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Virtual Teams as part of Internationalization of Higher Education

Tarja Chydenius a, Tanja Jadin b

a Laurea University of Applied Sciences, FINLAND
b University of Applied Sciences Upper Austria, Softwarepark, Hagenberg, AUSTRIA

ABSTRACT
Worklife is becoming increasingly international and intercultural. With improved online interaction and new ways of working multicultural virtual teams are becoming a routine. In order to interact effectively and efficiently in the networked professional environments practice for higher education students is of utmost importance. Building intercultural competence and experimenting with multicultural virtual teams as part of pedagogical internationalization must be systematic. Successful internationalization of education depends on activities on three levels: institutional, faculty and students (Lauridsen & Cozart 2015). Trust, relationship building, cohesion, cooperation, communication, team-related attributes and tasks are crucial for successful virtual team cooperation (Hertel, Geister & Konradt, 2005; Baruch & Lin, 2012). In order to explore for further prerequisites of effective cross-cultural virtual cooperation in an educational setting a group of Finnish and Austrian master level students were given an assignment to organize multicultural virtual teams and study aspects of intercultural work. Six virtual teams were formed with only a broad assignment brief with the objective of finding out factors hindering or facilitating a successful intercultural virtual team cooperation from the subjective students’ point of view. After a three weeks’ long co-operation both student groups filled in a similar qualitative questionnaire about the intercultural virtual team experiences. The questionnaires were analyzed with content analysis by means of different criteria i.e. cooperation and collaboration, technical platforms, satisfaction and perceived challenges. The results were additionally analyzed in view of intercultural differences. The students were very satisfied and appreciated the possibility for the virtual international team work. Based on the results following recommendations for enhancing intercultural knowledge in virtual teams are presented: considering obligations and time (especially for para-occupational education), clear assignments, a set of recommended tools for communication and collaboration, scaffolding students in different steps i.e. team formation, common ground for group work and intercultural awareness.

Key words: Virtual Teamwork, Intercultural Communication, Intercultural Cooperation, Cross-Cultural Education

1 INTRODUCTION
The purpose of this paper is to investigate the prerequisites for successful intercultural virtual teams in a higher education context. As working life is becoming increasingly international, project teams are forced to have knowledge about computer-mediated cooperation, appropriate usage of technology and intercultural issues. Future professionals need to be able to analyze factors that make this virtual and multicultural activity effective and efficient. The distant mode of working demands for good motivation, high self-directedness and willingness to work independently from the other team members. Consequently, not every
professional is capable to work effectively in virtual teams, not to mention added challenges of intercultural online teams. Universities of Applied Sciences have a practical and applied approach in knowledge and skills acquisition. Thus, additional emphasis needs to be addressed to find out what makes intercultural virtual teams especially for higher education successful. As part of applied higher education the required skills need to be practiced and relevant knowledge and understanding for this type of expertise gathered. Most higher education institutions claim to be international and to provide opportunities for intercultural learning. However, the degree and quality of internationalization is not always easily definable. InterlUni, an Erasmus Academic Network, provides a framework and a set of principles for quality teaching and learning in the international classroom (Lauridsen & Cozart 2015). As many other studies and reports this report, too, fails in addressing the virtual learning spaces. For some reason, intercultural virtual teams between partner universities have been little studied as part of internationalization of education. Many factors such as trust, relationship building, cohesion, cooperation, communication, team-related attributes and tasks have been found to be crucial for successful virtual team cooperation (Hertel, Geister & Konradt, 2005; Baruch & Lin, 2012; Lin, Standing & Liu, 2008). This study aims to explore what are the further prerequisites for effective cross-cultural virtual cooperation in an educational setting between groups of Finnish and Austrian master level students. Students from two different master programmes in Finland (Laurea University of Applied Sciences) and Austria (University of Applied Sciences Upper Austria) combined their courses for three weeks for an online virtual team work. The virtual team assignment’s goal was to increase knowledge of intercultural cooperation by making the students familiar with various cultural models and gain understanding about different cultural characteristics or typical behaviour affecting human interaction. At the same time, the knowledge was made applicable and new skills needed to be practiced in virtual cross-cultural teams. This increased the students’ knowledge about intercultural aspects, diversity and challenges working in virtual teams. At the same time, it offered the authors an opportunity to investigate some of the aspects of successful cross-cultural teams in higher education.

