

E-Learning as a Socio-Cultural System: A Multidimensional Analysis

Vaiva Zuzevičiūtė
Mykolas Romeris University, Lithuania

Edita Butrimė
Lithuanian University of Health Sciences, Lithuania

Daiva Vitkutė-Adžgauskienė
Vytautas Magnus University, Lithuania

Vladislav Vladimirovich Fomin
Vytautas Magnus University, Lithuania

Kathy Kikis-Papadakis
Foundation for Research and Technology, Greece

A volume in the Advances in Educational
Technologies and Instructional Design (AETID)
Book Series

Information Science
REFERENCE

An Imprint of IGI Global

Managing Director: Lindsay Johnston
Production Editor: Jennifer Yoder
Development Editor: Erin O’Dea
Acquisitions Editor: Kayla Wolfe
Typesetter: Kaitlyn Kulp
Cover Design: Jason Mull

Published in the United States of America by
Information Science Reference (an imprint of IGI Global)
701 E. Chocolate Avenue
Hershey PA, USA 17033
Tel: 717-533-8845
Fax: 717-533-8661
E-mail: cust@igi-global.com
Web site: <http://www.igi-global.com>

Copyright © 2014 by IGI Global. All rights reserved. No part of this publication may be reproduced, stored or distributed in any form or by any means, electronic or mechanical, including photocopying, without written permission from the publisher. Product or company names used in this set are for identification purposes only. Inclusion of the names of the products or companies does not indicate a claim of ownership by IGI Global of the trademark or registered trademark.

Library of Congress Cataloging-in-Publication Data

Zuzevičiūtė, Vaiva, 1970-

E-learning as a socio-cultural system : a multidimensional analysis / Vaiva Zuzevičiūtė, Edita Butrime, Davia Vitkute-Adzgauskienė, Vladislav Vladimirovich Fomin, and Kathy Kikis-Papadakis, editors.

pages cm

Includes bibliographical references and index.

ISBN 978-1-4666-6154-7 (hardcover) -- ISBN 978-1-4666-6155-4 (ebook) -- ISBN 978-1-4666-6157-8 (print & perpetual access) 1. Web-based instruction--Social aspects. 2. Internet in education--Social aspects. 3. Distance education--Computer network resources--Social aspects. I. Title.

LB1044.87.Z89 2014

371.33'44678--dc23

2014013827

This book is published in the IGI Global book series *Advances in Educational Technologies and Instructional Design (AE-TID)* (ISSN: 2326-8905; eISSN: 2326-8913)

British Cataloguing in Publication Data

A Cataloguing in Publication record for this book is available from the British Library.

All work contributed to this book is new, previously-unpublished material. The views expressed in this book are those of the authors, but not necessarily of the publisher.

For electronic access to this publication, please contact: eresources@igi-global.com.

Chapter 11

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

Timo Lainema
University of Turku, Finland

ABSTRACT

In this chapter, the authors introduce a global synchronous e-learning platform that is used for teaching virtual collaboration, multicultural communication, and business process management. The platform has been used in joint learning sessions between international universities, and the data of the study has been gathered from self-reflecting essays of the participating university students. The authors analyze the data from the point of view of how the students create a social and cultural identity in this totally virtual environment in which no student will probably ever meet face-to-face his or her team members and collaboration partners. They consider both the environment as a social construction as well as an environment that is technology supported. In this respect, the chapter has several implications for educators in the present global and ever-technology-rich university environment.

INTRODUCTION

Speculations on the role of information technology in organizations and its implications for organizational design have flourished now for decades, time after time when new information technology solutions take place in the working environment. A recent development in this area is the application of different eLearning applications and platforms in education. Although the use of these systems is commonplace, researchers and educators still do not have a clear overall view,

what kind of eLearning application is desirable and functioning. This chapter seeks to add new knowledge in the field of virtual collaboration in a synchronous e-learning environment, especially in how to generate a functioning virtual learning environment in which the student collaboration is motivated and eager, and is reported to be meaningful.

In recent years, global teams – teams that are both geographically distributed and culturally diverse – have been increasingly used to collaborate on projects involving innovation and complex

DOI: 10.4018/978-1-4666-6154-7.ch011

team processes. It is not uncommon that teams are quickly put together and have to perform in an ad hoc fashion on a project task. Especially when team members have not worked together before, they have to establish their teamwork processes and invent their collaboration quickly. They further have to be adaptive to an ever-changing context. Success in this kind of environment comes with experience (Köhler, Fischlmayr, Lainema, & Saarinen, 2013). Today we do not yet have a clear picture how this relatively new technological environment has affected and will affect the role of information technology in educational organizations and their organizational structures.

The turn of the twenty-first century has meant a shift from traditional organizations to more extensive use of virtual organizations and virtual working. Virtual organizations can be defined as geographically distributed organizations whose members are bound by a long-term common interest or goal, and who communicate and coordinate their work mainly through information technology (Ahuja & Carley, 1998).

As soon as the advancement of ICT has enabled such forms of working and organizing to develop that don't build on physical proximity and face-to-face contact, they have been rapidly adopted worldwide as a new model of organizing knowledge-intensive work. Many organizations have introduced the virtual organization model for their interrelated operational units at locations far from each other, or project teams of specialists that are dispersed on different continents (Lähteenmäki, Saarinen, Fischlmayr, & Lainema, 2009). And as Wasko, Teigland, Leidner & Jarvenpaa (2011) note, the skills acquired in virtual worlds are precisely the skills demanded today by real-world organizations, like (p. 650) (1) *leading a large virtual team of people with diverse demographic backgrounds from across the world without any formal authority over these individuals*, (2) *successfully developing and implementing strategies under pressure*, (3) *networking to acquire necessary information and resources*, and (4) *building trust and managing cross-cultural conflict without face-to-face communication*.

successfully developing and implementing strategies under pressure, (3) *networking to acquire necessary information and resources*, and (4) *building trust and managing cross-cultural conflict without face-to-face communication*.

Empirical studies have shown that virtual teams tend to have high-quality decisions, are more creative, and are more satisfied with the outcome of work than workers in traditional organizations (Rico and Cohen 2005). Many organizations are nowadays relying heavily on virtual teams. The invisible virtual organization that links its members together doesn't involve them the same way as a traditional organization does (Hertel, Geister, & Konrad, 2005). These networks do not automatically get socially organized into proper teams in the traditional sense. They might find new and even more competitive forms of organizing than direct control and hierarchical command chains.

The value of the theoretical discussion remains weak without empirical evidence from the successfulness of teaching the virtual and how students engage and identify themselves in the virtual environment. In this study we are interested in how to enhance the premises for learning successful virtual collaboration in a dispersed e-learning environment. The case simulation sessions are "adhocratic" by nature: adhocracy involves project teams that come together to perform a task and disappear when the task is over (Morgan, 2006). The topic is relevant and important on a global scale as the challenges for modern learning environments are worldwide. We think the group with the most to gain from this chapter will be teachers in higher education who are interested in enriching experiences for their students. The chapter also touches upon topics like e-learning as socio-cultural system, challenges of ICT-based innovations in higher education, culture and e-learning, and new trends in e-learning.

