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International e-benchmarking: Flexible peer development of authentic learning principles in higher education

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Abstract

More and more, social technologies and virtual work methods are facilitating new ways of crossing boundaries in professional development and international collaborations. This paper examines the peer development of higher education teachers through the experiences of the IVBM project (International Virtual Benchmarking, 2009-2010). The e-benchmarking process in which teachers applied authentic learning criteria (Herrington & Oliver, 2000) is described, as are the e-tools (Ning, ACP) and the methods employed collaboratively to develop e-learning competence. Cases came from Finland, Korea, Canada, Belgium and England. The project formed an international virtual learning community for teachers. In peer development, elements of authentic learning were assigned meaning, development alternatives were considered and the interpretation of authentic learning in different situations and cultures was made concrete. The results promote and inform the planning of e-benchmarking communities and flexible virtual team work in professional development and education contexts.

Keywords: peer development, professional development, e-benchmarking, authentic learning, community of practice

Introduction

New kinds of challenges facing higher education require different approaches to traditional continuing education methods in *professional development* (PD) for teachers. An increasingly powerful driver of change challenging teachers' competence is the internationalisation of education. The significance of virtual international learning communities has increased markedly with the creation of new opportunities for on-the-job teacher professional development.

Seeking solutions to PD needs, authentic learning (Herrington and Oliver 2000) offers a powerful approach across disciplines. Social technologies and virtual work methods facilitate new forms of boundary crossing in PD (Lewis and Allan 2005), and in this regard, e-benchmarking is central. How can we construct flexible PD models for teachers which enable flexible international collegial peer development and virtual peer support?

Theoretical framework: e-benchmarking creating virtual peer development communities

(E-benchmarking refers to benchmarking cooperation, in which electronic communication tools are employed in interaction. Benchmarking supports the opportunity to learn from one's own and others' experience, something Malderez and Wedell (2007) consider crucial in a teacher's learning. The benchmarking process may become a learning space, created through communication and the exchange of ideas, knowledge, experiences and emotions in a reflective and authentic way (Boud 2006; Docherty, Boud and Cressey 2006).

In this paper, we examine an innovative International Virtual Benchmarking (IVBM) project as a new form of international peer learning and PD support for higher education teachers. The IVBM provides an international collegial network for PD and forms an organisational and national border-crossing learning environment that aims for authentic problem solving.

Peer development supporting factors of virtual communities

The *peer learning space* formed in the IVBM project has interfaces with virtual team and learning community approaches. An international virtual team is a temporary, culturally heterogenous, geographically dispersed group, communicating through networks and engaged in a collective task (Järvenpää and Leidner 1998; Powell, Piccoli and Ives 2004). Virtual teams can also be examined in a teacher PD context as virtual learning communities. Lewis and Allan's (2005) list of features characteristic to virtual learning communities include a shared objective, development of authentic work practices, dialogue and interaction, collaborative construction and sharing of knowledge, and the use of information technology.

Peer development, facilitated by the benchmarking operational model, also shares features with *community of practice* (CoP) thinking. Often, community of practice is thought to refer to informal and self-organising communities. Wenger (2001) suggests some communities of practice are formal from the start, and the IVBM operational model examined in this paper represents this type of organised activity. *Community of practice*, according to Lave and Wenger (1991) describes a group of people who share similar challenges and a common area of interest or profession. These kinds of communities are focused on a domain of knowledge and accumulate expertise in this domain. They develop their shared practice by interacting around problems, solutions, and insights, and building a common store of knowledge (Wenger 2001). The purpose of a CoP is to provide a way for practitioners to share best practices, ask questions of their colleagues, and provide support for each other. Mature expertise can be transmitted through a CoP (Lave and Wenger 1991; Hakkarainen 2000).

Wenger (1998, see also Hakkarainen 2000; Zhang and Watts 2008) distinguishes three sub-factors in a CoP. The community's starting point is *joint enterprise*, a target, implementing a collective venture. Secondly, *commitment to mutual engagement* is characteristic to the community, that is, doing things together with other members of the community. Thirdly, the community produces a *shared repertoire* to support activity, and shared tools (conceptual and material objects).

Thinking and action tools are created through the process, which Wenger (1998) calls *reification*). For Wenger, learning is a process in which people are not only active participants in the practice of a community, but also through which they develop their own identities in relation to that community.