2 KNOWLEDGE BASE

The main concepts of this explorative research are virtual teams, intercultural teams and internationalization of education. Each of these topic areas have been abundantly researched but the aim of this study is to explore how the combined knowledge of these areas can better support the aim of internationalization-at-home in higher education institutes (HEI).

2.1 Internationalization of education

Internationalization of education is an objective for most higher education institutions and many initiatives and activities supporting this aim have been taken. Mostly, these activities focus on sending students abroad, receiving incoming exchange students or supporting staff exchange but also other steps have been taken to support the aim of internationalization. Despite the increased traveling possibilities a substantial part of the students are not able or willing to undertake an exchange period abroad. Thus, some effort has already been put in increasing the internationalization-at-home opportunities where online cooperation between partner universities is one of the possibilities. The prerequisites for a successful online cooperation are, however, not studied in detail.
In order to ensure high quality of teaching and learning in international classrooms Lauridsen and Cozart (2015, 79) present a 3x3 matrix of principles affecting the quality of teaching and learning in a multilingual and multicultural learning space. The matrix includes an institutional, a faculty and a student dimension and provides additional conditions for each category to be met.

The focus of activity for the institutional dimension is to ensure the following quality principles: Providing an inclusive learning space, providing institutional support for learning-conducive environments, and integrating students and staff in the institution. Our experience in practice is that the inclusive learning spaces on master degree level’s online studies are little considered and various partnership and online exchange-integration possibilities are still on very early stages. One practical example for improving the situation, as described in this paper, is to include students from various HEI’s interculturally in a same online study unit. This demands for institutional support in the form of partnerships, teacher exchange and resources.

The dimension of teaching staff is focusing on educational processes, namely in the three following areas: Raising awareness about teaching and learning processes, reflecting on teaching approaches, and negotiating learning processes and in managing and leveraging diversity. In this sector, there is a lot of room for further development and research. For example, the impact of various cultural backgrounds on online learning processes or teaching approaches has been little studied.

On the student dimension the matrix principles focus on the educational outcomes: cultural identity and extending one’s knowledge base, benefitting from awareness of cultural differences and the ability to deal with linguistic diversity, and acquiring and applying contextual and intercultural knowledge to different cultural contexts. All these factors are relevant also in online studies and especially the linguistic diversity in written communication might become more emphasized.

The intercultural virtual team assignment between the Finnish and Austrian master level students provided practice in several of the above mentioned conditions, especially on the educational outcomes, ability to deal with linguistic diversity, intercultural knowledge to different cultural contexts (student dimension) and educational processes and teaching approaches (teacher dimension). The institutional dimension is a strategic activity where support is manifested, for example, in partnership agreements between universities, as in the case of the Finnish and Austrian universities of applied sciences.

2.2 Virtual teams

Much thought has been given to team effectiveness with regard to virtual cooperation. Compared with face-to-face teams virtual teams can be more fragile and vulnerable due to lack of trust, lack of full commitment due to physical absence, obscure project goals or inadequate non-verbal communication, missing social cues, transparency and high feeling of anonymity and a high potential for conflicts (Hertel & Konradt, 2007).

Hertel, Geister and Konradt (2005) identified different relevant aspects for virtual team management based on a lifecycle model of virtual team management. The key activities which should be done in the first phase, “Preparations” contains mission statement, personal selection, task design, technology, rewards system and organizational integration. In the next phase, “Launch”, goals and rules should be discussed during a kick-off workshop. These steps are necessary for a successful “Performance management”, the third phase. This phase
includes motivation and emotion and the regulation of communication. In addition, leadership issues are relevant. The phase “Team development” includes team training, evaluation of trainings, and possibly integration of new team members. The last phase, “Disbanding” are relevant on the one hand for the recognition of achievements and on the other hand to motivate team members for virtual team cooperation in the future.