CASE DESCRIPTION

The simulation environment analyzed in this chapter is called VIBu (*Virtual Teams in International Business*, <http://www.vibu.fi>). We will next describe the research setting, the simulation game technical architecture, and the learning principles applied in the environment

Method

This study is based on qualitative material collected from participating students' simulation game assignments. The assignment answers have been collected through the use of online surveys, which have been sent to the students after the simulation sessions. The student assignment answers are individual reflective essays covering their experiences and insights from the simulation game sessions. In the essays the students have been asked to cover, for example, the following themes: overall feelings of the simulation experience, team effectiveness, organization of work, conflicts, threats, and expectations.

We follow the ideas of grounded theory, which encourages research methods to be gradually refined to findings (Corbin & Strauss, 2008). Grounded theory is a set of techniques that provides a rigorous and detailed method for identifying categories and concepts that emerge from text and helps the researcher link the concepts into formal theories (Glaser & Strauss, 1967). Our application of grounded theory follows these ideas although we do not have any scientific theory to be linked to the findings.

In our work we have followed these simple guidelines for grounded theory research (Bernard & Ryan, 1998): the researcher should produce verbatim transcripts of interviews (in our case the texts are from student essays) and read through the texts. The potential themes that arise are identified. As analytic categories emerge, exemplars are pulled from those categories together and com-

pared. By grounded theory the analyst develops increasingly richer concepts and models of how the phenomenon being studied really works.

Data

The data used is collected from global, synchronously operated business simulation game sessions in October 2012, where the students worked in virtual teams and managed their companies in real-time over geographical distances and time zones. The data are self-reflecting essays from the students on their team-work challenges. The same students played the simulation game twice, a two week period separating the one day sessions. The students wrote a self-reflecting essay after both of the sessions (see Appendices A and B for the full essay assignments).

The sessions in October 2012 had 137 students participating, from 11 universities in 7 countries (Denmark, Poland, Austria, Hungary, USA, Indonesia where all students exchange students, and Thailand). Altogether the students presented 19 different nationalities (besides the aforementioned: German, Iraq, Chinese, Dutch, Nepalese, Filipino, Serbian, Italian, Greek, Slovak, Estonian, French, and Ukrainian), who formed 15 international, dispersed teams which had to collaborate virtually, in real-time, over several different time zones. A typical student team would comprise of students from three continents and no two students would be located in the same physical location. For example, Team 1 included students from Massachusetts/USA, Copenhagen/Denmark (two different universities), Bangkok/Thailand, Linz/Austria, Krems/Austria, and Yogyakarta/Indonesia.

Out of the 137 participating students 89 returned the first self-reflecting essay (response rate 65.0%) and 71 returned the second (51.8%). 67 (48.9%) returned both the first and the second essay and this is the data that has been used in this paper, as we wanted to see, whether the opinions

and attitudes would change between the first and second simulation session. The assignments were not mandatory in all of the participating universities, which explains the low response rate. The responses come from universities in Austria, Denmark, and Indonesia, with single answers from the USA and Thailand.

The Simulation Game Architecture

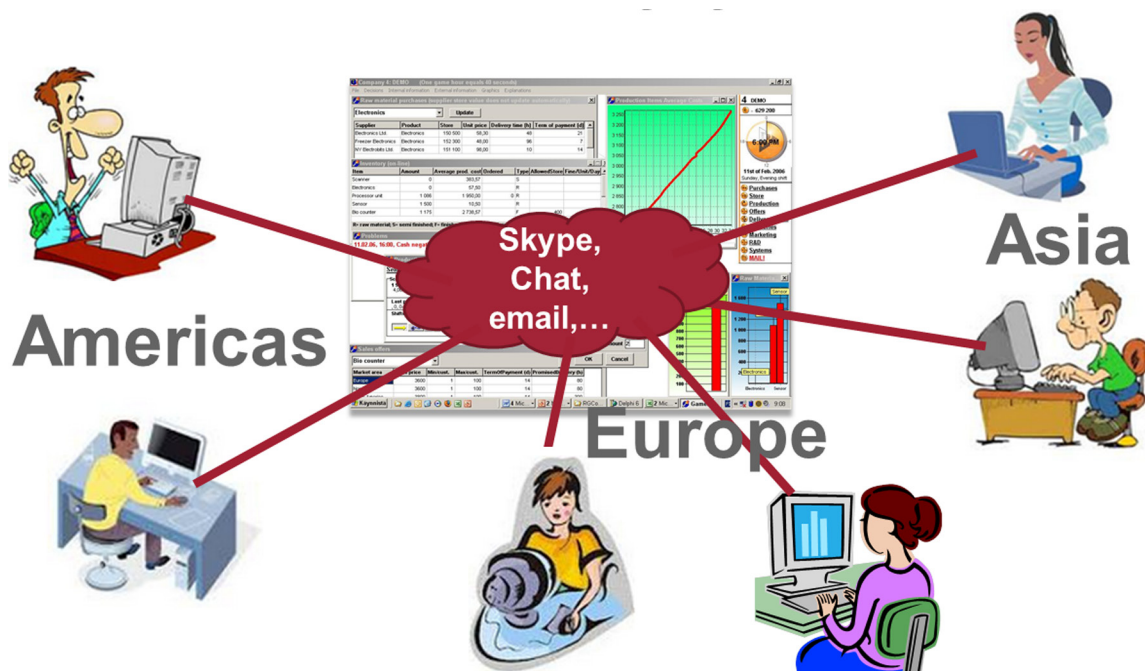
The companies in the simulation game are manufacturing companies, whose core task is to take care of their basic supply chain from suppliers to customers (including procurement, inventory management, manufacturing, and deliveries). Besides this basic business process, the companies need to manage support functions, like cash management, recruiting, marketing, and product development, and all this has to be done in a profitable manner. The simulation environment is, thus, not a simple one, but rather complex with tens of different

decision areas which all have to be balanced in a clock-driven environment (the simulation has an internal clock).

The business processes described above create an utterly motivating, immersive and meaningful operating environment for the students. As such the environment is an optimal one for something as challenging as virtual collaboration, as it seems that the students are highly motivated in overcoming the obstacles present in virtual collaboration: their motivation to run their business is high and they will find the ways with which to be able to do the operational tasks.

One student team running one simulation company is usually formed from 8 to 12 students, all located in different geographical locations, like described in Figure 1. The students have the same view to their companies through a remote connection software. This means that any of them can make decisions in the simulation game in real-time. At the same time they have the real-time view

Figure 1. VIBu simulation dispersed communication environment



The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

on their company interface, the team members collaborate, most in real-time, using Skype, chat and email. So the decisions are the result of team negotiation and collaboration. As the simulation sessions last for 10 to even 16 hours, it is obvious that when we are running global session between different continents, the local times in different locations require that the students work in shifts: as time passed the Asians shift the responsibility to Europeans, and then soon the Europeans shift the responsibility to Americans. This all represents the challenges of virtual, global, dispersed work at its best and worst, including time differences, technical challenges, cultural differences, and language barriers.

