

## Creating an e-Benchmarking Model for Authentic Learning: Reflections on the Challenges of an International Virtual Project

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International virtual teamwork offers new opportunities for the professional development of teachers. In this paper, we examine the initial experiences in an ongoing international virtual benchmarking project coordinated by the Finnish Online University of Applied Sciences. What challenges does an international context present for project construction and collaboration? Data from five countries, in the form of participant reflections and researchers' observations, were analysed according to four types of barriers: language, time, technical and mental barriers. Initial data indicates that trust is an essential starting point, as there is neither time nor possibilities to build mutual trust by traditional means. Organisational confidentiality issues, however, can complicate the situation. The project introduces 'collision' as a method of professional development, in which physical and organisational borders are crossed and the skills and competencies needed in global learning environments are acquired.

*Keywords : e-Benchmarking, Authentic learning, International benchmarking, Global e-learning*

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## Introduction

Educational organisations are expected to operate and develop teaching more internationally today. In Finland, the Higher Education Internationalisation Strategy (HE-Internationalisation, 2009) emphasises increasing international studies and connections in line with OECD policies (see Marginson, & van der Wende, 2008). Internationality is one central element of educational development and is examined as a factor in the quality and outcomes of educational organisations. According to the National Innovation Strategy (FIS, 2008) Finland's inclusion and position in global skill and value networks requires active participation and influence as well as international mobility and attractiveness. In a borderless world, know-how can be sought elsewhere (FIS 2008).

International and global dimensions are strongly linked to constructing an innovative learning environment. In Korea, the concepts and policies of international education at the higher level are focused on strengthening the nation's international competitiveness (Kim, 2008). Many higher education institutes want to educate students to acquire global perspectives and various abilities to work internationally. This International education enables universities to invite excellent students and to increase income (Korean Ministry of Education, Science and Technology, 2006). Most universities have English as a required course. The trial for international education by higher educational institutes includes several types: degree level, program level, curriculum level, and course level. For example, a dual degree system is becoming popular among universities, where students take half of the total credits in Korea and the remainder abroad. Some also provide international courses by foreign professors offline or online. The most prevalent examples of international education can be found in the non-degree programs. Virtual classes have great potential to involve international education in that international experts can be invited to develop curriculum in an efficient and cost-effective manner.

Similarly, in Australia, much attention is placed on the role of education in exploring and developing connections across a diverse range of cultures and systems, to promote cooperation that benefits international collaborations. This broader understanding of other cultures is encouraged so that students can reflect upon their role in a connected world, and to assess the benefits of international cooperation. The mobility of people in the world today is recognised as an important driver in internationalisation, as is the ready availability of technology to provide increasingly seamless communication at a distance (IHEPP, 2003). With large numbers of international students, Australian universities are anxious to provide quality assurance in international programs both onshore and offshore (Stella & Liston, 2008).

Labour markets provide the internationalisation impetus for education. Global experts skilled in internationalism and understanding across cultures are needed in today's workplaces (Vartiainen, Hakonen, Koivisto, Mannonen, Nieminen, Ruohomäki & Vartola, 2007; FIS, 2008). EU strategies encourage teacher mobility (see CEP, 2005). Mobility projects for teachers should be facilitated and promoted as an integral part of continuous professional development (CDP) programs. These programs should also ensure teachers have the knowledge and experience of European cooperation to enable them to value and respect cultural diversity and educate learners to become EU citizens globally responsible.

Internationalisation may be physical, but in our current globalized world, knowledge based society with information and technology (IT) itself can be the very virtual internationality. Collaborative technologies make virtualisation possible (Qureshi & Zigurs, 2001; Lewis & Allan, 2005). In the educational institutions, traditional international face-to-face exchanges are authentic learning situations. Not everyone, however, is able to participate in an exchange, so cooperation should be made possible by virtual methods. Even in work, internationality is not necessarily physical one, but virtual cooperation and interactive activity. The problem with physical internationality and exchanges in an offline educational

context is often lack of resources and time. A further challenge in educational internationality is to find means of cooperation that support sustainable development (Im & Bautista, 2009; Leppisaari, 2009).