Wenger (2001) also contends that new technologies have extended the reach of our interactions beyond the geographical limitations of traditional communities. Research (Hsu,

McPherson, Tsuei and Wang 2006; Gannon-Leary and Fontainha 2007) has identified the following four factors as central dimensions in the work of virtual learning communities: language, time management, exploitation of technology, and trust. Trust is a key factor for successful virtual learning community activity (Lewis and Allan 2005). Short-term virtual teams have also been observed in studies to develop a high level of trust, but this has occurred according to a model of rapidly achieved trust (“a swift trust”). When there is insufficient time to build trust gradually, team members assume that the others are trustworthy and begin to work as if trust has already been built. Evidence to either strengthen or weaken trust is identified during the process (Powell et al. 2004; Peters and Manz 2007).

Wenger (1998) stresses the challenging nature of planning a CoP’s learning—planning that includes both participation and reification—with success dependent on how well these fit together. Two types of influential *participants* operate on the fringes of a CoP, *full members and peripheral participants*. As newcomers (initially working at the community’s periphery) adopt the knowledge and skills of the community, they gradually move towards the border of full participation (Lave and Wenger 1991; Herrington et al. 2010).

International Virtual Benchmarking project (IVBM): Peer development of authentic learning principles

New innovative educational and work methods are required in teacher training for teachers to become international (Sobrero 2008; Lewis and Allan 2005). One opportunity, according to our experience, is an integration of benchmarking, virtuality and internationalism. The IVBM model described in this paper is based on the Finnish Online University of Applied Sciences network’s (FOUAS) pilot study that combined benchmarking methods and virtuality (authors 2009) to which international e-benchmarking cooperation was added as a new element.

The focus of the FOUAS benchmarking was authentic e-learning and formed a basis for pedagogic activity and reflection. Elements of authentic learning were chosen as benchmarking indicators (see <http://bit.ly/9MZgPrt> for the evaluation tool). They formed a scaffold and framework for inter-collegial dialogue and networked learning. The nine elements of authentic learning proposed by Herrington and Oliver (2000) were applied in authentic learning benchmarking (see also Herrington & Herrington 2006; Herrington, Reeves and Oliver 2010).

The IVBM operational method had five stages: 1) commencement, 2) benchmarking preparation, 3) benchmarking session, 4) ‘post-mortem’ discussion and, 5) conclusion. In the first stage, teachers described the course submitted for the IVBM process, mirroring it against the elements of authentic learning. In the second stage, teachers in benchmarking pairs applied the authentic learning evaluation tool to self-evaluate their own course and peer evaluate the course of their pair. Teachers presented their course in the third stage, the virtual benchmarking session, mirroring it against the elements of authentic learning, received feedback from peers, both from their own pair and from other benchmarking actors and observers participating in the session. Through reciprocal benchmarking peer development activity teachers learned authenticity elements and identified development alternatives in their online teaching practice.

Consistent with Lave and Wenger’s (1991) classification, there were two types of actors in the IVBM project: full members were the international benchmarking pairs (4 pairs or groups, altogether 12 teachers) and 8 courses or partial courses. (In this paper, we use the term ‘pair’, even though one case consisted of a trio and another of a group of five.) Additionally, any practitioner could join the IVBM peer development community as an observer (N=23). The observer role in particular alludes to Lave and Wenger’s (1991) peripheral participants in a CoP. In total, 60 individuals logged in to the Ning environment, so in addition to the above two types of participants, a third type must be recognised in this context. This was an interest group of about 20 individuals who every so often followed the IVBM group’s activities in Ning.

Benchmarking cases came from Finland (4), South-Korea (1), Canada (1), Belgium (1) and Wales/England (1). An Australian expert on authentic learning acted as project consultant and there were also observers from Japan. The Finnish e-learning experts, coordinated the IVBM peer development community.

Virtual work methods and tools enable an international shared peer development of authentic e-learning principles. A Ning environment (<http://ibenchmarking.ning.com>) was employed as a collective virtual forum for knowledge gathering and interaction. Benchmarking pairs had their own forum created in Ning, where they prepared for the benchmarking session and made summaries of their learning processes. Adobe Connect Pro (ACP) was employed as the online connection and some pairs also used Skype for benchmarking session preparations.

The IVBM peer development community's joint artefacts that supported collective work (cf. Hildreth, Kimble and Wright 2001; Kimble, Hildreth and Wright 2001) were: the process plan, and *the evaluation tool of authentic online learning*.

The IVBM project can be examined as short-term virtual, peer development, community activity that includes features of a CoP. Participants interested in peer development worked in a traditional border-crossing virtual learning community, which supported collaborative responses to rapidly changing PD needs of teaching (cf. Qureshi and Zigurs 2001).