Hertel, Konradt & Voss (2006) introduced a Virtual Team Competency Inventory (VTCI) with several relevant competencies for virtual team work. Beside professional expertise, technical training, cognitive abilities, taskwork-related, team work-related and telecooperation-related knowledge, skills and abilities. Whereas taskwork-related competencies are necessary for a successful performance, Hertel, Konradt & Voss (2006) foreground communication and cooperativeness as relevant teamwork-related abilities. Especially for virtual teams following telecooperation-related skills are of utmost importance: persistence, willingness to learn, creativity, interdependence, interpersonal trust and intercultural skills. Krumm, Kanthak, Hartmann and Hertel (2016) investigated the most relevant knowledge, skills, abilities, and other characteristics (KSAOs) in virtual teams. They postulate the Great Eight competency model which are learning and deciding, supporting and cooperating, interacting and presenting, analyzing and interpreting, creating and conceptualizing, organizing and executing, adapting and coping. In their study they compared traditional business teams and virtual teams to find out the most relevant KSAOs for virtual teams and identified leading and deciding, analyzing and interpreting as crucial factors for virtual team work. Beside these individual traits and relevant processes Lin, Standing & Liu (2008) would like to know more about the effectiveness of virtual teams. Based on a meta-analysis they identified several relevant factors for successful teams. In a next step twenty-four teams were asked to find a problem for a BBQ Restaurant. Afterwards, all participants had to fill out a survey. The results show the relevance of social dimensional factors such as relationship building and team cohesion which had an impact on coordination, performance and satisfaction. Communication is the most relevant factor and has to be consider to foster cohesion and relationship building.

2.3 Intercultural teams

Research has shown that people with different cultural backgrounds behave differently in teams. For example Adler & Gunderson (2008) claim that collectivistic or individualistic values have an impact on the cooperation between team member. Compared with diverse, multicultural teams homogenic and non-diverse teams have been discovered to reach mostly average effectiveness. Intercultural teams, on the other hand, are more likely to be either highly effective or highly ineffective (2008, 140). A team’s actual productivity depends on how well it manages to work together, use its resources and accomplish the job. It also depends on the type of task. Cultural diversity has been found to add on the team’s effectiveness and productivity especially in team work requiring innovativeness. In case of routine tasks, the diversity may even be a hinder for effectiveness.

As most of the master level students will seek positions in knowledge-intensive expert or managerial level jobs the previous discoveries on diverse teams are a strong indication that competence and experience of working in intercultural teams during their studies will be an advantage for their future careers.

To reach a high productivity and effectiveness in multicultural virtual teams requires several skills and competence which call for regular practice. Koehn & Rosenau (2010, 8-16) have
identified five dimensions for gaining transnational competence: analytic, emotional, creative/imaginative, communicative and functional (project/task) competence. These competence dimensions overlap partially with the competence required in virtual teams. But despite of that and at the same time, due to different working modes and reduced or only technology-mediated non-verbal communication the competence demands are larger than in face-to-face teams. This puts a lot of requirements on students willing to learn and practice the skills needed in virtual intercultural team. Thus, we claim that the quantity and quality of the online learning opportunities needs to be addressed on all the dimensions found crucial in Lauridsen’s & Cozart’s study (2015), namely on institutional, faculty and student levels.

Intercultural interaction is often regarded as difference-based and especially in etic frameworks the approach is comparative (Spencer-Oatey & Schneider 2009). Between distant cultures there may be many differences but geographically and historically fairly close cultures such as Finland and Austria may not present any major challenges for intercultural interaction. According to Hofstede’s model (2005), Austria displays a higher masculinity and lower power distance than Finland, just to name the most differing dimensions. The GLOBE study (Chokkar et al. 2008) indicates that gender egalitarianism is lower, performance orientation and assertiveness higher in Austria than Finland. In the other six Globe dimensions the differences are not noteworthy. Lewis (2015) classifies both countries as linear-active cultures, but Austria leaning more towards multiactive, Finland towards reactive variation. Nevertheless, these small dissimilarities are enough to offer cross-cultural team challenges and intercultural communication practice for the student groups in this case study.

