

PEDAGOGICAL MODEL FOR ENHANCING COMMUNICATION IN INTERNATIONALLY MIXED GROUPS IN VIRTUAL MOBILITY

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Abstract: Virtual mobility is considered as an alternative to physical mobility in terms of democratising access to international and intercultural study experience. One of the definitions (proposed in the Move-IT project) states that virtual mobility is 'the set of ICT supported activities that realise or facilitate international, collaborative experience in a context of teaching and/or learning'. Within the framework of a multicultural and multinational group, participating students should gain international experiences and competencies from the professional field, utilising the possibilities offered by global communication technologies. High level of interactivity and communication between students participating in virtual mobility is one of the fundamentals to reach that goal successfully.

The paper describes our experience in virtual mobility which resulted in the design of a successful pedagogical model. Evaluation results show that over 85 % of students coming from 38 countries indicate that through this virtual mobility experience they gained necessary skills for international communication.

Keywords: virtual mobility, online learning, virtual summer school, communication tools, pedagogical model

1. INTRODUCTION

DOBA Faculty is the largest online higher-education provider in Slovenia and has a 16-year tradition in online learning. The DOBA Faculty student body consists of 100 percent of non-traditional students. Virtual mobility courses were designed 10 years ago in order to create an opportunity for the institution and students to obtain international experience, who would otherwise be unable to gain said experience due to their work and family commitments. One of the main aims of introducing virtual mobility was also to identify the main success factors that influence course design, delivery and particularly communication in an international virtual context.

Virtual mobility at DOBA Faculty is implemented in three forms: virtual summer school, international week and joint implementation of courses with international higher education institutions. In the last 10 years there have been altogether more than 2.300 students from 41 countries participating in different kinds of virtual mobility courses.

This case study paper describes our experience in virtual mobility which resulted in the conception and implementation of a rather rich and successful pedagogical model. Analyses of virtual mobility courses and students' feedback show that the model successfully supports students cross cultural competency development.

The designed model is outlined through three pillars: people, content/activities and tools.

2. DOBA FACULTY ONLINE LEARNING PEDAGOGICAL MODEL

The study at DOBA Faculty is fully online supported and carried out in the Blackboard virtual learning environment, which is considered one of the most comprehensive, high-quality, and widely-used virtual learning environments in the world.

Implementation-wise, online learning is designed as a supported online learning model, which means that the students are provided tutor support throughout the duration of their studies.

From the pedagogical perspective, DOBA Faculty created a pedagogical model based on modern pedagogical theories and approaches, with the central principles being the principles of social constructivism and connectivism, collaborative and problem-based learning and learning by using online resources, which reflects the nature of the medium and the meets the needs of employed students.

In this model, the monitoring of students' activities and attainment of objectives are predominantly based on concept-adapted continuous assessment of knowledge and tutor support during studies. We argue that the model is student-centred which focuses on the following interrelated principles:



Image 1: Principles of online learning experience [1]

Online environments, which are less constrained by time and space, flexible and asynchronous, allow knowledge to be constructed, discovered and transformed by students [2]. Students have more freedom when exchanging ideas, opinions, facts, experiences and expectations. They can improve the richness and quality of the learning experience.

3. IMPORTANCE OF A HIGH LEVEL OF INTERACTIVITY AND COMMUNICATION IN A VIRTUAL LEARNING ENVIRONMENT

A number of researchers agree that one key element contributing to student learning success and satisfaction in online courses is related to learner interaction [3].

The degree of interaction among participants in distance courses is widely acknowledged to be an indicator of successful learning experiences [4]. Research indicates that greater interaction in an online learning environment contributes to student satisfaction.

Our experience in virtual mobility online courses over several years has demonstrated that meaningful, ongoing interaction fosters and increases student success and satisfaction regardless of a student's prior experience in virtual mobility and online learning. Asynchronous communication allows students to collaboratively gain knowledge and skills; it offers students the opportunity to be equally included in the study process and enables learning that overcomes geographical and time limitations. On the other hand, synchronous communication replaces the lack of live communication. The lack of personal contact is one of the major shortcomings of online learning.

Nevertheless, it would be unrealistic to expect that all students will interact and use the communication tools offered by the virtual learning environment. We need to consider the phenomenon of lurkers, who will never actively engage in the study process [5]. There are approximately 18% of lurkers in our online courses, who log into Blackboard regularly, read the course materials and follow the communication without interacting with the teacher, tutor or other students.