Implementation of research

In this paper, we examine factors that affect peer development in the operational model we employed. In so doing, we deepen an understanding of the perspectives examined initially in the project's commencement stage (authors 2009). Our research questions were: What factors in the IVBM community promoted or hindered teachers' peer development? How should the IVBM operational model as a *form of peer development* be further developed to support as effectively as possible flexible peer development of authentic learning principles?

Research data comprised:

- 1) the initial survey 2009 (N=17, Webropol) in March-April 2009,
- 2) the final survey (N=9, Webropol) April 2010,
- 3) Ning documents (benchmarking pairs' interaction and discourse, summaries and benchmarking process reflections, learning outcome summaries),
- 4) recordings of 10 ACP virtual meetings,
- 5) coordinator observations, notes and discussions.

The research method employed was qualitative content analysis and categorisation on the basis of the research questions. The study can be described as a reasoning process in which induction and deduction, the data and theories, alternate and overlap (Cohen, Manion and Morrison 2005; Flick 2006). We have constructed the research data and theoretical framework (Wenger 1998; Lave and Wenger 1991; Lewis and Allan 2005) in abductive dialogue into a *three dimensional examination frame*. The examined themes are 1) joint peer development target, 2) shared peer development repertoire and 3) interactive peer development practice, and negotiation of a common understanding and sharing of expertise. The examination themes partially overlap, which illustrates the cyclical and dialogic nature of the peer development process.

Factors supporting or preventing peer development in an IVBM community

1. Joint enterprise - peer development through international virtual benchmarking

The first dimension in the examination of IVBM peer development focuses on the operational aspects of the community, that is, planning of activities.

Joint enterprise - planning

IVBM experiences in the recruitment stage indicated benchmarking relationships could not be established through distant contact alone, despite a high level of interest. Only after several meetings, either a personal meeting or Skype, telephone and email meetings, was it possible to agree on the actual benchmarking process. First a common language and common understanding of the project tasks and operational methods, through various discussions, had to be established.

Participants from different parts of the world were brought together by their interest in online pedagogy and its challenges in higher education. The IVBM peer development community had a clear practice-development task and a common timely problem: how to develop more authentic e-learning. The community's activity had a clear idea of the value delivered to teachers: access to peers and peer evaluation by benchmarking, access to expertise, answers to questions and help with authentic e-learning problems. It provided access also to what is hot in the field and connected teachers with a respected international authentic learning expert. In the Ning environment, the IVBM community produced links and reference material to contemporary knowledge in the field.

The IVBM community's activity was planned around the benchmarking process and the activity was coordinated by two e-learning experts. Hildreth et al. (2000; 2001) have suggested the greatest challenge in a virtual CoP is facilitating participation in a virtual community. On the other hand, individuals must learn to participate productively in these processes (Wenger, 2001).

A process plan, process staging and description of participant roles was accessible to all in Ning. Participants, however, did not have time to concentrate on the plan, so the coordinators went through each participant's process with them in detail and constructed a case-specific version of the process stages. The virtual learning community's and benchmarking pairs' self-direction did not work to the extent assumed, and for this reason the coordinators' role was essential in taking forward the sub-processes. The coordinators functioned as interpreters of the "multi-lingual" model in the virtual learning community (Lewis & Allan 2005; Sobrero 2008).

According to our study, teachers considered the IVBM process a meaningful *peer learning and development space*: an opportunity to communicate and exchange ideas, knowledge, experiences and emotions in a reflective and authentic way (Boud 2006; Docherty et al. 2006). The learning summaries in Ning indicated that authentic learning principles opened up new ideas and possibilities to teachers on how to improve their teaching. Teacher professionalism was supported by self-assessment elements that structure authentic learning, and especially learning from one's peers (Slepkov 2008).

The tension between international transparency and organisational factors

The members and their knowledge are the most valuable resources of a CoP. Experts at various stages of expertise enrich the IVBM community. According to our study, one of the most significant factors in constructing a virtual benchmarking project has been—in addition to individual trust—organisation-level trust and cultural factors (Peters and Manz 2007; Lewis and Allan 2005). Factors of trust can form an obstacle in virtual international work at an institutional level. The IVBM model requires opening up one's teaching implementation to scrutiny, and this appeared to be an issue of concern for many of our partners. When using an open environment, issues of data protection, personal security and immaterial property rights (IPR) must be recognised (Lewis and Allan 2005; Gannon-Learly and Fontainha 2007), their significance being heightened in global cooperation.