3 RESEARCH DESIGN

The aim of this case study is not to define differences between or compare the Finnish and Austrian students as such but illustrate a case of a successful way of practicing internationalization-at-home skills virtually in a higher education setting. The research design chosen for this explorative study was a qualitative questionnaire. A qualitative approach is justified when the research objective is to explore and understand the “meaning individuals ascribe to a social or human problem” (Creswell 2014, 4), as in this explorative case study. The aim was to explore further prerequisites for effective cross-cultural virtual cooperation in a higher educational setting. As described earlier, a lot of research has already been done on prerequisites for virtual teams in general and for intercultural team effectiveness but our focus was combined with the problematics of virtual intercultural learning teams in higher education institutes.

The study groups included students from Universities of applied sciences in Finland (9) and Austria (17). The students represented different master programmes in business, hospitality management, service, innovation & design from Laurea University of Applied Sciences, Finland and the master degree program Communication and Knowledge Media from the University of Applied Sciences Upper Austria. Six virtual multicultural teams of 3-4 students were formed consisting students from both universities. The student group from the Finnish UAS had a substantial intercultural experience, two of the students coming originally from Africa or Asia and many other with living or working experience abroad. Two students in the Finnish group were even living abroad and participating in the course from distance. This made the teams multicultural rather than just bicultural.

The Austrian students consists of 17 female students (two from Germany). The master “Communication and Knowledge Media” is a full-time study program although most of the
students are working some hours during a typical week. The students had some intercultural knowledge from a course about intercultural communication before they start with the virtual team cooperation. The master students were given an assignment to build virtual teams and work on an assignment cross-culturally. They only had a broad assignment in order to see how students organize their virtual teams and which factors hinder or facilitate a successful intercultural virtual team cooperation from the subjective students’ point of view.

The students participating in the virtual team assignment were asked to respond to a qualitative questionnaire as part of their assignment. By doing so every master student returned the questionnaire with the following open-ended questions:

- How did your virtual team formation succeed? What were the main challenges? What are you especially happy about?
- What are your main learnings of intercultural virtual teams?
- How did the way of working differ from working with students from your own culture, if at all?

Coincidentally, all students were female. The two male students enrolled for the Finnish course cancelled their participation at the beginning of the online study unit. The students’ age ranged from about 22 - 40 years. All Finnish students were studying along a full-time job. The data was gathered in listings of student answers by each national student group. Following the guidance of Guest, MacQueen and Namey (2012, 129) the big amount of data was reduced to shorten and sharpen the focus to relevant categories (see Table 1).

4 FINDINGS

In general, students found the virtual team co-operation rather smooth and successful. In the following we will analyze the main findings from the perspectives of team formation, working process, communication, technological platforms, satisfaction, perceived challenges and intercultural experiences. These subcategories have been chosen based on the theoretical knowledge presented in chapter 2.

The items listed in Table 1 are indicative of the student groups’ experiences. They are not direct quotes but are shortened comments from the student answers. They do not aim to quantitatively represent the student experiences but instead, point out the cognitive observations and emotional feelings of the students. The categories are based on previous findings of virtual team cooperation by Lin, Standing & Liu (2008), Hertel, Konradt & Voss (2006) and Hertel, Geister & Konradt (2005). In Table 1 one can see the summarized results from the analysis reflecting students’ experiences from Austria and Finland.