Weller [6] also points out the problems or dissatisfaction of students with e-learning. He speaks of a reluctance of several students, who previously studied individually, to collaborative learning and especially to situations such as team activities that are being assessed.

DOBA Faculty virtual mobility courses allow for several types of interaction and communication: interaction with the learning environment, interaction with the material, and interaction between the students, the teacher and the tutor. The interaction between the students, the higher education teacher, and the tutor is facilitated via communication tools, which enables asynchronous and synchronous communication.

While interaction in a face-to-face environment may occur naturally and without thorough planning, designing and implementing, interaction and communication in an online environment requires strategic planning. Interaction and communication in virtual mobility courses at DOBA Faculty is further described through the prism of people, content/activities and tools.

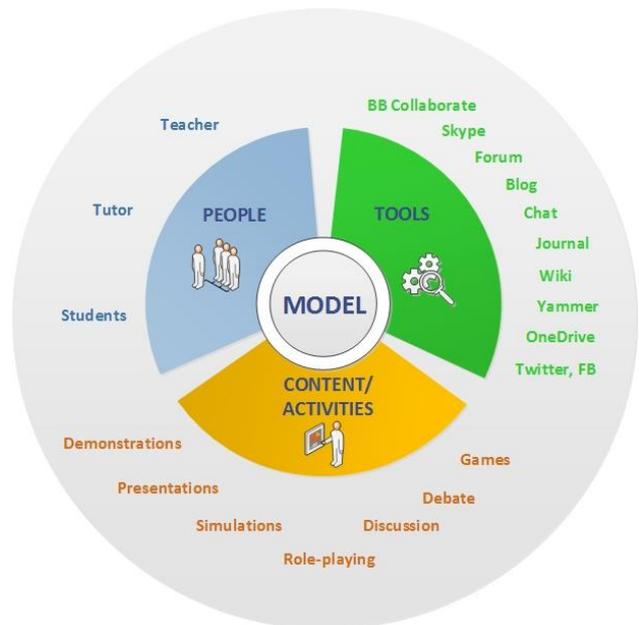


Image 2: Communication and interaction model

3.1. Teacher, tutor and student interaction in virtual mobility courses

The teacher's role has changed dramatically in the last years, from "the sage on the stage" to "the guide on the side" [7]. Teachers are moderators and facilitators [8]. Key focuses of teacher-student interaction in our virtual mobility online courses are: teachers to communicate the expectations for online participation and course procedures, to provide support and guidance, to help shape the conversation and keep it aligned with learning outcomes, to give timely content-related feedback, to give timely continuous feedback on students' performance and to grade. Feedback is given individually or to the whole group. Text, audio, or video is used to provide feedback.

Asynchronous and synchronous communication is provided (e.g. discussion boards/forums, emails, blogs, wikis, group or one-on-one virtual meetings, chat messaging and discussion forum...).

The cooperation between teachers and tutors is also of vital importance for the successful implementation of the

online course. Before the start of the online course, teachers conduct coordination meetings with tutors in order to align expectations and discuss the features of the target group.

Tutor–student interaction is another type of interaction introduced in our virtual mobility course. The main activities of tutors are monitoring students' participation and performance, counselling, motivating, guiding and giving encouraging feedback. They also challenge students with topical issues and encourage discussion and debate. Moreover, they help each student to become a self-motivated and self-directed learner.

Feedback is given individually or to a group. Text, audio, or video is used to provide feedback. Tutor-student communication is mostly asynchronous (e.g. emails, forum posts...) when needed synchronous communication is introduced (virtual meeting, chat...).

Student-student interaction is carefully designed by teachers. Teachers create a lot of opportunities for students to interact with each other: e.g. synchronous/asynchronous discussions, post comments, virtual team work, sharing of ideas and practices, peer-reviews, etc. Our experience in virtual mobility online courses shows that various forms of student-student interactions are important, however, the quality of their interactions is even more important.

