

Online Master Communities of Practice: Collaborative Learning in an Intercultural Perspective

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Abstracts

English abstract:

This study addresses the challenge of the educational design and implementation of two online Masters' programs within the humanities and education. The empirical basis for our investigation is the conception and delivery process of both courses from two different educational cultures, respectively; Ireland (MIC) and Denmark (OL). The core intention of the study is to explore, describe, compare, and discuss the extent to which collaborative learning in communities of practice (COPs) (Wenger, 1998) may be said to have developed throughout the learning process. From a perspective of learning as a matter of change taking place through participation in COPs, this paper attempts to assess — using a set of identifying criteria for COPs — the learning value of the processes that emerged from the viewpoint of, both designers as tutors and students.

Danish Abstract:

Dette kapitel omhandler udfordringen omkring design og implementering af to online masterkurser inden for humaniora, som begge omhandler implementeringen af IKT (informations- og kommunikationsteknologi) i læreprocesser. Det empiriske focus for vores undersøgelse er henholdsvis designkonceptet og afviklingsprocessen i de to kurser, som har deres oprindelse i to forskellige uddannelseskulturer — den irske og den danske. Hovedformålet med undersøgelsen er, dels at undersøge, beskrive, sammenligne og diskutere i hvilken grad etablering af kollaborative lærings- "communities of practice" (COPs) (Wenger, 1998) kan siges at have fundet sted i de to forløb, og dels at vurdere på tværs af nationale og kulturelle grænser - de studerendes opfattelse af hvilke specifikke elementer og nuancer ved COPs, som var tilstede i - og markante for — de to kurser. Fra et perspektiv på læring forstået som et spørgsmål om forandring gennem deltagelse i online COPs, vurderer vi — på baggrund af et sæt identificerende kriterier for COPs — nuancerne i de lærings- og samarbejdsprocesser, som udviklede sig i de to kursusforløb.

Gaelic Abstract:

Féachann an taighde seo ar chomhdhéanamh agus múineadh dhá chlár Máistreacht in Éirinn agus sa Danmhairg in ábhair léinn agus oideachais. Rinneadh an chóras a úsáideadh sa dhá thír a iniúcadh ar leibhéal chultúra, agus oideachasúil. Is í príomhaidhm an taighde ná scrúdú a dhéanamh ar an leibhéal d'fhoghlaim chomhleasa (COP's) (Wenger, 1998) a tháinig chun cinn i rith chomhdhéanamh agus cur i gcrích an dá chúrsa, agus i rith an phróiseis foghlamtha ina hiomlán. Más fíor go dtagann athrú ar an bhfoghlaim, trí phartaíocht i suíomh foghlamtha chomhleasa, déanann an taighde seo iniúcadh níos domhaine — ag úsáid critéir aitheanta ó COPs — ar fhiúntas foghlamtha an dá chóras d'ar leis na cruthaitheoirí agus na mic léinn a ghlac páirt.

Introduction

*Insanity: The belief that one can get
different results from doing the same thing.*

(Albert Einstein)

The enhancement of quality in educational offerings of networked collaborative learning on the Web appears to be a broad, complex and multi-faced challenge (Cecez-Kecmanovic & Webb, 2000). Among other things, the challenge identifies as key components pertinent to quality and success, the design of the virtual learning environment and the implied roles enacted by teachers and students throughout the delivery process (Koschmann, 1996; Collis, 1997; Bates, 1999; Harasim, 1999; Collins, Mulholland and Watt, 2001). To design collaborative processes that truly integrate and draw upon individual competencies and interests of the adult student appears an even more challenging activity (Danielson, Lockee & Burton, 2000; Woodruff, 2002; Sorensen, 2002; 2003a). Thus, as designers and teachers, we need a way of capturing this design challenge which holistically incorporates the unification of staging the learning environment, its components and scripting the course delivery process. Moreover, as actors on the networked stage of learning, we need to re-think our roles and re-write our instructional scripts as facilitators of learning processes online (Powers & Guan, 2000).

It is evident to the authors that the building of theory within the literature on design of networked collaborative learning is rather scarce and dominated by mainly empirical studies. As a result, many design approaches rest on mainly pragmatic perspectives derived as lessons from practical studies. The ideal approach, however, must be to merge the two, theoretical knowledge and lessons from experience, in order to establish the bridge for knowledge building on design of networked learning. Web-based learning environments (WBLEs) are clearly the contemporary, instructional "innovation of choice" in higher education (Persichette, 2000).

This paper reports on the study of two online courses from two different Masters programmes, in Ireland (MED. & MA in Education, MIC) and in Denmark (Ms in ICT and Learning, OL). Both the courses and programs in question have been designed and delivered by the authors on the basis of their national and

cultural organizational, pedagogical, and technological traditions and preferences, utilising a combined theoretical (Wenger, 1998) and pragmatic optic. Our main objective is to quantitatively measure and explore the quality of the two courses (as outlined at a later stage in the paper), to the extent to which it is possible to identify the establishment of 'Communities of Practice' (COPs), in "mutual learning".