<table>
<thead>
<tr>
<th>Team formation</th>
<th>Austrian students’ experiences</th>
<th>Finnish students’ experiences</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team formation</td>
<td>Austrian students initiate the team work, suggested the way of cooperation and the tools</td>
<td>Austrians made the first contacts. A straightforward process, formation happened very easily. It took time in the beginning to grow trust with each other</td>
</tr>
</tbody>
</table>

Table 1. Comparing student experiences of the Austrian and Finnish students
| Working process | Austrian students started with an e-mail to invite the finnish students to the collaboration  
Most of the teams cooperate in a way subdividing the assignment  
In one team with just one Finnish students, austrian students worked more in their team formation face-to-face and obtained approval from the Finnish students  
Although the working process were task-oriented, students were also relationship- and consensus-oriented. | Our team worked well.  
Had a good and clear goal with the team work  
All team members were active  
Following schedules and doing tasks as agreed  
Worked as one team and everyone was polite and friendly  
Surprised about how easy it was to co-operate with total strangers  
Team requires an appointed leader |
| Communication | Students used one communication tool for informal communication to exchange photos, information and they used smileys in their virtual communication to facilitate relationship-building.  
Off-topic and small talk are valuable for the team work  
Mixture of tools for communication and cooperation are necessary | Communication was open and non-hierarchical  
Efficient communication and clear division of tasks and roles help working in virtual teams  
Lacking non-verbal messages posed some challenges |
| Technological platforms | E-Mail, Google Drive, Slack, Skype, Facebook (mixture of tools for informal communication and working process) | First contact via email, then Facebook, Slack, Skype, Google Drive  
Used several platforms for various needs  
Building trust was easy by using a familiar platform (Facebook) |
| Satisfaction with the assignment | Overall, students were very satisfied, although the assignment were a challenge to handle it. | This project went very well  
Felt like everyone was ‘good friends’ with one another |
| Perceived challenges | Slightly different assignments  
To find a chat meeting (due to different commitments and time zone)  
To manage and finalize a coherent paper  
Time pressure  
Technical problems with chat tools  
Missing social cues | Slightly different assignment briefs  
Technological challenges in Skype meetings  
Agreeing on the output format  
Time resources, some traveling  
Different time zones, finding common time to meet on Skype  
Spent too much time on agreeing on the tools instead of the actual work, could have had an even quicker start |
Intercultural experiences

<table>
<thead>
<tr>
<th>Good practice</th>
<th>Austrians were easy to get along and very friendly</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practice is necessary to understand the challenges of intercultural communication</td>
<td>No observable cultural challenges</td>
</tr>
<tr>
<td>The lectures beforehand about intercultural communication and virtual teams were very helpful</td>
<td>Punctuality and linear time understanding similar; low context in both cultures</td>
</tr>
<tr>
<td>Most of the Austrian students didn’t perceived any big differences between them and the Finns.</td>
<td>Austrians communicated more as a group, Finnish team members more individualistic</td>
</tr>
<tr>
<td></td>
<td>Austrians a bit more authority and advice seeking than I am used to.</td>
</tr>
<tr>
<td></td>
<td>A feeling of more top-down management where in Finland we are more equal.</td>
</tr>
</tbody>
</table>

In general, the students did not encounter major cross-cultural challenges. It was found that students representing either Finnish or Austrian cultures worked diligently, kept to the agreed deadlines and wanted to clear agreements on what the members were to do in between online meetings. This resonates well with the findings of several cross-cultural comparisons were Finns and Austrians are found to have similar mindsets towards (e.g. Hofstede, the GLOBE study).

An interesting finding is that the students (Finns and Austrians) didn’t perceived any intercultural differences. But a closer look in their reflections show that some differences can be attributed to intercultural differences mentioned in the literature i.e. that Austrian students initiated the working process and were very task-oriented whereas the Finns were waiting the Austrians to take the first contact. This happened with the majority of the teams and could not be explained by different schedules or guidance.

The main challenge in the mutual cooperation was the slightly different briefing for the assignment. The Austrians were free to choose any cultural model while the Finns were told that each team should concentrate on a different model. This difference in guidance was not intentional and resulted from the fact that the instructors had not thought about each detail in the assignment. Additionally, the ways of presenting the assignment output were different. The Finns were taken their study unit as an online course while the Austrian had face-to-face class sessions. Thus, this difference was unavoidable.