3.2. Activities to promote interaction and communication in virtual mobility online courses

Salmon [9] states that the virtual learning environment promotes student socialisation and networking, of course with careful planning of e-moderating. She developed the five stage online learning model, which includes access and motivation, online socialisation, information exchange, knowledge construction, and development. With each stage, it is not only the quality and effectiveness of learning that grow but also the frequency of student interaction. The online socialisation phase comprises of the sending and receiving of messages, which helps students create a community within the virtual learning environment or a group of people who are connected by the sense of working together for a common goal.

The teacher, as a course designer, structures and plans the virtual mobility online course and all students' activities within it very carefully while preparing the course in advance. In comparison to the traditional study mode, a lot of time and effort is dedicated to designing the course as an active learning environment in the context of relevant and interesting tasks and choosing the appropriate communication tools that support the tasks in order to encourage and support students' interaction and communication.

Teachers have to select such course activities that enable students to gain experience in enacting or simulating the performance of competent professionals in the real world. According to Horton [10] the course activities can be classified in three types: activities to absorb, activities to do, activities to connect. Since in virtual mobility at

DOBA Faculty we focus on the communication model, teachers choose mainly activities to do and activities to connect in order to achieve the learning objectives.

The designed activities require students to be in constant interaction and communication with the teacher, the tutor, as well as classmates. Most frequently planned activities to promote interaction and communication are comments, discussions, debates and presentations, virtual round tables, project based learning activities, team projects activities, role playing, brainstorming, etc.

Teachers also incorporate interactive and reflective writing activities which help to raise students' awareness of their own learning processes encouraging them to become actively engaged learners responsible for their own learning.

3.3. Communication tools for enhancing interaction and communication in virtual mobility online courses

In an online course, communication means frequent interaction and a constant presence in the virtual environment. While communication in a traditional learning environment is mainly limited to face-to-face sessions, communication in the virtual environment is an ongoing process, which takes place daily or even hourly during an online course. For this reason, it is important for teachers to thoroughly plan the communication dynamic and choose the appropriate tool that will support the course content and activity and most important, that will support achieving student learning outcomes.

A virtual learning environment and other digital tools DOBA Faculty uses to implement virtual mobility courses offer a wide range of possibilities for interaction and communication. Teachers choose tools according to different types of communication flows (e.g. teacher to students, student to the whole group, team of students to team of students, etc.) and types of activities (e.g. project presentations, simulations, games, role-playing, discussion).

Although the forum is still most commonly used tool in an online course, evaluation of virtual mobility courses at the faculty show that synchronous communication tools are being used (Blackboard Collaborate, Skype for Business, Yammer) more and more each year. Some other tools, which are often used, are Twitter, Facebook, wikispace, YouTube, Padlet, etc.

A number of tools can be introduced and used in virtual mobility courses, but it is important that students have no difficulties using them. Too many tools used during the virtual mobility online can create a students' "technologies overload". Both, difficulties in using tools and overload, may negatively affect the course.

4. VIRTUAL MOBILITY

DOBA Faculty implemented the first virtual mobility course in 2005. Virtual mobility represents the use of information and communication technologies to obtain

the same benefits as a student would have with physical mobility but without having to travel [11].

Virtual mobility is a very broad term and once it is defined it also needs to be classified into several categories. Available literature does not provide a generally accepted classification into categories and virtual mobility is thus categorised from several different aspects. The most commonly used categorisations are the classification that categorises virtual mobility with regard to the use of virtualisation and the classification with regard to the course of mobility. While the first distinguishes between the totally virtual, partially virtual and dual or mixed virtual mobility [12], the second classifies virtual mobility into four types: a virtual course as part of a study programme or seminar at a higher education institution; a whole programme at a higher education institution; virtual student placements and virtual support activities to physical mobility [13].

A virtual study programme offered by a higher education institution gives students from different countries the opportunity to take such a study programme without having to go abroad for a whole academic year.

Virtual mobility at DOBA Faculty is implemented in three forms: within the framework of the virtual summer school, within the framework of international week and within the framework of joint implementation of courses with international higher education institutions.

5. CASE STUDY - VIRTUAL SUMMER SCHOOL AT DOBA FACULTY

The international virtual summer school at DOBA Faculty was first implemented in 2009. It takes place in the form of individual and team activities in Blackboard. Lectures, given by national and international lecturers, are attended online by all participants of the summer school regardless of the course they have chosen. Within the framework of a multicultural and multinational group, participating students gain international experiences and competencies from the professional field, utilising the possibilities offered by global communication technologies. Students from across the globe can join courses or parts of courses offered by DOBA Faculty and can have their institution recognise the completed study obligations.