Theoretical Perspective on Learning: Communities of Practice

The concept of learning through communities of practice is presented and developed by Etienne Wenger in his book "Communities of Practice. Learning, Meaning, and Identity" (1998). The book presents a social theory of learning. The primary focus of Wenger's theory is the view of learning as social participation as a process of being active participants in the practices of social communities and constructing identities in relation to these communities. Wenger defines a community as "a way of talking about the social configurations in which our enterprises are defined as worth while pursuing and our participation is recognizable as competence" (Wenger 1998, p. 4). He lists his premises in relation to what matters about learning (cited from Wenger, 1998, p. 4):

- **We are social beings.** Far from being trivially true, this fact is a central aspect of learning.
- **Knowledge** is a matter of competence with respect to valued enterprises — such as singing in tune, discovering scientific facts, fixing machines, writing poetry, being convivial, growing up as a boy or a girl, and so forth.
- **Knowing** is a matter of participating in the pursuit of such enterprises, that is, of active engagement in the world.
- **Meaning** — our ability to experience the world and our engagement with it as meaningful — is ultimately what learning is to produce.

In Wenger's perspective, a social theory of learning must necessarily encompass the elements that denote or characterize social participation as a process of learning. The four main 'entities' in Wenger position in relation to his social theory of learning are (cited from Wenger, 1998, p. 5):

- **Meaning:** a way of talking about our (changing) ability — individually and collectively — to experience our life and the world as meaningful.
- **Practice:** as way of talking about the shared historical and social resources, frameworks, and perspectives that can sustain mutual engagement in action.
- **Community:** a way of talking about the social configurations in which our enterprises are defined as worth pursuing and our participation is recognizable as competence.
- **Identity:** a way of talking about how learning changes who we are and creates personal histories of becoming in the context of our communities.

To Wenger, learning takes place through engagement in actions and interactions, through which it reproduces and transforms the social structure in which it is situated, and while it is viewed to be the carrier of the evolution of practices and the absorption of newcomers, it is thought to also be the carrier of the development and transformation of identities.

Participation refers to a process of taking part and also to the relations with other that reflects this process. It suggests both action and connection (...) [It] is the complex process that combines doing, talking, thinking, feeling, and belonging. It involves our whole person, including our bodies, minds, emotions, and social relations. (Wenger, 1998, pp. 55-56)

[Reification is] the process of giving form to our experience by producing objects that congeal this experience into "thingness". (Wenger, 1998, p. 58)

Wenger argues that reification can refer to both process and product, that it can take different forms, that it occupies a great deal of our collective energy, and that it shapes our experience (Wenger, 1998). But, most importantly, that these two forms, participation and reification, are dimensions of both practice and identity and that they exist in learning in a dynamic interplay (Wenger, 1998, p. 87):

Forms of participation and reification continually converge and diverge. In moments of negotiation of meaning, they come into contact and affect each other. (Wenger, 1998, p. 87)

Wenger's theory of learning is truly and fundamentally social. He sees COPs as "the social fabric of learning" (Wenger, 1998, pp. 251) and stresses that the mechanism that makes information knowledge empowering (i.e. the very mechanism that makes it "knowledge") is the way and the extent to which it can be integrated and operationalized within an identity of participation.

Collaborative learning principles call for a perspective and functioning of group learning, while learning through COPs points to learning as an aspect of the functioning of a community of practice. They both emphasise learning as *an individual and a social phenomenon*, and they both argue for shared, collaborative and democratic learning efforts, stimulated through *participation, engagement, motivation, and ownership* (Sorensen, 2003a). In the learning perspective applied to the present study, we view *online learning* as processes taking place *collaboratively* in what we identify, in principle, as *online communities of practice*. It changes our analytical focus from viewing the COPs as secondary phenomena in a fixed instructional plan to emphasizing the COPs themselves as the curriculum.

Descriptions of the Master Programmes

Denmark:

Course on "Online Learning" (OL)

The OL course is one of several courses on the Danish cross-institutional online MS in ICT and Learning (MIL)[1]. MIL is a two-year (half-time) Master education in ICT and Learning. MIL provides continuing education for working adults engaged in educational planning and integration of ICT in learning processes at schools and all types of educational institutions. Employees with educational responsibilities in different types of organizations also enter the program. MIL is structured in four categories of studies: four modules (each consisting of three to four courses), one project work, and one Master thesis. Many of the approximately 40 MIL participants were highly qualified teachers at the high school level and had extensive university education and high competence within their individual work areas.

The design of the OL course was based on PANEL, a process oriented model for design of participation in collaborative knowledge building processes on the net (Sorensen, 2003a). The main pedagogical idea assumed in the model is the establishment of a student-centred, open process in which knowledge resources enter dynamically from outside via the participants as well as through the teacher(s). This process should be driven and motivated by the participants and their individual knowledge (the latter is an important factor in adult education, where each of the participants is an "expert" in their individual working context). It also assumes a dynamic interchange between teacher and learner roles and provides a rough indication of how much of the teacher contribution evolves at a meta-communicative level. The participants, in the two-week preparation period read literature according to three themes within the course subject, online learning. The themes corresponded to the names of the three discussion fora in the succeeding period of discussion.