Reflection on what openness in online context means is needed, as is reflection on how much of a learner's and teacher's work can be shown to others. A public presentation of a course implementation contains problems, as it may not necessarily be possible to display

student work publicly, and education organisations are concerned about content ending up in the hands of others. For this reason, a teacher participating in an international virtual project cannot be examined as a discrete entity; rather her/his connection to the background organisation is powerfully present in the project implementation. Restrictions arising from professional or organisational trust factors need to be acknowledged when considering how a course is displayed to other participants (Lewis and Allan 2005).

Language, time and scheduling

English is considered a global language, but its use for deeper theoretical thought and learning is not necessarily possible for all participants. Hsu et al. (2006) recommend the acceptance of so-called *plain English* in international virtual collaboration, which is a challenge for those for whom English is not their native language. Writing in a foreign language may reduce contributions in virtual environments, but on the other hand the asynchronous (Ning) connection, employed in addition to the synchronous ACP connection, may have helped non-native speakers to join the discussion on authentic learning evaluation.

Time management is an issue in the construction of international virtual learning communities that emerges in various forms (cf. Lewis and Allan 2005). One of the problems in the year-long project was the busy day-to-day schedules of teachers, which often hindered commitment to the project. However, all teacher PD requires time, as reflection requires time (Leppisaari et al. 2009a). Time factors, and peer evaluation of authentic learning—requiring synchronous benchmarking communication across time zones—require a strong commitment and motivation on the part of participants to international virtual projects. However, synchronous benchmarking communication, especially among those from different countries, is meaningful because it promotes the feeling of communicating and belongingness (cf. Lee and Im 2003).

Virtual work is seen to save time (travelling) and this is often raised as an argument for more virtual activity. Ironically, lack of time as an obstacle to virtual work also emerged in teachers' experiences. Mastering new operational methods and tools requires time, and time was also taken up by advance preparations in the IVBM model and participation in asynchronous discourse in Ning. Furthermore, time differences presented a challenge in implementing synchronous online sessions, as the project's benchmarking cases came from around the world, and the greatest time difference between a benchmarking pair was 14 hours.

Participant *commitment* in a development project is a dimension related to time management, though it also relates to resourcing and time available for work on the project (cf. Herrington et al. 2010). Flexibility significantly enhances possibilities of participation, but Wenger (2001) points out that the danger of a pure web-based presence for a community is its timelessness. A web-based presence can contribute to a sense of communal time, for example, in reminders, synchronous events and hot topics (Wenger 2001). In the IVBM process, synchronous ACP benchmarking meetings were the basis for such 'hot topics'.

2. Shared peer development tool repertoire

The second examination theme in IVBM community peer development factors is the shared tool range, which includes pedagogy and technology tools, practices, methods, artefacts and concepts (Wenger 1998; 2001; Lave and Wenger 1991). The study indicated that the IVBM operational model was indeed seen as an innovative and inspiring operational model and an enriching and constructive learning process. One teacher (t) commented:

The concept of this project is great in the respect of monitoring others' lectures and learning how to develop authentic education. (initial survey, t17).

The project's international collaboration was felt to be an especially meaningful opportunity:

This benchmarking process is a really enriching experience (t3, ACP session chat 9.11.2009).

The IVBM project formed an international virtual learning community where, through peer interactions, elements of authentic learning were assigned meaning, development alternatives were considered and the interpretation of authentic learning in different situations and cultures was made concrete.

In the operational model, pairs/groups presented each other with questions, answered questions, sought deeper knowledge, explained perspectives, justified opinions, and gave each other feedback, that is, they negotiated meaning and formed collective perceptions. Consistent with the research outcomes of Kimble and colleagues (2001), the significance of shared artefacts was highlighted in the construction of a collective understanding in the IVBM peer development community. The authentic learning criteria (Herrington and Oliver 2000), and the evaluation tool as a benchmarking tool and document derived from the criteria, existed at the start of the project, but were not considered completely ready, and thus became a focus of collaborative development. There was negotiation over inherent meanings (cf. negotiation, Wenger 1998) throughout the duration of the project. Interpretation of the elements of authentic learning in international collaboration required sustained collective discourse. The authentic learning evaluation tool was a catalyst for pedagogic discussion and functioned more as the focus rather than vehicle of collaboration (Hildreth et al. 2001).