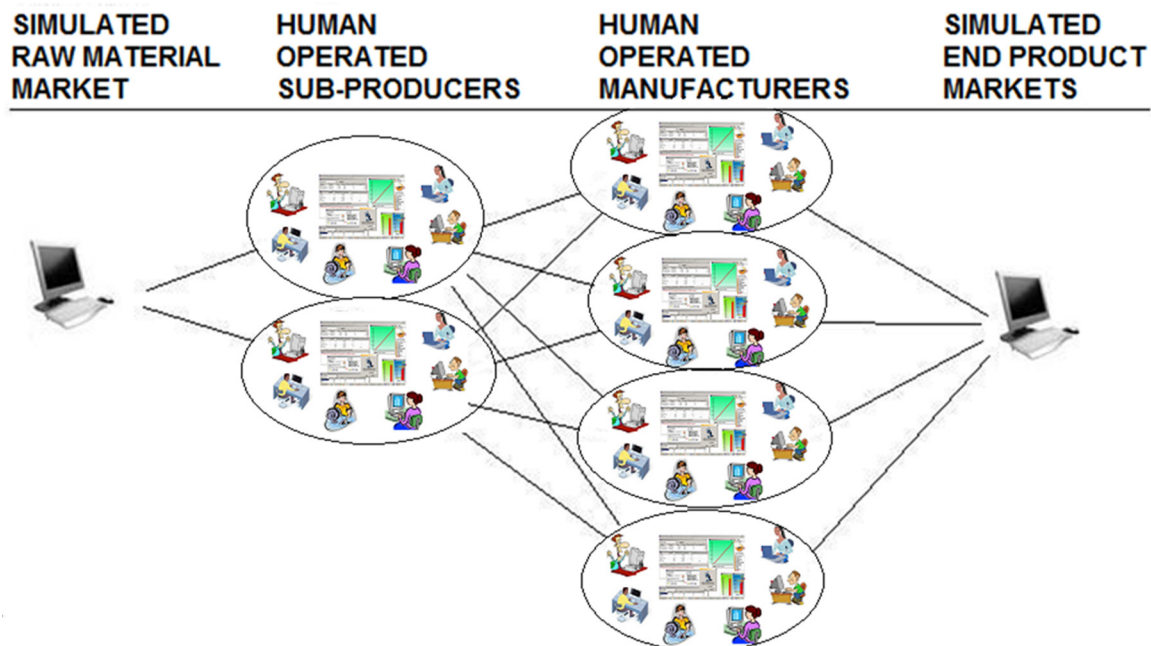
Each of these student teams is part of the simulation global supply chain (Figure 2). Compared to more conventional business simulations VIBu is different so that the simulation companies rely on each other as suppliers or customers. Thus, instead of being plain competitors between each other, the student teams need to collaborate to be successful. This also simulates the highly networked nature

of present day business supply chains. In VIBu this is organized so that some of the companies (sub-producers) manufacture goods that are raw materials of the other companies (manufacturers). In practice this means that the student teams need to virtually contact also their suppliers/customers.

The environment described above is fundamentally different from traditional business simulations, which are mostly played locally, all students participating in the same place at the same time. If these traditional business simulations are played in a decentralized manner, they very seldom include synchronous (real-time) communication between the students in different locations. A student quote nicely describes the difference (Quote 1/Q1):

I had the opportunity to make quite similar simulation like this one in my Bachelor program in Vienna. There we worked in a team sitting together for four days. So there was no team organization necessary. Communication difficulties or failures with time scheduling were also not possible. So I learned personally [from VIBu], how difficult it is

Figure 2. VIBu simulation global supply chain



to organize a team with different team members, where nobody knows each other, with different backgrounds and time zones. (Austrian male student, first simulation session)

The Nature of Learning in the Environment

VIBu is an experiential learning environment in the way Kolb (1984) describes them: the environment forms a cycle of action taking and seeing the consequences of that action. We believe that learning is neither a transmissive nor a submissive process, but rather a willful, intentional, active, conscious, constructive practice that includes intention-action-reflection activities as described in many educational studies describing the constructivist learning paradigm (see, for example, Jonassen & Land, 2002). In VIBu the identification of relevant information and correct solutions is left open in the instructional situation. In other words, the student teams are self-directed and the teachers/facilitators of the simulation sessions give only a necessary amount of information with which to start the sessions. The focus will be on the skills of reflectivity of the learner, not on remembering.

In VIBu the learners are newcomers in the environment and in their teams, who change knowledge, skills, and discourse and become “old-timers.” This has much to do with developing identity where the learner transforms into a member of a community of practice (Lave & Wenger, 1991). We believe that knowing is inherent in the growth and transformation of identities and it is located in relations among practitioners, their practice, the artifacts of that practice, and the social organization of communities of practice. This is similar – if not equal – to the VIBu learning experience. According to the ideas of constructivism, understanding the world as experienced is important. For newcomers their shifting location through a complex form of practice creates possibilities for understanding the world as experienced.

Duffy and Cunningham (1996) note that the newcomer begins to assume responsibilities, testing her abilities and responsibilities in that environment. The process of gaming is about first observing and then beginning to take on some responsibilities in a group you wish to become an integral part of. Much like Duffy and Cunningham describe, VIBu provides the learner access to the community of practice and provides the tools that will support the learner in assuming her role in that practice. Moreover, VIBu focuses on developing the skills of the learner to construct (and reconstruct) plans in response to situational demands and opportunities. Thus, VIBu provides contexts and assistance that will aid the individual in making sense of the environment as it is encountered: plans are constructed, tested, and revised as a function of the particular encounters in the environment.

Authenticity and realism has a role VIBu. What is simulated in VIBu is some of the critical features of the reality of virtual work and communication, and supply chain management. Learning is situated in a rich context, reflective of real-world contexts making it possible for a constructive process to occur and transfer to environments beyond the learning situation. Constructivism emphasizes the group environment and what Brown, Collins, & Duguid (1989) describe as group learning is much like the description of VIBu: collective problem solving, displaying multiple roles, confronting ineffective strategies and providing collaborative working skills.

During the game the participants discuss about the characteristics and logics of the environment, they negotiate together, change knowledge, learn from each other, and make decisions. Thus, they develop identity as managers of the company they are running. In the end of the game the participants should be experts who are on top of the events taking place in their VIBu company. All the participants in the game session (from different companies) form a community of practice, which has understood the simulation world as experi-

enced. If the VIBu session works as intended, the learners begin to assume responsibilities and test their abilities to assume roles and responsibilities in the game environment.

As Gosenpud (1990) notes about business gaming, the learner often learns things not intended by the designer, and often this unintended learning is more valuable because it is relevant to the learner. The VIBu context is without doubt rich: it includes social interaction and decisions, which cover a multidisciplinary field and where the environment is in change. The players are given an expert role of a manager and they are supposed to think in the knowledge domain as an expert. The whole idea is to give the participants knowledge that could be transferred to environments beyond the learning situation. The goal is to portray tasks, not to define the structure of learning required to achieve that task. The identification of relevant information and correct solutions is left open in the situation.

The Results: Components of Successful Virtual and Dispersed Learning Sessions

As we are using students' self-reflecting essay answers as research data, we need to realize that the students are writing the essays as course assignments to the teachers and they may report opinions that are somewhat biased (students may show simulation related issues in a too positive light not to irritate the teachers, or they may exaggerate their learning). However, we are not analyzing the essay answers directly from the point of view of what the students thought about the simulation but from the point of view of how they saw the communication and collaboration in the environment. The students did not expect that we would grade these opinions and descriptions, so we can assume that writing the narratives has not been directed by the aim of pleasing the teachers.