The interest in joining the virtual summer school differs through the academic years. Below is the trend in the number of participating students in the virtual summer school for the last five years.

Table 1: Overview of participation; 5-year comparison

Study year	Target group			total
	Students	Prospective students	International students	
2011/12	287	82	65	434
2012/13	245	55	42	342
2013/14	127	30	115	272
2014/15	179	70	125	374
2015/16	70	179	137	386

In the 2016 virtual summer school we received over 250 applications from international students all around the world. 137 international students from 38 countries took part, the majority coming from Kenya (43 students), Greece (14 students), Croatia (10 students), Estonia (9 students). Since DOBA Faculty offers its programmes in Slovenia, Croatia and Serbia, 179 prospective students came from these three countries.

Courses taken via virtual mobility at DOBA Faculty are interesting for students from three different aspects [14]. First, there are the topical content, the opportunity for exchanging knowledge and opinions and the possibility to establish business contacts. Secondly, the mode of implementation (virtual) is interesting and allows employed individuals to partake in the virtual summer school. Another important point is the intercultural aspect and the experience of international cooperation, as part of the programme is also intended for international students. Cross cultural communication is becoming more and more important in today's business since the success often depends on how good other cultures and social groups are understood.

After each course a survey is conducted among the participating students to measure their satisfaction with the implementation of the courses. We especially check why students decided to take the courses in the form of virtual mobility, which competencies they expect to develop and which communications tools they use. The results of this segment of the survey are presented below comparing the last three study years.

Table 2: Competencies that students expect to develop in virtual summer school; 3-year comparison

Students' expectations	2013/14	2014/15	2015/16
gain from participation in international teams	8,67 %	12,68 %	16,75 %
improve knowledge of online learning	17,89 %	11,27 %	12,43 %
improve knowledge of information technologies	7,56 %	2,82 %	2,63 %
improve intercultural competencies	35,65 %	39,44 %	32,12 %
improve communication competencies	30,23 %	33,80 %	36,07 %

As evident from Table 2, students expect from international virtual mobility to improve communication competencies (36,07 % of students) and intercultural competencies (32,12 % of students). This is followed by the opportunities arising from participation in an international team and improved knowledge of online learning and information technologies.

These competencies will become increasingly necessary in any future workplace and students are more and more aware that they have to acquire this set of skills and competencies as part of their education. Almost 97,8 % students in the study year 2015/2016 answered that they would recommend the virtual summer school to a friend.

Table 3: Satisfaction with developed competencies in virtual summer school on a 1-7 scale (7 being the highest score); 3-year comparison

Satisfaction with developed competencies	2013/14	2014/15	2015/16
competencies for participation in international teams	5,8	6,1	6,2
competencies for online learning	5,6	5,9	5,8
information technology competencies	6,1	6,0	5,9
intercultural competencies	6,5	6,3	6,4
communication competencies	6,3	6,3	6,5

As evident from Table 3, students are very satisfied with the competence development in the virtual summer school. The highest level of satisfaction is with communication competencies (6,5), intercultural competencies (6,4) and competencies for participation in international teams (6,2).

Table 4: Satisfaction with the tools to support communication on a 1-7 scale (7 being the highest score); 3-year comparison

Communication tool	2013/14	2014/15	2015/16
Blackboard communication board (forum, chat ...)	6,0	5,8	5,9
One Drive	/	5,9	6,2
Skype	5,2	5,5	6,0
Wiki	4,5	4,3	3,9
Yammer	/	/	6,1
BB Collaborate (webinar)	6,1	6,3	6,5
Twitter, Facebook	5,9	5,8	5,5

The students use different communication tools in the course. Some of the tools are mandatory, such as the Forum in the course or Blackboard Collaborate (for following webinars, team presentations or oral exams). There are also several different tools available for communication within the team or between the students. The students can choose the communication tool that suits them best. The monitoring of team dynamics has shown that students prefer One Drive (6,2/7 in the study year 2015/16) and Yammer (6,1/7 in the study year 2015/16), which have replaced Wiki, a tool widely used in the past years.