Virtuality in various dimensions of international mobility brings new opportunities and challenges important for teachers. International cooperation in education including virtual one brings cooperative production and sharing of knowledge across borders. It promotes the global development of educational quality and the growth of reciprocal understanding. On the other hand, quality of provision, language problems and inclusion of national educational policies may become challenges (Cross-border, 2007). In a global world, integrated quality assurance methodology as well as its implementation model is needed (cf. Lee, Leppisaari & Im, 2009).

Virtual teamwork has rapidly become more common as labour markets internationalise. Could virtual teamwork be applied in education? Why is it not as natural in education as it is at work? In a borderless world the significance of virtual communities and electronic interaction grows rapidly as models fostering interaction and continuous education of teachers in the workplace are sought, and innovative learning environments are created (cf. FIS, 2008). The FINHHEC evaluation report (Leppisaari, Ihanainen, Nevgi, A, Taskila, Tuominen & Saari, 2008) indicates the necessity to combine authenticity and internationality in educational development. How can ICT (Information and Communication Technology) be deployed in a borderless world in the construction of international learning networks, where other's skills are reciprocally utilised and each other's different competence is combined? How can authentic situations in teachers' authentic internationality studies be provided and how can the opportunities to acquire experience in international teamwork be built in the field of education? In this paper, we examine the ongoing International Virtual Benchmarking (IVBM) project being implemented in 2009 by the Finnish Online University of Applied Sciences (FOUAS) in which professional development (PD) of teachers is

supported by a virtual benchmarking method. This project had an international virtual community formed.

### **Virtual learning communities**

Even though there are some studies on virtual teams, especially comparative studies between traditional and virtual teams (see Powell et al., 2004), they are mostly focused on the business context. There has been few research on how virtual teamwork can be applied in educational context and its special features. The teething problems we encountered in the IVBM model convince us of the necessity to consider how observations and models in the studies on virtual teams can be applied in the pedagogic context. An examination of the theoretical basis establishes a foundation for implementation and analysis of the IVBM project and, it also creates a wider understanding about international virtual teamwork as a model for CPD of teachers.

Powell, Piccoli and Ives (2004) define virtual teams as groups of geographically, organisationally and/or time dispersed workers brought together by information and telecommunication technologies to accomplish one or more organisational tasks. Supported by ever advancing communication technologies, virtual teams are able to transcend time and space, connecting people across disciplines, functions, geographies, and organisations, combining their individual skills in order to temporarily work together and accomplish a project or goal (Peters & Manz, 2007). Virtual teams are often assembled in response to specific needs and are sometimes short lived (Chaese, 1999 in Powell et al, 2004). It is essential that virtual team members need to be more adept at working with individuals from cultures and backgrounds that differ from their own. Boundary-less virtual team environments create a more complex and ambiguous playing field for its members (Peters & Manz, 2007).

In an educational and teachers' PD context, virtual teams can be examined as virtual professional learning communities (see Lewis & Allan, 2005; Leppisaari, Mahlamäki-Kultanen & Vainio, 2009). The application of *virtual learning communities* (Lewis & Allan 2005) can be considered as a common theoretical framework in our study context. According to Lewis and Allan (2005), features of learning communities include, for example, a shared goal and project, shared resources, commitment to improve professional practice, learning and development focused on real work-based issues and practice, high levels of dialogue, interaction and collaboration, knowledge sharing, construction and exchange, and the use of information and communication technologies. *Crossing boundaries* with different operational cultures, exchange of ideas in a multidimensional manner, and a dynamic network of colleagues can produce new and innovative concepts and procedures (Tynjälä, 2006; Tuomi-Gröhn et al, 2003).