In the following quotes 1S means the first and 2S means the second simulation session.

The challenge in the simulation environment was similar to that of real-world organizations (Q2):

The team assignment was not difficult in terms of the content as everyone was anyway into the topic... but in terms of communication, different time zones, general time issues as well as collaboration via e-communication media, it was a challenge. It took us a long time just to discuss what is expected to do and how we can organize the work as well as how and when we can communicate about the task as a team to get first ideas. (Austrian female student, 1S)

Looking at the essays as a whole, one can find all of the challenges Kayworth & Leidner (2002) list to be present in the virtual context: traditional social mechanisms are lost or distorted, communication dynamics are altered (such as facial expressions, verbal cues, gestures), inhibition in building trust, communication process dysfunction, multiple cultures require greater communication skills, communication may be distorted through cultural misunderstandings/biases, multiple time zones make scheduling meetings very difficult, need for proficiency across a wide range of technologies, and team membership bias toward individuals skilled at learning new technologies, among others. Without going into detailed essay answers, we content in stating that all of these challenges are present in the essay data. A further challenge in VIBu is that the environment misses something that many scholars (e.g. Bell & Kozlowski, 2002; Kayworth & Leidner, 2002) find as an essential ingredient for effective virtual team work, namely that the virtual team would have a leader who would have a mentoring quality. In some cases this, however, takes place in VIBu without the simulation operators leading the participant into this direction.

As a general comment on how the students felt about the exercise we can say that the majority regarded it as a very positive experience (Q3):

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

I enjoyed working with the people in my team and could of course imagine working with them again in the future. I think I even made some new friends. My expectations regarding the VIBu sessions were met and I have gained more experience in working with people I did not know before, with different cultural backgrounds, via e-communication media. (Austrian female student, 1S)

Commitment

An obvious prerequisite for successful collaboration is that most of the virtual team members are committed to the joint task. We have noticed that students are naturally inclined to international collaboration and find the international arrangement fascinating. Surprisingly often they are able to self-organize their teams as a result from active participation, commitment to the joint task, and openness to each other (Q4):

We partly split the roles between us but sometimes we all just did what has to be done... As beginners in the game got one function they understood at first and took over some more tasks after a time. Therefore mostly in this sequence persons joined and left the game so one could say it was a constant flexible taking over roles perspective which was working out very well in our group... Due to the good communication and the sympathy within the group we had a great advantage as this is in my point of view the most [important?] prerequisite characteristics for success. (Austrian female student, 1S)

Often the students are even willing to make compromises for their newly appointed team, to avoid problems and help each other in finding a suitable shift in the team work context (Q5):

Based on our plan [the] Asian team could have morning shift from 3:30AM GMT to 6 hours, but it was not like that on real time scheduling.... All

members from Asia took the time slot from 5:30 AM GMT because they had [an] important lecture before that. It means that there was no one to begin the game. This kind of discontinuity was solve by one American member Sandy was [online] until midnight, one member from Thailand had to cancel the class and Jivan from Denmark waked up early. (Nepalese male student in Denmark, 1S)

One demonstration of the unifying and team spirit creating potential of these kinds of international exercises is the following quote (Q6):

The most fruitful experience was that team coherence and collaboration peaked when we had run into biggest troubles. Nobody blamed anybody else, everybody felt responsible. This is what I would call a real team. Since we are just at the beginning, I am sure that team spirit will be growing in future as well. (Austrian female student, 1S)

However, poor commitment may lead to frustration of the more active members (Q7):

However, I must say that exploiting our full potential would have required definitely an input from all team members. In fact, the commitment of the rest towards the solution of our team assignment left quite a lot to be desired. What I found especially annoying were the responses of two members wherein they thanked the others literally for the great work without contributing anything to the assignment. (Austrian male student, 2S)

Teachers who are planning similar dispersed exercises with assignments should make sure that the requirements are the same for all students, no matter where the students are located. This prerequisite becomes very clear from the student comments. This has been a challenge for us game facilitators as we feel that we have limited possibilities in making sure that the local teachers commit themselves (and their students) to the

aims of the simulation. Partly this is a cultural issue—the standards for required course participation are different in universities in different parts of the world.

Empowerment and Self-Organization

Our experiences point out that the group interaction and the intensity of the synchronous exercise provide a self-directed learning experience, in which the instructor plays a surprisingly small role. The intensive decision-making challenges and group discussions within the simulation environment help the students to immerse themselves in to the challenges of the virtual world. The following quote illustrates the self-organizing capacity of multicultural, virtual teams (Q8):

As we organized and discussed the different roles in our teams it was quite easy to find the right role and tasks for everyone. We decided that only one person could handle the simulation itself and so we decided to have a manager in every shift that took care about all ongoing processes on the virtual desktop. In the case that 4 of us in one shift we also installed a vice manager to assist the manager keeping the overview. All other team mates were assigned to be the negotiators on the market. This splitting up of the different roles made it quite easy for us to start working. I also would say that everyone found the role that was the right one and started to work in the proper way. Also I would say that all of us had the same opportunities to participate... Furthermore we decided that one of each shift would sum up what happened during the shift to provide the other all information on what we did during our shift... So everything was well and we could work effectively... Definitely there were power structures in our team, but they were developed equally. (Austrian male student, 2S)

The previous quote is somewhat surprising in regards of what previous studies have found to be essential on effective virtual team work. For

example, Bell & Kozlowski (2002) and Kayworth & Leidner (2002) have found as an essential ingredient for effective virtual team work to be a leader who would have a mentoring quality. The results from the VIBu case indicate that a clear leader is not necessarily needed, as the team may also function on an equal basis. Surely, the VIBu sessions are too short to come up with any conclusions regarding longer virtual team projects, but at least in this kind of adhocratic, short term projects it seems to be possible that the team is managed in a democratic manner.

Thus, empowerment of the teams leads to self-organization, which may take several forms. Having a leader in the team worked for many of the teams. What was a bit surprising, however, was that finding a leader for a team does not necessarily take place based on voluntariness but the team may choose a reluctant or unwilling person as the leader (Q9):

Concerning my role I have to admit that I didn't really have a very high active part. We decided that I would take over the more managing role in the first shift, so that we would have one person to have an overview on what was going on. So mainly I acted as an advisor and gave suggestions what to do as well as having an overview on the stocks and the needed orders. So every time I found out that something needed to be done I made my suggestion to the others, which in my opinion turned out quite good. (Austrian male student, 1S)

Leadership can also be joint by nature and at the same time create a positive and democratic team spirit, leading also to good results (Q10 and Q11):

Considering the power structure of our team it can be definitely said that no member had more power than others, as everyone had the possibility to disagree to certain decisions. But like always in business or personal life, people are often too shy or too lazy to start a discussion... everyone had the opportunity to step forward and declare

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

her/his point. The presence of a leader(s) made the whole game even much easier. So satisfaction with that was quite high. Like in every time it is important to have a strong person, who is able to make final decisions. To be successful with this strategy it is important to allow compromises and listen to the team mates. (Austrian male student, 1S)

Especially the change in group dynamics were interesting, at first nobody had a real clue what to do except ordering materials and produce, but at the end of the session apparently the group appointed members to groups (Buyers, Manufacturers, Marketing) and even a CEO was chosen. (Dutch male student in Indonesia, 1S)

With the exception of Q6 all the above quotes on team management and self-organization were positive, showing different kinds of approaches to successful team dynamics and collaboration. It seems that if the students are given a meaningful task to be completed, they are motivated to take the effort to make the virtual organization a successful one. The lesson to be learned from the teacher/facilitator point of view is what we referred to already earlier, that the VIBu students are newcomers in the environment who begin to assume responsibilities, testing their abilities and responsibilities (Duffy and Cunningham, 1996). The participants clearly first observe and then beginning to take on simulation related responsibilities. In most of the cases they also wish to become an integral part of their own team.