After each course in the virtual summer school, student satisfaction with different tools is monitored, while we also suggest the most popular and widely used tools in light of previous experience and use. We also noted a higher satisfaction level with Skype ever since the students have been offered the possibility of using Skype for Business, which is offered within the framework of Microsoft 365 services. Students therefore no longer have to share their personal email address with other

participants, which used to be the main problem in past years.

The highest satisfaction levels have been recorded for Blackboard Collaborate (6,5/7) which offers audio and video communication and application sharing. Moreover, collaboration is enhanced with real-time annotations and text, whiteboard text editing allows content to be added and edited. Teachers have personal rooms accessible across all their courses, ideal for virtual office hours or ad hoc meetings. Blackboard Collaborate is most frequently used synchronous tools by the teachers. It is also an alternative to Skype for Business and approximately one third of students use it for communication between team members.

In the last 2 years teachers also have been using Blackboard Analytics which helps them identify and overcome barriers to student success and keep learners on track. It also provides the insights to help understand what is going on within a course from course activities to learner behaviours and is able to adapt the communication and course activities.

5.1. Challenges of online communication and collaboration in international groups of students

Although the online environment allows the shy, the hesitant, the slower and the less articulate students to have an equal say [2], the online collaboration can on the other hand cause stress by some students. Students may experience difficulties in building relationships with other students, participating in team decision making and reacting to team pressures and team dynamics. According to or experience, this is particularly true for African students who are more used to teacher-centred classroom and individual learning. In an online setting, where they don't "see" their classmates, they have difficulties understanding their circumstances, values and attitudes.

Experience have shown that students, who had previously been engaged only in the traditional study mode, needed four times more support than students, who were experienced in online learning.

Students in a virtual learning environment also have to interact with the technology. For technology novices, the interface may be a barrier to learning. One of the barriers for new technology users is that the student becomes more engaged with the technology and not with the content of interaction. As soon as students become more familiar and comfortable with the technology their communication is enhanced.

In our virtual mobility courses we encountered the following technology issues: lack of network access (especially African students), lack of basic technology skills, inability to navigate the virtual learning environment Blackboard. Video and written tutorials were prepared and sent to students (how to use different tool, how to navigate in Blackboard, etc.).

Moreover, students could contact DOBA's technical support via e-mail, Skype, phone or a special forum in Blackboard. The technical support was available

throughout the course 7-days a week, most issues were solved in 24 hours.

In addition, a free online orientation course was designed in order to minimize all communication and technology issues and help students to prepare for virtual mobility. Students learn about the principles of online learning, intercultural communication and working in internationally mixed teams. A lot of focus is also given to netiquette (etiquette for the internet). In order to have good discussion online, students have to have some guidelines and boundaries for conducting the discussion so that the online conversation will be successful.

While only about 8% of international students explore the orientation course, the online orientation day, which is organized 2 days before the start of the virtual summer school, is attended by over 65% of international students. Online orientation day consists of short webinars on how to work and communicate in virtual summer school, how to navigate in Blackboard and use different tools.

While the orientation course is not moderated, orientation day is run by the programme manager, the course teacher and an IT specialist. In addition to introducing students to the work methods in the virtual summer school, the purpose of the orientation day is also to obtain information on the target group and correspondingly adapt the implementation of the course and student support.

At the end of the orientation day, the students fill in a questionnaire with questions on their previous experience with online learning, the familiarity with specific tools, their Internet connection, etc. Teachers are able to adapt the course activities and communication according to questionnaire results and the specifics of the target group.

6. CONCLUSION

Managing virtual mobility courses and international groups requires detailed planning and thorough selection of communication tools, especially as a number of students don't engage in course activities (lurkers), while the groups of students are also very diverse in terms of their cultural background and have different proficiency in the use of ICT. A close cooperation between the teacher and the tutor can influence students' performance. There is also a need for additional support for students participating in a virtual mobility course (technical support, orientation day, etc.).

With the implementation of a communication model in the virtual mobility courses, the satisfaction of students after completing the course is high as well as the satisfaction with the developed competencies. The students state that the virtual mobility course provided them with many new experiences. Positive experiences which definitively stand out as important include; teamwork in a multicultural environment, project-based learning involving work with new media and quick feedback on their progress. The positive experience the students had with the virtual mobility course is also reflected in the high percentage of students who would recommend the course to a friend and would like to take part in another virtual mobility course in the future.

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