Virtual learning communities provide an opportunity for individuals with a common purpose to come together across barriers of time and space. When using online communication tools in interaction busy professionals from distant places can access a community of peers at a time and place that suits them (Lewis & Allan, 2005). Based on Qureshi and Zigurs (2001), focusing on tasks and goals is easier in virtual environments than in traditional ones. So, it maximizes the advantages of diversity in global collaborations. Serving the needs of virtual team members is the starting point for payoffs from global virtual collaboration (Qureshi & Zigurs, 2001). Collaboration provides the means through which representatives from different organisations can share their knowledge and expertise and develop a mutual understanding and appreciation of each other's perspectives (Lewis & Allan, 2005). Based on previous research, virtual teams can be examined by using factors which contribute to the successful performance of the team (see Table 1, Pallow et al., 2004; Lewis & Allan, 2005; Qureshi & Zigurs, 2001; Sobrero, 2008; Tenhunen & Leppisaari, 2009).

Table 1. Successful performance factors of virtual teams

Stages of virtual teams	Key features	Critical success factor
Foundation and induction	<ul style="list-style-type: none"> <li>• member recruiting</li> <li>• project design</li> <li>• training</li> </ul>	<ul style="list-style-type: none"> <li>• identifying potential members</li> <li>• the design of interaction</li> <li>• knowledge sharing to foster common understanding/goal and shared language vs. specialist language</li> <li>• early and uniform training</li> </ul>
Incubation, Socialisation ( <i>socio-emotional processes</i> )	<ul style="list-style-type: none"> <li>• strategy/goal setting</li> <li>• developing shared language</li> <li>• team building, cohesion, commitment and trust</li> </ul>	<ul style="list-style-type: none"> <li>• relationship building, facilitating socialisation</li> <li>• visual online meetings</li> <li>• personal and institutional trust; swift trust model</li> <li>• mixed amount of managerial control / intervention</li> </ul>
Improving performance Implementation ( <i>task processes</i> )	<ul style="list-style-type: none"> <li>• communication, knowledge sharing</li> <li>• learning activities and collaborative knowledge construction</li> <li>• coordination and the commitment of the team</li> </ul>	<ul style="list-style-type: none"> <li>• the right selection of technology, openness vs. closeness</li> <li>• ineffective vs. effective leadership/management motivation</li> <li>• structured activities and explicit roles and responsibilities vs. right balance between structure and flexibility</li> <li>• support (peer, technical)</li> <li>• time managing</li> <li>• cultural differences vs. understanding diversity</li> </ul>
Closure Outcomes	<ul style="list-style-type: none"> <li>• performance, skills acquisition</li> <li>• satisfaction</li> </ul>	<ul style="list-style-type: none"> <li>• training</li> <li>• interaction</li> <li>• rich communication methods</li> <li>• team viability</li> </ul>

The design of the virtual learning community and the structuring of its interactions, particularly early on in a team's life, have been found to impact the

development of a shared language and shared understanding by team members. Clear team structure contributes to the successful formation of virtual learning community. Once a shared knowledge base is established and a shared language is found, the members of the virtual learning community seem to be able to complete ambiguous tasks relying on electronic communication (Pallow et al, 2004; Peters & Manz, 2007). Both synchronous and asynchronous methods should be employed to help participants' activities in a virtual community (Hsu, McPherson, Tsui & Wang, 2006).

The main problem in this study centred on the formation of virtual learning community and the recruitment of members. According to Allan and Lewis (2005), virtual learning communities are likely to be effective if the number of members is relatively small (5-18 members). Various recruitment methods are used: an open call for volunteers to join the group or the message can also travel from one colleague to another within a specific interest group (e.g., HE teachers). Employing organisations often take the initiative in supporting the development of community, bringing work colleagues from related areas together to work on particular tasks or projects. In the IVBM project FOUAS took this role for the virtual learning community (cf. Lewis & Allan, 2005).

Several virtual learning team studies have examined the role of cultural differences among team members. Cultural differences appear to lead to coordination difficulties and create obstacles to effective communication (Pallow et al., 2004). Also the members' technical expertise impacts on team performance and individual satisfaction. There is also evidence that virtual team members are affected more by the newness of the technology being used than by the newness of the team structure itself. Early and uniform training has also been found to foster cohesiveness, trust, teamwork, commitment to team goals, individual satisfaction, and higher perceived decision quality (Pallow et al, 2004).