There are opposite examples, however. The following quote shows how it may be difficult to become part of the group if the active team members do not include the less active team members (Q12):

When I got back to the group, team mates had partially changed. The business was very profitable... I felt that those three guys collaborating at the moment had established a good system how to divide the tasks as well as developed real managerial expertise how to successfully run the

company. However, it seemed quite difficult to me to participate again, because I neither was at the same stage of experience nor knew the real background of their decision making... Nobody could take the time to explain this to me and I didn't dare to ask, since I realized that they had to concentrate on the very business. So this was an unexpressed conflict that made me quite insecure. (Austrian female student, 1S)

The quote above shows problems which the students may very well face in their future real world working environment. The question for us educators is, should we try to prevent these kinds of experiences from taking place or not. As such they are valuable experiences from which the students can learn, but the task of the teacher is to take care that these experiences are dealt with in an appropriate manner. Giving the students an opportunity of writing about these incidents and reflect on them is probably the only possible way of managing it in this kind of bigger sessions with over 100 participants. The normal case is that through the reflection the students get an opportunity of reflecting on the incidences and analyze how the situation developed (Q13):

The team assignment between the sessions was very useful in terms of helping our group analyze our company and to jointly develop a plan for the second session. We completed the assignment together by having a group Skype call and collaboratively writing in a Google Document (Gdoc). The Skype call allowed each of us to propose our ideas, make suggestions, and comment synchronously. Although some members took greater initiative, with writing or making proposals, we were able to reach consensus and move through the assignment without a group leader guiding the discussion. (Polish female student in Denmark, 2S)

In many cases the students realize how they could have acted in a different manner, leading to better team communication and collaboration.

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

In the case of Q12 this unfortunately was not the case. The student in this case was on the track of becoming an equal team member, but process was not finished in the second session (Q14):

...we had at least defined our strategy [during the two week period between the simulation sessions] which made it easier for me to act more self-confidently. Despite me feeling more comfortable this time – my contribution the team assignment seemed to be welcome by the others – I had bad luck: In the evening before the second round's start, it turned out that we would be just three team members... [I] was online from 3.30 till 8.30 (GMT+0) then, managing the whole company on my own. I made some nice experience concerning the management of internal organizational processes, negotiations with customers and also experienced the feeling to get a company out of the red figures into generating a positive cash flow again. As regards to our team, I am sorry to say so, but I can add nothing, because I didn't cooperate with anyone... So I could not make another experience. This is all I can say. Last but not least I would like to state that I am very disappointed, because I had really expected to experience how to cooperate within a virtual team. (Austrian female student, 2S)

The situation described above is very unfortunate. As simulation facilitators we try to prevent these kinds of situations by creating big enough teams (i.e. naming 8-10 students into one team when the simulation time is 12 hours, meaning that there should be on average 4-5 students online in any given moment). On one hand this means that the case described in Quotes 12 and 14 is rare in the simulation nowadays. On the other hand, other students in the same team may have a totally different experience. For example the next quote is written by a team colleague of the student who wrote Quotes 12 and 14 (Q15):

The beginning of the second session was different from the first session as nearly everyone in the team knew each other as well as the process of the game... The overall situation in the first session could be explained as everything working out great. We were very organized as tasks were split between us but nevertheless as we all were talking to each other, the whole time it was easy that everyone got the whole picture. I think that was for sure one of our benefits, that we had a very good communication during the whole time... as we all were communicating during the whole time it was easy to ask questions and get answers or to make a decision as a team if no one had an answer to it. The only difference in that respect was the fact that we were all more experienced in the second round of course, and therefore our decisions were made very fluently and quickly as we had a naturally understanding for it. (Austrian female student, 2S)

Partly the difference in the tones of Quotes 12&14 and 15 can be explained by the fact that different students take part during different time slots. But partly this probably also can be explained by personality and cultural issues (note, that the students of Quotes 12 and 13 were both Austrian females).

At best the empowerment and permission to self-organize leads to great results (Q16):

If asked now what the biggest advantage of virtual teamwork is, I would most of all say that it is the resource pool of individual skills, expertise and talents dispersed all over the world together with the different background everybody brings with him or her. (Austrian male student, 1S)

Trust

It is obvious that trust is needed in this kind of virtual environment, like it has been clearly found

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

in previous literature on virtual teams and trust. The building of trust takes place through determined communication and orderliness (Q17):

One of our identified key goals for the second round was to improve communication and the way information is transferred to members (re) joining the simulation. When I had to leave the first shift on that day I announced this around 15 minutes before to the other members. Since two colleagues joined the round we had to review the task allocation and agree on the strategy for the next hours. I summed up the major developments of the past hours and sent a short review... My colleague from Indonesia who should continue for a while added her comments to this... Since the member who overtook my duties had been very supportive during the team assignment I had trust that he was really interested to carefully work towards the achievement of good performance of our company... After seven hours in my physical work environment I returned to the virtual simulation... It was great to see that my team mates had continued to succeed and expanded the profits up to nearly 5 million Euros... 'Hello Martin, we are selling everything out', one team member welcomed me. (Austrian male student, 2S)

How trust is achieved in this kind environment is partly a mystery to us, but definitely active communication and openness help in building trust. As simulation facilitators we can mostly inform the students before the simulation sessions on what the prerequisites of trust are and how important it is that they have a strong team identity. After that it is upon the teams to achieve trust. Next another quote showing great trust between the different team members. It is clear that the students have created a strong team identity in this case and we may assume that this is the result of good communication and equality between the members (Q18):

As we defined our roles and with the role corresponding decision power there was no real problem in taking a decision when it was necessary. If we take a look at the role of our negotiators who were dealing with the „market“ there was full bargaining power given to them so they did not need to always ask the rest of the team what they should pay for a certain needed part. I guess this made it quite easy for us to work together and everyone had the possibility to enjoy the simulation. (Austrian male student, 2S)

Depending probably on their cultural background the students may feel differently on how they bring up and present their personal information. These seemingly very little details may have a quite significant meaning for how trust is built as the students may make very strong interpretations based on seemingly small issues (Q19).

...what was a little bit annoying for me personally was the fact that some students did not put photos of themselves on their Skype accounts. One student for instance made himself visible solely with a black picture. On the one hand I have a certain understanding for privacy concerns but on the other hand I have to admit that it was easier for me to establish trust with someone of whom I had a picture in front of me... since Skype allows for this feature I would argue that it is valuable for establishing common trust in virtual team activities. (Austrian male student, 1S).

