiments we created teams in each country which collaborated with each other. As one adds more countries, the possibility of 100% virtual teams (one member in each country) becomes viable. How to conduct such an experiment and what to measure in it, is an interesting research issue which will be addressed in the spring of 2000.
- f. It is proposed to investigate why significant differences were detected regarding satisfaction from the experiments and the learning of global EC.

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Appendix 1

Questionnaire for Measuring Culture in the Multinational Virtual Company Experiment

Hofstede (Hofstede 1991) proposed five dimensions of national culture two of which (i.e. power distance and uncertainty avoidance) overlap with the organizational culture dimensions identified in Hofstede et al (1990, p.301). The third organizational culture dimension identified is “work centrality”. These 3 cultural dimensions can be used to measure the relevant individual personality traits of group members. These personality traits will have a bearing on the dynamics and outcomes of the multinational virtual company experiment in the course of accomplishing tasks. Drawing from Hofstede’s definition of these dimensions the following items are developed as formative measures of these dimensions (in terms of personality traits) in the setting of the experiment (i.e. with University students as the experimental subjects).

Power Distance

Definition: *The extent to which the less powerful members of institutions and organizations expect and accept that power is distributed unequally* (Hofstede 1991, p.28)

Q1

How frequently are you afraid to express disagreement with your professors?

1. Very Frequently
2. Frequently
3. Sometimes
4. Seldom
5. Very Seldom

Q2

How do you perceive the teaching style of your professor?

1. *Autocratic* - you are told clearly and exactly what to do in the course and expected to do it without exception.
2. *Consultative* - you are consulted about how you want to be taught but will accept whatever the professor decides to do.
3. *Democratic* (Majority Rule) – your professor will just teach the way the majority of student want him to, even if it means you won’t always get what you want.
4. *Paternalistic* – your professor adopts a caring and interactive style in teaching and will adjust his style to fit your individual desires.

Q3

What teaching style do you prefer your professor to have?

1. *Autocratic* - you are told clearly and exactly what to do in the course and expected to do it without exception.
2. *Consultative* - you are consulted about how you want to be taught but will accept whatever the professor decides to do.
3. *Democratic* (Majority Rule) – your professor will just teach the way the majority of student want him to, even if it means you won’t always get what you want.
4. *Paternalistic*– your professor adopts a caring and interactive style in teaching and will adjust his style to fit your individual desires.

Uncertainty Avoidance

Definition: *The extent to which the members of a culture feel threatened by uncertain or unknown situations.* (Hofstede 1991, p.113)

Q4

University rules should not be broken – even when you think it is in the University’s best interest.

1. Strongly Agree
2. Agree
3. Undecided

4. Disagree
5. Strongly Disagree

Q5

How often do you feel nervous or tense at work / school?

1. Very Frequently
2. Frequently
3. Sometimes
4. Seldom
5. Very Seldom

Q6

How long do you think you will work for the same company in your career?

1. Less than 2 year
2. 2 to 5 years
3. more than 5 years
4. until I retire

Work Centrality

Definition: *The extent to which work takes a central place in a person's total life system* (Hofstede et. al. 1990, p.301)

Q7

Work is more important to me than leisure time.

1. Strongly Agree
2. Agree
3. Undecided
4. Disagree
5. Strongly Disagree

Q8

Having challenging tasks at work is important to me.

1. Strongly Agree
2. Agree
3. Undecided
4. Disagree
5. Strongly disagree

Q9

Physical working conditions are unimportant to me.

1. Strongly Agree
2. Agree
3. Undecided
4. Disagree
5. Strongly Disagree