Research has established a positive link between socio-emotional process and outcomes of a virtual team project. Relationship building, cohesion, and trust are



fundamental processes fostering effectiveness, while suggesting virtual teams face significant difficulty in achieving them (Pallow et al, 2004; Peters & Manz, 2007). Trust development in virtual teams presents significant challenges, as it is difficult to assess teammates' trustworthiness without ever having met them. Virtual team research has found that short-lived teams are in fact able to develop high trust, but do so by following *a swift trust model*: when they don't have enough time to slowly build trust, team members assume that others are trustworthy and begin working as if trust were already in place while seeking confirming or disconfirming evidence throughout the duration of the project (Pallow et al, 2004; Peters & Manz, 2007).

Research (Hsu et al, 2006; Gannon-Leary & Fontainha, 2007; Daugaard, 2003 in Lewis & Allan, 2005) has also identified the following key barriers in working in a virtual team/learning community: *language, time, technique* and *mentality*. According to Gannon-Leary & Fontainha (2008) critical success factors include usability of technology; trust in, and acceptance of ICT in communication; a sense of belongingness among members; paying attention to cross-national and cross-cultural dimensions of the virtual learning community; shared understandings; a common sense of purpose; use of netiquette and user-friendly language and longevity. Virtual collaboration supports the creation of communities of practice where people work together to achieve joint goals. Cultural diversity can enhance the value of virtual collaboration (Qureshi & Zigurs, 2001). According to Hsu et al. (2006) language barriers are obvious in international virtual learning communities and cannot be resolved over a short period of time. Participants need to be encouraged to use simple English to express ideas.

Virtual learning communities lack opportunities for face-to face interaction and socialising which can consolidate group membership. Consequently individuals may fail to engage in the community preferring to work autonomously. Trust building is vital for sharing and trust primarily develops through face-to-face interactions. Trust issue can also be a barrier at an institutional level. Crossing virtual boundaries between institutions can result in institutional-related problems, especially legal

issues such as data protection and, intellectual property (Gannon-Leary & Fontainha, 2008).

### **Teachers learning virtual internationality authentically**

Staff development is changing; traditional training programs are being replaced by virtual learning communities, concomitantly increasing concerns about data protection, privacy and confidentiality (Lewis & Allan, 2005). Digital age teachers need access to best practice and quality PD (New Skills for a Global Innovation Society, 2008). One strategic objective of continuing professional development opportunities in the European Education and Training 2020 document (ET 2020) is enhancing innovation and creativity at all levels of education and training. Creativity and innovation will be promoted by developing specific teaching and learning methods (including the use of ICT tools and teacher training). ET 2020 underlines mutual learning: peer learning activities and web-based cooperation in teacher PD.

Training teachers to become international teachers requires new innovative educational and work methods. Technological developments provide new kinds of solutions. One solution in our experience is the combination of benchmarking and virtuality, which we have previously piloted and researched (Leppisaari, Vainio & Herrington, 2009a). Development needs arising from the piloting of the virtual benchmarking model (VBM) we developed as a new way of CPD for higher education, clearly indicated that internationality needs to be strengthened. Figure 1 illustrates the central elements of the IVBM project. Internationality is a new element in the 2009 implementation. The project context is authentic e-learning. In the project teachers also learn virtual internationality authentically. Virtuality/virtual methods and tools facilitate international activity. During the project we also investigate how *internationality* affects work methods and what challenges it sets for implementation.