This kind virtual exercise may also bring the participants closer to each other, by uniting them with rare but shared experiences (Q20):

...that people from the US had connection problems because of the hurricane and the entire participation rate of our team decreased a bit. (Austrian male student, 1S)

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

If trust is in place, the working routines and roles seem to find their places even in this kind of short experiments (Q21):

In the second session of the VIBu game I realized that team members had much [more?] awareness, less email exchange, less conversation, more flexible on time and work and focused on task. We had good results and cooperation even though we did not exchange much email as compared to the first session, the reason could be that once virtual team member gets to know each other they focus on the task and gives better collaboration work. (Nepalese male student in Denmark, 2S)

The teams are extremely independent and we as simulation operators get quite little questions from the teams. The teams clearly try to manage themselves, showing great commitment to and ownership over the simulation task (Q22):

We also hit a conflict when we were unsure of the game because we were not producing anything even though we had materials and an active production line. After a couple frantic minutes we were almost going to contact the tutor but we managed to find the solution. (Danish male student, 1S)

Complexity and Authenticity

Today a common thread running through the deficiencies in any learning domain is oversimplification (Hakkarainen, Palonen, Paavola, & Lehtinen, 2004). At the same time the present business world contains more complexity than ever. Our guiding idea in developing and running VIBu sessions has been the belief that we need to provide relevant experiences on the contemporary working environments to the students, to expose them to authentic complexity. We will next show comments demonstrating this issue.

The first quote describes how challenging the starting situation is for the students (Q23):

...my first impression was that it sounds very complicated and complex. Before starting the RealGame it was a glorious mess. Everyone was a bit confused as some had troubles with the network connection and some were just unsecure when it comes to game rules... At the time when I was entering the game it seemed very confusing as we all didn't know each other in person so many times we asked each other who is online which was very amusing. Even though I was informed about the game operations upfront, it is very different if you suddenly have to play the game. (Austrian female student, 1S)

Although it was a problem for some of the students that not all participants were in an equal position concerning the simulation related assignment, this student found a very constructive view to the issue (Q24):

Finally we fixed the essay, even it was not easy, mainly because of the fact that some members were graded on the VIBu sessions and others not. The only important thing I want to say in this matter is that this should stay like this, because real business teams have to deal with exactly the same problem. Certain members just join the group, because the head of his department lost negotiations against another head and therefore he has to provide one person of his department to a (virtual or non-virtual) team. Many times, this person will not be interested in the object of the team, because of the absence of incentives. Quite the contrary it costs time and even the direct boss is not happy seeing him working on that project. The difference in our VIBu was that we did not have a given organization structure, therefore we had organizational problems in the first session, but it worked better in the second session. (American female student, 2S)

Often educators believe that the students need clearly defined assignments to be able to produce

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

“correct” learning outcomes. And even if we simulation operators feel that the challenge is extremely complex and vague, it is not necessarily how the students think about it (Q25):

In the team I sometimes felt as if there might be a power void which no one would fill out. It wasn't a big issue since our common task which we needed to accomplish wasn't creative in nature but clearly defined so we had a common ground for collaboration. I think an undefined problem would have required a leader who could create some incentive for the group to collaborate by defining tasks and assigning them. (Danish male student, 1S)

Exposure to Cultural Diversity

It is quite clear from the premises of VIBu that the experience is rich with cultural issues (different language skills, communication patterns, and cultural customs). This has been a basic argument of VIBu from the beginning, that students should be exposed to different cultures so that they will achieve cultural skills needed in the contemporary global business environment. We do not claim that what we offer would be anything close to exhaustive in this respect. More VIBu is like the first glimpse on multiculturalism for many of the participants, as still today truly working multicultural university exercises seem to be rare (except for, of course, student exchange programs). Modern technologies can be part of the process of overcoming cultural barriers (Q26):

Afterwards we socialized by sharing personal social information like interests, age and education and it helped the alignment of the group to get to know the others. (Danish male student, 1S)

The next quote talks about the importance of being informed and having consideration for other cultures (Q27):

I learned that knowledge makes you important in a team and therefore it was easier to convince other team members of my ideas... In the second session I got much more compliance. Interestingly my colleagues accepted my decisions more, no matter which culture they were from. I assume that knowledge helps, apparently in each culture similarly. I tried to find out the strengths of each member and used my position to give recommendations, who could do what. I had to express this in different ways, under consideration, which culture my colleagues came from and which personal behavior they had. Because some people liked to be treated high appreciated, for others this was not as important. (American female student, 2S)

It is very clear that cultural issues become partly visible in the sessions, although we are sure that in this kind of a short session the cultural characteristics do not have a chance to fully become visible. The sessions are probably much too short for the participants to get free of or forget about consciously or unconsciously accentuated politeness and correctness. If nothing else, the sessions work as an icebreaker between the cultures and removes fictitious cultural stereotypes (Q28 and Q29):

Our team consisted of members from different cultures with a high degree of diversity. After the first Skype session and introductions via email I think everyone was quite satisfied with the made up selection. The only critical incident was the different time zones where the members lived in (time scheduling!)... Through the high diversity regarding the appearance of different universities where the members are studying, we were able to generate a high class learning level. (Austrian male student, 2S)

One member from Thailand noticed that the supplier I was negotiating was just right next to her room in [the] university, so she told me that she

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

will negotiate with her face to face. She negotiated on Thai language [and] after that the supplier was ready to sell on [a] lower price than before... different people from different culture and time zone perceived information differently. Face to face communication with Asian people is more effective than via communication tools. (Nepalese male student in Denmark, 1S)

But as already mentioned, this kind of a short session is not long enough to bring up the true diversity of cultural differences, as the quote below suggests. What the quote below also might indicate is that the young people around the globe today have less cultural diversity than generations before them. In other words, the local cultures have been exposed to Western business culture through television, global companies and business models operate throughout the world and universal business teaching materials are used in universities everywhere (Q30):

As I mentioned before I am content with the way my team is operating, it's efficient, direct and very professional in my opinion. As far as I know there haven't been any disputes or conflicts between the members at least not when I was playing the game. The way our team operates is very Western in my opinion which doesn't surprise me because the majority of my group members are from Europe or America which doesn't form a problem for me since I'm from the Netherlands and I am used to working with people from both Western countries and Asia. (Dutch male student Indonesia, 1S)

It is obvious that the student enjoy the multi-cultural aspect of the simulation. It fortifies their natural curiosity on foreign cultures and adds an additional level on their motivation. As the modern working life is becoming more international, it would be downright empty-headed not to use this possibility which coaches students to the challenges of modern working life. That is the task of the educators in any case.

An additional benefit of using the virtual environment is that it seems that students can work in a democratic and equal environment, as the required technology is not a financial issue in almost any part of the world. The virtual environment does not include the physical class room nor any other physical characteristics, but merely the person with her/his intellectual capabilities. This is an equal starting point for humane and appreciative education.

“Unexpected” Results

In this kind of educational experiment the teacher can never know exactly what the students will take with them and what will turn out to be important for the individual students. These unexpected learnings may very well be the most important learnings for these individuals, and the author of this chapter as the operator and teacher of the experiment would like to state that teachers should never trivialize this kind of more “informal” learning.