The teams were encouraged to use any kind of tools or technological platforms for communication and collaboration. E-Mail, Skype, Facebook, Slack and Google Drive were listed to accomplish the project task. One student noted that “I learned that the regular communication creates trust and commitment. Even a short message tells the others that you are committed to common goal”. This emphasized that the students should be able to choose their own technical platform in order to feel comfortable with the need of communicating enough. All teams used communication tools for informal communication which was quite
useful on the one hand for the working process and on the other hand to build trust, a common understand, to know much more about each other and for the relationship building in itself.

5 DISCUSSION AND LIMITATIONS

Several studies have shown larger cultural differences between intercultural online teams (e.g. Kyong-Jee & Bonk 2002) unlike in this study. The results show that students had initial challenges in setting up the teams, issues with time management and other commitments (e.g. work or family). Building trust and finding a common ground for communication and collaboration seemed to be one issue for effective cooperation and for a more perceived successful work. In terms of intercultural differences, it is worth to be mentioned that the Austrian students started the process, they were very task-oriented and directive whereas the Finnish students seemed to take a more reactive but evenly committed role. However, the cross-cultural challenges were not to found to be very large. This may be due to the fact that Austrian and Finnish cultures are, by large, sharing a lot of similar values (e.g. Hofstede 2010, Chokar et al./ the GLOBE study 2008). The perceived rather small cultural difference in this explorative case may also be due to the fact that the participants were all sharing a similar gender, generational and educational culture which turned out to be more unifying than national culture differences. One distinct difference between the student groups was that the Austrian students were full-time students and mostly not occupied during their studies, as to their Finnish team members all had occupational responsibilities besides their studies. This mainly caused some time strains but cannot be considered to relate to the culture as such.

Virtual teams were found to pose a slight challenge for the intercultural cooperation because of lacking non-verbal cues. Some students suggested that the use of smileys could be used for expressing feelings and to create a greater sense of togetherness. This indicates that students are quite used to utilize non-formal ways of communicating also in more professional settings. Several students mentioned that lack of time was a serious issue. This makes a prompt start and adequate allocation of time for the virtual team assignment a prerequisite for a successful virtual team assignment.

The study revealed the even slightly differing assignment briefs create confusion in the working process. Based on the authors’ long experience in higher education, it is very typical that any assignment brief or instruction needs to be tailored differently to suit the needs of various learning groups. Additionally, there are always inevitable communication challenges which also applied to this case. Even though the learning facilitators had agreed to brief the students similarly for the assignment some details were given differently due to resources and practicalities connected with the institutional study offerings. This inevitable difference in communication resonates well with work life task briefs and gave the students a realistic challenge to discuss some open details. Nevertheless, the learning facilitators should agree on a detailed brief indicating possible differences in ways of working in order to prepare the students for an efficient cooperation from the very beginning of the process.

This explorative qualitative research is only indicative and does not represent or predict outcomes in other similar cases. Yet, the findings and insights gathered can be useful for other virtual teams in higher educational settings. One limitation for generalizing these findings is certainly the fact that in this case all participating students were female. This was a pure coincidence and may have influenced the smooth ways of working. Interestingly, it has been found that there are distinct female and male cultures in each nation and cultural differences tend to be lower between females than males (Hofstede & Hofstede 2005, 34).
The explorative case provides an example of how aiming at high quality of international teaching and learning can also be achieved on distance. The organizational and faculty dimensions were involved (see Lauridsen and Cozart 2015, 79) in enabling a multicultural learning space. Based on the results following matters for enhancing intercultural knowledge in virtual teams are recommended: considering obligations and time (especially in adult education and studies along a full-time occupation), clear assignment briefs, a set of recommended tools for communication and collaboration, scaffolding students in different steps i.e. team formation, common ground for group work and intercultural awareness.

As a conclusion we can state that this experiment provided good insight for virtual team practice between HEI’s and proposes a replicable internationalization-at-home pilot for other institutions to model and improve.

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