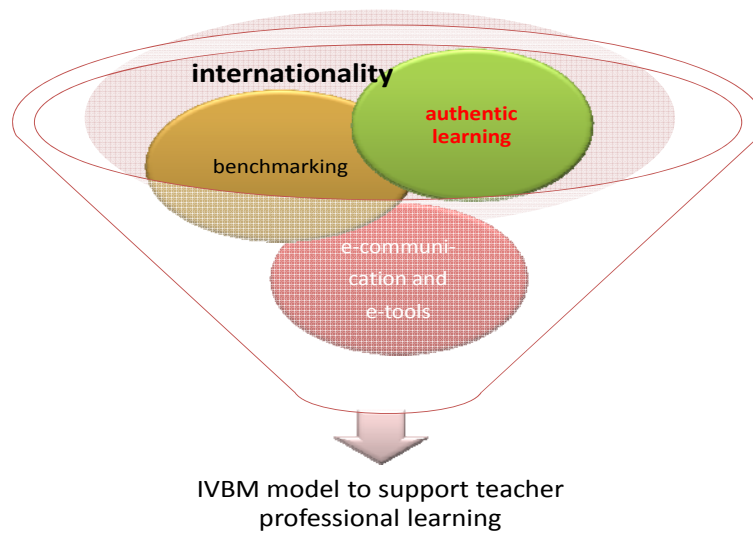


Figure 1. Main elements in IVBM-model

In the IVBM model, teachers with their peers evaluated authenticity in e-learning practices, deploying a tool created from the authentic learning elements proposed by Herrington and Oliver (2000; Herrington, Reeves & Oliver, 2010, authentic evaluation criteria see <http://bit.ly/9MZgPr>). Challenges authenticity sets for virtual education were considered using a virtual benchmarking method: HE teachers presented their courses, mirrored them against the elements of authentic learning, received peer feedback and gained a better understanding of the elements through developmental collegial dialogue. A benchmarking process realised through virtual sessions and social media work methods was developed to support teachers' professional development (Leppisaari, Vainio & Herrington, 2009b).

There were two types of participants in the IVBM project. International BM pairs (4 pairs) formed the project's core, and in addition to these, anyone (HE teachers primarily informed) could join the IVBM international learning community as observers. Project cases came from Finland (7), Canada (1), South Korea (1), Belgium (1) and England (1). Other participants were the project consultant, an expert on authentic learning from Australia and three observers from Japan.

The benchmarking process utilised Adobe Connect Pro software (ACP) as a synchronous communication tool in virtual meetings and the Ning environment as an asynchronous collective knowledge collation and interaction forum. Discussion forums were opened in a Ning environment (<http://ibeckmarking.ning.com>), in which all collective material, such as benchmarking session recordings and evaluation feedback discussions, was saved. Teachers were able to add new discussion areas as needed and create their own blogs. Our technological choices were in line with OECD perspectives: the further evolution of non-proprietary open source models and systems (OECD, 2005, 134–135) will enable the interactive, social and pedagogical potentials of online education to be more effectively developed than in commercial learning systems such as Blackboard/WebCT (Marginson & van der Wende, 2008). IVBM can be described as short term virtual team cooperation. It is an interaction among special interest groups, as a virtual learning community across traditional boundaries, matching teachers together in answer to their rapidly changing professional development needs (cf. Qureshi & Zigurs, 2001).

### **The study**

'User experiences' of virtual work in an educational context has been studied to some extent (see e.g. ; Kumar & Bhattacharya, 2009) but little research data exists on internationally realised collective virtual PD of teachers. In this paper, we examine the challenges internationality sets for constructing a virtual benchmarking project. Our focus of interest was the challenges and barriers existing in virtual learning communities (see Hsu et al, 2006; Gannon-Leary & Fontainha, 2007; Daugaard, 2003 in Lewis & Allan, 2005) and these were observed and defined by the participating teachers and authors and illustrated with quotes from teachers participating in the IVBM project.

Research data comprised:

- a) the initial survey 2009 (N=17, Webropol) in March-April 2009
- b) the final survey (N=9, Webropol) April 2010
- c) Ning documents: interaction and discussion between benchmarking pairs,
- d) recordings of 10 ACP virtual meetings, which also contain session chats (analysed from perspective of research task)
- e) coordinator's observations, notes and discussions

The kick-off seminar for Finnish participants was held as an ACP session in March 2009. Experiences, especially of the project initiation, were considered in an ACP session held in May 2009 together with Finnish benchmarking case participants, the teachers of at is, Uuniversities of Aapplied Ssciences. teachers. The project coordinators have engaged in discussion with international case members via email and have also met members during international work trips.