In addition to pedagogic artefacts, the IVBM community's virtual interaction tools also critically affect peer development possibilities. A blended operational model is considered better for finding a common language and common understanding than working in a virtual learning community only (Lewis and Allan 2005; Kimble et al. 2001). Face-to-face meetings were not, however, possible in a community where participants came from around the world. One teacher summarised in the final survey that the virtual benchmarking method as a form of peer development works well:

...if everyone has the tools and distance work principles under control (t2).

Participation in a community should, according to Wenger (2001), be made as easy and effective as possible. Learning to use new tools complicates participation. In an IVBM peer development community, it is important to create both public and private community spaces (cf. Wenger, McDermott and Snyder 2002). Feedback in the final survey participants was activated to use Ning, and the fact participants in a multi-cultural online community have differing levels of ability for realtime work was raised (t2).

Time must also be set aside for learning to use the software (Sobrero 2008), as virtual meeting software might not previously be familiar to all participants. Participants in this project quickly learned how to use the software and were also ready to test software before actual sessions.

3. Reciprocal peer development activity

The third perspective that emerged from the data includes peer development content of the benchmarking process: negotiation of meaning, construction of a common understanding and knowledge, artefacts, sharing and articulation of expertise, confidentiality issues and cultural factors.

Building a common understanding from authentic principles

There was a conscious decision to leave the concept of authenticity rather loose in the project and for it to be discussed and negotiated collectively through the nine elements of authentic learning, together with the evaluation tool. Hakkarainen (2000) believes learning should be organised so that the learning process leaves room for establishing a personal relationship with the learning target and rigorous reification beforehand should be avoided. If almost all sub-factors of the process are abstracted, there is no room left for shared experience, reciprocal assigning of meaning or real learning (Hakkarainen 2000). Loosely defined concepts, however, caused continuous uncertainty in some participants. Is a collective definition of concepts at the start of the process preferable, so that this issue need not be returned to continuously? Or is negotiation of meaning specifically an opportunity for learning? Hakkarainen (2000) recognises that virtual learning environments can, however, guide and structure a practitioner's activity without restricting her/his learning process too narrowly.

Trust and cultural factors

In a project based on virtual connections, there is neither time nor opportunity to build trust in traditional ways. In the Ning environment, there were observers and even outsiders, some of whom were present under a pseudonym. In order to build trust, those in the environment should be able to identify each other. It was noticeable that bringing a photo to Ning and using web cameras during ACP sessions were experienced as trust building actions, creating a sense of belonging. Studies (Peters and Manz 2007; Sobrero 2008) have shown that synchronous virtual meetings, particularly at the start of collaboration considerably strengthen trust.

In the light of our experiences, the *swift trust model* (Meyerson, Weick and Kramer 1996; Peters and Manz 2007) brings a relevant perspective to the examination of the IVBM community. It is as if trust is the assumed starting point, a matter of will, from which members set out on a common process. Trust is built on previous relationships or as systematic cooperation in which gradually the trust of others is gained through working together. In one project case, collaboration was built on previous cooperation. In this case a deeper level in conversation was achieved more rapidly than in the other examined cases:

It seems it was very valuable that we participants knew each other: we were able to go into the main issues in great depth in a short time" (t10, 17.3.2010 Ning).

It must be noted that the IVBM model touches on a very sensitive area of cooperation when the issue is evaluation of a colleague's course implementation. In each of the four benchmarking cases in the project, the international partner had a slight connection to a Finnish project participant, and this was decisive in building trust in the recruitment stage. Benchmarking partners who were strangers to each other could, however, engage in successful interaction, as the following comment evidences:

The reading and critical approach of the project of my partner makes [me] feel really related to them and I am concerned (t3, 23.11.2009 Ning).

According to our experience, trust also includes cultural factors. Cultural differences in the project were felt to be a particular challenge in international collaboration:

From our online discussion, I became very aware of cultural differences when it comes to teaching and learning online (t5, 29.11.2009 Ning).

In particular, cultural difference focuses on the authentic learning principle of *multiple perspectives*, within the concept of ill-structured learning environments.

Working in international virtual teams demands inter-cultural competence, sensitivity and being able to cope with uncertainty. Cultural differences and learning from these interested teachers is a key benefit, because future student groups on their courses will be more multi-cultural than they are now. To reduce the cultural gap and enhance mutual understanding

between those in different countries, we can utilize social network services (SNS) such as Twitter or Facebook in daily life. And they will gradually experience cooperative and collaborative motivation to engage in such valid and ubiquitous international learning communities.