The students are often very imaginative in coming up with new ways of tackling the lack of means possible in more traditional working environments (Q31):

The expression of emotions which is part of any social interaction is quite different compared to physical working environments. Emotion icons or expressions of emotions in words appear instead of physical manifestations or mimic expressions of mental states. (Austrian male student, 2S)

The next quote talks about the special characteristics of the virtual communication tools and how they should be taken into account in virtual communication (Q32):

As in our virtual team the main communication was done by chat, it was important to take care how we express opinions and that we explain on which factors our decision is based. In a virtual

team we have to explain much more things... When we negotiated via Skype usually we did not know our counterparts personally. If I achieved good prices, I wanted that the person on the other side of the line knows me better to enforce the relationship and therefore have successful business in future as well. I sent for example my personal email address via Skype chat... My intention was that the person seeks me with this email address on Facebook to know more about me. In the meantime I know that she did it immediately. And it worked, we had a perfect partnership and I got offers very fast, which helped me to compare the offers of more supplying teams in the same time... To guaranty the price level when I left my shift, I started to introduce my follower to the persons I currently negotiated with. This emerged to be very helpful. (American female student, 2S)

Although in theory virtual communication makes communication globally easier and cost efficient, in reality not all the parts of the globe are equal in terms of virtual communication. This group seems to have overcome the problem with the network capacity, using virtual tools that require less capacity, creating equality through the use mode of the technology (Q33):

We decided to mainly use the chat function in Skype and leave the phoning away. This turned out to be very effective and we had no problems with our communication at all. Furthermore I would say that this was the better decision, because sometime you can have big issues with the voice quality when you make calls on Skype. In the chat there is no problem with the communication. Also in this case everyone could state ones opinion and everyone had a look at it... (Austrian male student, 2S)

CONCLUSION

In a networked business environment enhanced flexibility is necessary for coping with the ever-increasing environmental dynamism. The accelerating velocity of change and turbulence in the business environment put emphasis on individual and collective agility to adapt to the changes in the environment. This kind of flexibility requires an increase in employee responsibility taking, self-control, and decision-making in ever-wider areas (Heifetz & Laurie, 1997).

In this paper we have demonstrated in the field of virtual collaboration, how to generate a functioning virtual learning environment in which the student collaboration is motivated and eager, and is reported to be meaningful. The novelty of our findings on virtual learning remains limited, but they, however, encourage educators to boldly experiment with ambitious ideas. Based on our experiences, the students today are open to new ideas, broad-minded regarding new technologies, tolerant to uncertainty, curious about foreign cultures, and motivated to learn new skills.

As noted earlier – and as the student quotes demonstrate – the experiment described in this study includes many of the challenges Kayworth & Leidner (2002) list to be present in the virtual context. Still, regardless of all these challenges the students in the sessions almost without exceptions have been able to overcome them successfully. Our case should stand out as example of how the students today may have much more motivation and capacity to take responsibility on their own learning than what many educators might think is realistic to expect.

For this kind educational experiments student *commitment* is an essential prerequisite and it can be achieved by simply offering the student a

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

meaningful collaboration task to be accomplished in an international context. Together student *empowerment* and commitment will lead to *self-organization*, resulting in commitment to the joint task, openness to each other, and even to a self-directed learning experience, in which the instructor plays a surprisingly small role.

If all the above attributes are in place and there is active communication and openness between the students, they are able to build *trust*, which commonly is regarded as an essential ingredient in successful virtual collaboration. In creating trust a strong team identity is important and that is possible to achieve by forming small international student teams.

Educators can further reassert the above attributes by providing an *authentic* and challenging learning task/environment, in which it is indeed not necessarily to reduce *complexity*—on the contrary. Complexity is seen as a motivating factor which increases the intellectual challenge of the learning task. Finally, through a multicultural and international learning experience we *expose the students to cultural diversity* and, thus, train our students to the very requirements of the modern, international working life.

As educators we should also remember the following. The younger generations are very fluent with the modern communication technologies. How the teacher feels about different technologies is not necessarily the same the students do. It is good to remember that the present day 20+ years generation was born in the middle of computers and computer networks. They may have started using computers before they started their school. Thus, it is often the teacher who is the barrier in putting new educational innovation into operation. Courage to implement bold innovations may result in something that will be unique for the students (Q34):

I did not expect that this game will be so interesting for me. Before we started the first session, I thought, it is just a game for handling a company.

But it is much more. It is an intercultural training, where people are under pressure to understand cultures and behaviors, because it is possible to measure the quality of the cross-cultural work in the teams (in a certain way). This game made me more open to make collaborative intercultural decisions. (American female student, 2S)

REFERENCES

- Ahuja, M., & Carley, K. (1998). Network structure in virtual organizations. *Journal of Computer-Mediated Communication*, 3(4).
- Bell, B. S., & Kozlowski, S. W. J. (2002). A Typology of Virtual Teams: Implications for Effective Leadership. *Group & Organization Management*, 27(1), 14–49. doi:10.1177/1059601102027001003
- Bernard, H. R., & Ryan, G. W. (1998). Text Analysis: Qualitative and Quantitative Methods. In H. R. Bernard (Ed.), *Handbook of Methods in Cultural Anthropology* (pp. 595–646). Altamira Press.
- Brown, J. S., Collins, A., & Duguid, P. (1989). Situated Cognition and the Culture of Learning. *Educational Researcher*, 18(1), 32–42. doi:10.3102/0013189X018001032
- Corbin, J., & Strauss, A. (2008). *Basics of Qualitative Research* (3rd ed.). Thousand Oaks, CA: Sage Publications.
- Duffy, T. M., & Cunningham, D. J. (1996). Constructivism: Implications for the Design and Delivery of Instruction. In D. H. Jonassen (Ed.), *Handbook of Research for Educational Communications and Technology* (pp. 170–198). New York: Macmillan Library Reference USA.
- Glaser, B. G., & Strauss, A. (1967). *The Discovery of Grounded Theory: Strategies for Qualitative Research*. New York: Aldine.