The IVBM project's initial survey on the Internet consisted of open-ended questions asking teachers to describe, for example, the added value an international context brought to the project. The reflection enabled teachers to recognise their starting point and attitude to the international project process being initiated. The IVBM project's final survey queried, for example, how teachers felt cultural and international factors affected the implementation of the project.

The research data comprises the coordinators' observations as well as the critical self-reflections and collective reflections of the teachers and observers. By theorising practical problems and clarifying background factors, this qualitative study in accordance with action research (see Leitch & Day, 2000; Cohen, Manion & Morrison, 2005) increases understanding of the phenomenon and helps in turn to apply theory to practice in order to improve the effectiveness of the IVBM project model (cf. Slepko, 2009).

## Reflections on project development

The possibilities, barriers and challenges of this international IVBM project implemented as a virtual learning community are examined below, by mirroring each against the collated theoretical framework described above. Four types of barriers are analysed (Hsu et al, 2006; Gannon-Leary & Fontainha, 2007; Daugaard, 2003 in Lewis & Allan, 2005): language barriers, time barriers, technical barriers and mental barriers.

The surveys show Finnish teachers clearly saw added value in the benchmarking project's international context. An international operational environment appears to add perspectives and challenge (a=initial survey, t=teacher = at1). Teachers also saw added value in the model in the acquisition of surprising new ideas from different cultures. Virtual international experiences are expected to give new ideas and stimuli: *Diverse ideas are being shared. It gives an opportunity to consider cooperative development of international e-courses in the future* (at8). Added value is provided through each pairs' reciprocal expansion of the international network, facilitating acquisition of new ideas by both parties (at2, at11).

Teachers believed that participation in the IVBM project supports professional growth. An international context helps to mirror one's own strengths (at3, at12) and provides an opportunity to see what kinds of e-courses are produced elsewhere (at4). Working in English improves language skills and ability to produce learning material in English (at4, at12). Awareness of Finnish e-learning skills was also thought to deepen as the project proceeded.

Teachers should experience working in a virtual community in order to create such a community for their students (cf. The Learning Society 2010). Participation in an internationally realised project raises expectations of strengthening one's internationality skills: *Offers a chance to assess possible cultural differences in teaching and guidance* (at8). Different cultures react to issues differently, which hopefully broadens perspectives and provides viewpoints that would otherwise remain

hidden (at5). Students from different cultures are enrolled in educational programs with English as the language of instruction, so it was hoped the teacher's experience of working in an international virtual community would open doors to the students' world. One teacher felt: "I enjoy hearing about cultural differences in terms of learning online because it helps me think more about gives me more to think about when planning my classes...I believe the population may become more global" (teacher 12.11.2009, Ning). Both Finnish and international teachers considered the IVBM model as an innovative and enriching experience: "The concept of this project is great in the respect of monitoring other's lecture and learn how to develop authentic education (teacher 26.11.2009, Ning)."

Success factors (see Table 1) and barriers (Hsu et al, 2006; Gannon-Leary & Fontainha, 2007; Daugaard, 2003 in Lewis & Allan, 2005), which have affected the IVMB project's foundation and incubation stages are examined in a more detailed manner below.

### Language barriers

A specific shared language is a challenge in international projects. English is seen as a 'global language', but its use in creating complex theoretical descriptions is not necessarily possible for all participants. Hsu et al (2006) recommend so-called easier English be accepted in international virtual teamwork, which sets a particular challenge for those group members for whom English is their native language. On the other hand, the asynchronous (Ning) communication connection employed in addition to the synchronous ACP connection, may help non-native speakers join discussions on authentic learning evaluation. Writing in a foreign language may result in less comment in a virtual environment, as members may be uncertain of their ability to express ideas.

In addition to spoken language, a shared content language is also problematic. The common goal of the IVBM project was an examination of a course or

module through application of authentic learning criteria in a benchmarking process. The authentic learning approach acted like a common content language. Not only were there national discipline-specific differences in educational concepts and their use, but also cultural differences. Interpretation of the authentic learning criteria in a Finnish context has required extensive collective discussion (see Leppisaari et al, 2009a), so more time will certainly be needed in international cooperation to find a shared content language.