Sharing and articulation of expertise

An ability to share one's expertise and experience with others and articulate tacit knowledge in virtual multi-cultural communities (Lewis and Allan 2005; Sobrero 2008) emerged in the data analysis as a factor impacting peer development. How is the journey already travelled made visible to peripheral participants in a multi-stage process formed from multiple roles, and how can it be entered at different times? Articulation of pedagogic tacit knowledge is challenging. As expertise grows, there may be an inability to take into consideration the construction of interfaces and articulation of knowledge from the perspective of newcomers to the discourse. In practice, this was evident in the project, for example, when online session questions dealt with benchmarked course content. Observers were only able to perceive the context partially, as the preparation stage discourse was not "visible" to them. However, a better record of collective activity is left behind in web-mediated action than in traditional face-to-face-communities, in which participants often retain a fragmented recollection of the activity (Zhang and Watts 2008).

The virtual benchmarking session was felt to be a positive challenge:

The real benchmarking was also good. It was tempting to present, to listen, to give comments and improve (t3, 23.11.2009 Ning).

Open sharing based on trust was evident between benchmarking pair members (Sobrero 2008). Reciprocal interaction between pairs during the "hottest" stage of the process was intensive. International benchmarking pairs described the reciprocal sharing of expertise, for example, as follows:

The questions and feedback from our pair was very constructive – and useful for us (t1, 11.11.2009 Ning).

Another partner felt:

They (benchmarking pair teachers) had some really good points of view and suggestions to improve my project. Because of the other approach towards my project, they could really solve some fundamental questions and give some really valuable advice (t3, 23.11.2009 Ning).

Reflection

Educational technology and social media offer new types of opportunities to organise teacher peer development based on international virtual benchmarking activity flexibility and without constraints of time and place. The five-stage IVBM operational model describes one example of how we can construct flexible PD models for teachers which enable international collegial peer development and virtual peer support.

The study produced a three dimensional international virtual learning community examination model. Factors promoting teachers' peer development were: a common problem-centred authentic development task, shared pedagogic and technologic tools and artefacts, negotiation of a common understanding based on trust, and construction of authentic learning knowledge. Barriers to peer development in the examined operational model were felt to be: time management factors, organisation issues of trust encountered by a new international operational model, and the articulation of one's expertise in communities made up of different types of participants.

Peer development in international virtual communities requires time and clear, though also sufficiently open and adaptable, work structures, and the building of an adequate level of trust. Time factors, both physical time differences in synchronous benchmarking communication and the participants' busy day-to-day timetables, demand strong commitment to an international virtual project. It was evident in the IVBM peer development community that trust was largely the starting point to collaboration, complicated by a few organisational trust issues. The IVBM project's strength is the integration of synchronous and asynchronous communication, which extended opportunities to participate in the project flexibly and in ways considered most convenient. Continuous attention must be paid to sharing and articulation of expertise in a virtual community made up of different roles and stages. Further development of the operational model should ensure that observers, that is, peripheral participants, are able to participate and peer learn more effectively in their own role. Social media affordances are not yet sufficiently exploited in making one's activities transparent.

A possibility of virtual international projects is so-called "collision", through which identification of elements promoting and preventing peer development can be exploited as part of a collective learning process (Leppisaari et al. 2009). Not only physical and organisational barriers are crossed in such collision, but also trust and cultural barriers, and competence and knowledge needed in the ever increasingly global learning environments of education are acquired.

Virtual benchmarking of online education may provide international peer support in a border-crossing world of education. Reciprocal benchmarking of teaching by higher education teachers from various countries in virtual environments is a step towards an international teacher identity deserving and worthy of further development. How can sustained international virtual peer development communities in which is accumulated knowledge on the skills of authentic online education and terms and conditions of learning be established? The community could foster different levels of participation in line with the IVBM operational model (cf. Wenger et al. 2002). In such a community, a teacher aspiring to develop greater authenticity in online education could begin as an observer and initially act as a peripheral participant and then move towards the centre of development with her/his own benchmarking case, thus enabling a gradually deepening opportunity of participation (cf. Hakkarainen 2000).

Development of the IVBM model should especially consider the creation of international communities that promote peer development. Teachers could then increase their pedagogic competence, virtual work and expertise that integrate internationalism flexibly, and above all else, they could benefit from the know-how of their peers in resolving acute development tasks in their own work. Our topics for further research include how authenticity was realised in the benchmarked cases, and what cultural factors and differences are evident in expressions of authenticity.

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