- Gosenpud, J. (1990). Evaluation of Experiential Learning. In J. W. Gentry (Ed.), *Guide to Business Gaming and Experiential Learning* (pp. 301–329). London: Nichols/GP.
- Hakkarainen, K., Palonen, T., Paavola, S., & Lehtinen, E. (2004). *Communities of Networked Expertise – Professional and Educational Perspectives*. Amsterdam: Elsevier.
- Heifetz, R. A., & Laurie, D. L. (1997). The work of leadership. *Harvard Business Review*, 75(1), 124–134. PMID:10174450
- Hertel, G., Geister, G., & Konrad, U. (2005). Managing virtual teams: A review to current empirical research. *Human Resource Management Review*, 15(1), 69–95. doi:10.1016/j.hrmmr.2005.01.002
- Jonassen, D. H., & Land, S. (2002). Preface. In D. H. Jonassen, & S. M. Land (Eds.), *Theoretical Foundations of Learning Environments* (pp. iii–ix). Lawrence Erlbaum Associates.
- Kayworth, T. R., & Leidner, D. E. (2002). Leadership Effectiveness in Global Virtual Teams. *Journal of Management Information Systems*, 18(3), 7–40.
- Köhler, T., Fischlmayr, I., Lainema, T., & Saarinen, E. (2012). Bringing the world into our classrooms – The benefits of engaging students in an international business simulation. In C. Wankel, & P. Blessinger (Eds.), *Increasing Student Engagement and Retention using Classroom Technologies: Classroom Response Systems and Mediated Discourse Technologies* (pp. 163–198). Emerald Publishing Group.
- Kolb, D. A. (1984). *Experiential Learning: Experience as the source of learning and development*. Englewood Cliffs, NJ: Prentice Hall Inc.
- Lähteenmäki, S., Saarinen, E., Fischlmayr, I., & Lainema, T. (2009). Virtual Organizations. In H. Bidgoli (Ed.), *Handbook of Technology Management* (pp. 189–206). Wiley.
- Lave, J., & Wenger, E. (1991). *Situated Learning: Legitimate Peripheral Participation*. Cambridge University Press. doi:10.1017/CBO9780511815355
- Morgan, G. (2006). *Images of Organization* (Updated Ed.). Thousand Oaks, CA: Sage.
- Rico, R., & Cohen, S. G. (2005). Effects of task interdependence and type of communication on performance in virtual teams. *Journal of Managerial Psychology*, 20(3/4), 261–274. doi:10.1108/02683940510589046
- Wasko, M., Teigland, R., Leidner, D., & Jarvenpaa, S. (2011). Stepping into the Internet: New Ventures in Virtual Worlds. *Management Information Systems Quarterly*, 35(3), 645–652.

KEY TERMS AND DEFINITIONS

Game-Based Learning: Like *Simulation Gaming* with the difference that the learning content may not be that clearly real-world related. Thus, the game context may be less clearly real-world related, although the skills learner may have a significant real-world importance.

Global Training: Training that takes place on a global (cross continental) level.

Multicultural Communication: Communication that takes place between two or more nationalities or cultures. Typical for this is that at least one of the parties uses some other language in communication than her/his mother tongue.

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

Self-Organizing Teams: Teams that do not have a clear, nominated leader, who would have the authority to lead the team.

Simulation Gaming: Form of training and education which uses realistic games (based on the real-world cause effects) in demonstrating the dynamics of the learning topic.

Supply Chain Management: The function in manufacturing organizations which manages

and controls the holistic materials flow from raw material purchases to customer deliveries. The aim is to have a cost efficient but also an accurate flow of materials which well serves the customer needs.

Virtual Collaboration: Collaboration that takes place using tools of virtual collaboration. The collaborators have a common goal.

Virtual Work: See *Virtual Collaboration*.

APPENDIX A: SELF REFLECTING ESSAY ASSIGNMENT AFTER THE FIRST SIMULATION SESSION

VIBu Virtual Team Exercise

Individual Reflective Essay 1, After 1st Simulation

This is an INDIVIDUAL reflective essay covering your experiences and insights to the first round of the VIBu.

Try to cover the following questions in your essay. Try to really consider these issues; it is not the intention to write a description of the simulation. Please make sure to write a coherent text and do not just answer the questions.

It is strongly recommended that you write your essay in a text editing program (e.g. Word) and copy the final text below. This gives you the possibility to save your work while writing the essay.

DL for handing in the essay is Tuesday, October 21st at midnight GMT+0. Optimum length of this reflection is two pages / A4s.

- Describe your overall feelings after the first virtual team session. How was it in the beginning for you? How it developed? What about afterwards?
- Think about your team in general. How effective was the team in your opinion? In terms of the game outcome? In terms of group processes ('working as a team')?
- Analyze your team more in-depth. What was working, what was not? Is there something that should be changed?
- Think about organizing the work. How did your team organize itself? Did you have roles or specific tasks? What was your role? How were the responsibilities been distributed? How did you feel about the distribution of responsibilities?
- Think about conflicts or potential threats. Were there any conflicts in your team? Or potential incidents that could have turned into conflicts? What were the reasons and how were they solved (if) in the team?
- Think about your expectations versus the experience. Was there something that surprised you? All in all, was there something you considered especially fruitful (learning-wise)? What do you think were the biggest challenges?
- What (if anything) you personally plan to do differently in the second round of the game? Why?

APPENDIX B: SELF REFLECTING ESSAY ASSIGNMENT AFTER THE SECOND SIMULATION SESSION

VIBu Virtual Team Exercise

Individual Reflective Essay 2, After 2nd Simulation

This is the second INDIVIDUAL reflective essay covering your experiences and insights to the second simulation round. The themes and questions are presented below. This exercise is designed to help you process the entire VIBu experience and to cover most important aspects of it.

Optimum length is 3 pages (can also be longer if wanted). The DL is 4.11.2013 (November 4th) at 12pm (GMT+0).

IMPORTANT: Note that it is not the intention to write a description of the actual exercise or the game, but instead to concentrate on the behavioral aspects of your team's working: who, how, when, why and with what kind of effects? Emphasis should be on your interpretation. In order to succeed in your reflection, you should analyze what has happened (think about the reasons) and not only describe the incidents.

1. Reflect your thoughts after finishing the team assignment between the sessions.
 - a. How did you organize your work? How did you feel about this way of cooperation (taking contact, collaborating through e-communication media etc.)? Were there any problems?
 - b. Describe your decision-making during the team assignment.
 - c. Did you find it beneficial to discuss about these different issues before the second session?
2. Reflect your thoughts after the second simulation session.
 - a. Describe the decision-making process in your team. Was it in any way different than in the first session and/or doing the team assignment? Think about how it was evolved.
 - b. How did your team organize the work? Did you have specific roles? Were all team members equally willing to participate? Were all given equal possibilities to contribute? How do you see your role?
 - c. How did you share knowledge between team members in different shifts? Was everyone "able" to delegate responsibility to the next group? Was it difficult to organize the shifts?
 - d. How satisfied are you with the communication within the team? Was everyone given equal possibilities to speak and have his/her opinion heard? Based on your experiences, think about the pros and cons of virtual communication.
 - e. Did you feel that your teammates were "present" during your cooperation? How did presence (or absence) manifest itself in practice? Can you think of an example? How did it affect your team's performance? Did you try to influence the development of presence in your team and how?
 - f. Think about the power structures of your team. Were there any members who had more "power" than others? If, why (what were the reasons)? Can you identify a leader in your team? Were you satisfied with the leadership in your team? How it could have been developed?
 - g. Were there any problems that your team had to deal with during the simulation session? Were there any conflicts or critical incidents? What were the reasons behind them and how did you

The Premises for Learning Successful Virtual Collaboration in Self-Organizing Teams

solve them in the team? How did you handle disagreements? Would you do anything differently now thinking about them afterwards?

- h. Think of the cultural differences. When and how did they appear? With what kind of effects?
- i. Looking back, can you say that you trusted each other? How would you describe that trust? (Also: What appeared to be most problematic in developing trust? Or surprising?) Would you feel comfortable with continuing working with this team also in the future?
- j. Compare your expectations regarding these VIBu sessions with the experiences now after the sessions. Were your expectations met? Was there something unexpected?
- k. What do you think you can personally take away with you from this VIBu exercise? Can you think of one or two issues that either changed your way of thinking or then enforced your previous assumptions regarding these different issues related to VIBu sessions?