Research indicates a blended learning approach is more effective than a totally virtual learning community for finding and becoming familiar with a shared language and even more broadly a shared understanding in virtual work (Lewis & Allan, 2005, 11). This, however, has not been possible in this current project as members are dispersed throughout Korea, Canada, Australia and Finland.

### **Time barriers**

The issue of time (in several different senses) was met when constructing an international virtual learning community. We have observed that the planning and constructing of an international project consumes considerably more time than projects in a national context. International benchmarking cases in the IVBM project have been sought through the personal contacts and networks of the coordinators and FOUAS teachers participating in the project. The Finnish cases were compiled from the FOUAS network with the assistance of FOUAS contact persons.

Just over a year was not a realistic implementation period for an international project if this period also includes recruitment and preparation stages. Due to issues of flexibility and time differences, discussions between busy professionals primarily occurred through email, and this required time. Furthermore, time differences impacted because the IVBM project cases were from Finland (7), Canada (1), South Korea (1), Belgium (1) and England (1). The time difference between a



benchmarking pair at its greatest was 12 hours between synchronous session participants (such as Australia and Canada).

The virtual work model saves time (for travel) and this is often used as an argument for virtual activity. However, teachers also felt that lack of time is a barrier to virtual work. Adopting new methods and tools is time consuming, as are the advance preparations in advance for the required in the project and the regular participation in asynchronous discussion in Ning.

### Technical barriers

In the virtual project time to be needed to be reserved for testing synchronous connections prior to the joint meeting was needed and this requires finding a time convenient to all. Testing should not be left until to the start of the meeting, so it must be done beforehand. The software needed to work so that everyone had a good audio and video connection. "The first online testing was really necessary also. It is good to discover Adobe Connect Pro before going online for the real benchmarking discussion" (teacher 23.11.2009, Ning). The project scope did not include technical support for members, and instructions and testing remained the coordinators' task. Finnish teachers felt data protection that is too strict complicates collaboration (at7). Firewalls used by educational institutions may block the use of ACP. This needs to be taken into consideration with international members. Time must be allocated for learning to use the software, as some members are not familiar with virtual meeting software. The Ning work environment employed in the project was also a new tool for many. The environment was not technically challenging, but the open operational culture may be new. The environment's structure also needs to be mastered, once again requiring time.

## Mental barriers

The central barriers in the project appeared to be *mental barriers*. Trust is a key dimension in examining mental barriers (see Peters & Manz, 2007). How can trust be built? What factors affect its establishment and generally facilitate interaction and the construction of collaborative knowledge in international and collective work? 60 members had logged onto the Ning environment which demonstrates the environment's open membership environment in nature. Employing social media in education raises new kinds of copyright problems. Material produced for selected environments is open and the environment's administrator also has a right to the content. Thus, in terms of use, a conflict due to Intellectual Property Rights may arise. Issues of data protection, privacy and confidentiality must be recognised in open environments (Lewis & Allan, 2005, 14). Coordinators need to raise these issues clearly and also discuss game rules with members.

Also, benchmarking pairs studied each other's virtual courses. Discussion is needed on what openness (cf. open access) is in this context, and how much of a student's and teacher's work can be shown to others. Student data protection must also be ensured and personal discussions not be revealed to others. In the discussions with international case representatives in the project stages, the issue of educational organisations' 'ownership' of course implementations was raised often. Permission for public display (open source, Web 2.0) must be sought. For this reason a teacher in the international virtual project cannot be examined as a discrete actor; rather his/her connection to the background organisation is a powerful component of the project implementation. It may not just be a question of a teacher's willingness to show material or skills, rather the organisation's policy is central in terms of intellectual property rights. Restrictions due to professional or organisational confidentiality needs to be understood when deciding how courses will be introduced to the different participating parties (Lewis & Allan, 2005, 163). In the Ning environment, especially in discussions and introductions of courses it

must be remembered that there are observers and even outsiders present, some of whom are there under a pseudonym. In order to build trust, those present in the environment should be able to recognise each other. The community needs to decide how unknown participants will be treated, and together make decisions on the issues such as whether or not they shall be removed from the environment or not.

Mental barriers in our experience also include *cultural factors*. Cultural differences and physical distance are especially challenging in international cooperation: “From our online discussion, I became very aware of cultural differences when it comes to teaching and learning online” (teacher 29.11.2009, Ning). Building trust in virtual environments and collaboration takes time (see, e.g., Hakkarainen, Palonen, Paavola & Lehtinen, 2004, pp. 189–191). Therefore, the majority of researchers do not recommend totally virtual learning projects. In one benchmarking case, the teachers knew each other beforehand and they felt: “...it seems it was very valuable that we participants knew each others: we were able to enter into deeper discussions on main issues go great deep into the main issue in a short s at short time” (teacher 17.3.2010, Ning). On the other hand, blended implementations in many cases are impossible in international cooperation. The *swift trust model* (see Meyerson, Weick & Kramer, 1996 in Powell et al., 2004; Peter & Wanz, 2007), in the light of our experience, brings a relevant perspective to the examination of virtual learning communities. During the benchmarking processes, teachers who were strangers to each other were able to find a trust and common understanding: “The reading and critical approach of the project of my partner makes that I feel really related to them and I am concerned” (teacher 23.11.2009, Ning). Trust can be seen as the underlying assumption, a matter of will, from which we set out on a common process. Adding images to Ning is seen as significant as it would increase group cohesion. According to studies (Peters & Manz, 2007) synchronous virtual meetings at the start of a cooperative process strengthen trust. The orienting ACP sessions held in the early stages of the IVBM project were national due to

difficulties in recruiting international cases. Therefore, and therefore, in the future projects, it is essential that cases are to be already recruited before the actual project work begins.

## Conclusions

Through this examination of the difficulties arising from an international dimension encountered in the IVBM project, we have attempted to eliminate various misconceptions concerning speed and ease of initiating international projects. International virtual projects and working in the virtual learning communities presents many challenges, which can, however, be utilised as part of the collective learning process. The strongest barrier appears to be mental barriers, which centre on trust and cultural factors at an individual and especially organisational level. Language, time and technical barriers understood widely have also affected the project's implementation. Shared language includes shared understanding of the project task and in the case under examination, the internalisation of the theoretical framework of authentic learning (cf. Peters & Manz, 2007, 120–121). Time factors, both physical time differences in synchronous benchmarking work and members' busy schedules, require a firm commitment to the project. The IVBM project's strength is the combination of synchronous and asynchronous work, which, for example, in the project related observations and collective discourse is seen to foster participation in ways convenient to members. Familiarisation with the methods enabled by social media, and clear instructions and structures for tasks, ease cooperation.

Operating in virtual environments requires an ability to communicate through technical devices and also diverse media competence, with which one communicates in the environment. Working in international virtual teams demands intercultural skills, sensitivity to discern cultural differences and ability to cope with

uncertainty. Project coordinators need to possess skills with which members are empowered to work towards common goals. Dialogic skills sustain discussion and bring continuity to the activity.

Open and innovative learning environments challenge teaching staff to a new kind of cooperation. We believe that the 'collision' of different perspectives at cultural interfaces results in authentic internationality learning and brings quality to higher education teaching. Virtual benchmarking projects enable collisions and the crossing of different boundaries between teachers and different cultures in the development of education.

Content barriers may be one of several additional barriers, even though they are arguably not as prominent as those mentioned earlier. The concept or the perspectives of virtual benchmarking may be different according to the subjects we are investigating. Some subjects are perhaps more suitable than others to be developed as authentic learning environments. Also teachers' major (science field) may affect how to monitor and what to focus when they are exploring the benchmarking courses. So figuring out the methodology for a better benchmarking process will be an interesting topic for the future research. In In further studies, we also will also seek answers to the question: How can authentic learning criteria be developed in a multicultural context? Such work will further increase understanding of the internationalisation of learning and educational collaboration.

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