The OL course lasted 5 weeks. It was divided into periods of reading and preparation (two weeks) and debate (3 weeks). Goals of the course are that the participants through engaging in collaborative knowledge building acquire:

1. insight in the issues of quality in design and delivery of online learning
2. meta-reflection on and understanding of the implication of teacher-learner roles
3. meta-reflection on and understanding of the reflective, interactive, and structuring potential of net-based learning processes (Sorensen, 2003b), and
4. a self-reflective experience of one exemplary model (their own course "Online Learning").

The participants were asked to distribute a set of roles among the members of their online group (on average consisting of 4 participants). The roles were supposed to form, support and guide their later discussion and to give the participants a concrete point of departure in the discussion. Some were presenters, some were moderators, etc. The description of the roles was clarified in the assignment. Both teacher and students agreed to commit themselves to attending the virtual learning space for a minimum of five times a week over the three weeks of debate. In the debate period, each of the groups was asked to present a commonly agreed problem related to the literature. Moreover, they were asked to initiate, conduct and wrap up the succeeding online plenum discussion, which evolved from the problem identified by their group. In parallel with the discussions, the participants and the teacher were engaged in meta-reflections and meta-communication in a meta-forum, to reflect and discuss the experiences and processes of the participants, as they evolved. The participants were graded on both quantity and quality of their contributions using a process-oriented assessment model, PAA (Sorensen & Takle, 1999; Sorensen, 2003a), underlining the following set of assessment criteria:

- Quantitative requirements included submitting at least 5 comments, give a certain number of comments to others' contributions and a certain number of new initiatives, elicit a certain number of responses from others.
- Qualitative requirements included questions asking for clarity, comments that add new knowledge to the discussion, comments that provide relevant associations, comments that organise and promote argumentation, comments that synthesise previous points of view and point to new directions, conclusions and visions.

The idea was, through the PAA model and its requirements, to stimulate participation in discussion, ability to listen to others, and contributions with relevant views.

Ireland:

Course on Qualitative Research Methodologies and online Learning possibilities (MIC)

The MIC course (MEd. & MA in Education) is a two-year taught master programme, which comprised working adults from various walks-of-life in education (elementary, secondary and third level), adult education, private sector and business[2]. Similar to the MIL programme in Denmark, the Irish master programme is structured in four categories of studies: four modules (each consisting of three to four courses), one project work, and one master thesis. The majority of participants (56%) were practicing teachers or involved in education management (18.6%). The remainder hailed from administrative or private business and general education (25.4%). They had extensive university education and high competence within their individual work areas. Having firstly completed a preliminary diploma, at the university, and submitted a 'project' on a topic of their own choosing, the participants were deemed eligible to further their studies to masters level in the second year by attaining a recognized '*honours*' standard in their work.

The participants' diplomas varied from ICT (Information and Communication Technologies) and adult education to general education. Their second year introduced them to the various aspects of research methodologies (both qualitative and quantitative), and the process of thesis preparation and writing. During this second year, they were expected to submit a final thesis outline and choose a supervisor (if they so desired otherwise one was automatically provided by Mary Immaculate College). It was with specific reference to the course on Qualitative Research Methodologies, the collaborative interaction between the teacher, the students and the demands of modern day living that the idea, development and realization of the on-line environment evolved. Traditionally, the Master course was 100% face-to-face instruction but in 2002-2003, the teacher decided to experiment by expanding the on-line and virtual, web-based possibilities of his own involvement on the course with the agreement of the participants who were also expected by the University to sit a written examination at the end of this section of the course.

Based on similar principles and ideologies to PANEL, a process oriented model for design of participation in collaborative knowledge building processes on the net (Sorensen, 2003a), the on-line course at Mary Immaculate College was initially created and designed out of a mutually agreed need to find a more practical, and stream-lined mode of delivery of the course, over 5 weeks, and thereafter, to the many students who had to travel long distances to the university. Its evolution was student-driven, collaborative, open-ended and non-regulated to encourage full participation at all levels of students' on-line experience. The possible uses of, and access to the forum were openly discussed in the face-to-face meetings at the

University and the rest was left to the natural laws of progression or regression depending on the students themselves, their discussions, needs and desire to openly communicate and share knowledge and ideas in an on-line forum (OLF).

The goals of the course were:

1. to give the participants a deeper understanding of themselves, their dominant personality traits and their learning and 'teaching' styles through the creation of practical and fictitious 'Action Research' situations in class, (Kersey & Bates, 1978), and consequently deepen their awareness of the uniqueness of qualitative research methodologies.
2. to expose them to collaborative knowledge building opportunities and ideas based on their mutually perceived 'mating-partners', 'soul-mates', 'opposites', etc. resulting from the in-depth study and discussion of the results of their findings on self and others (ibid, 1978).
3. reflection at a micro and macro level on all on-line aspects of qualitative research possibilities, which they may incorporate into their work and eventually into their theses.
4. to expose participants to 'virtual' online learning environments and discussion fora in which they could share their experiences, knowledge and the '*Je ne sais quoi*' – *Whatever may arise!*, which might also occur.

The MIC and OL experiences were and still are emergent and constantly evolving. The teachers were privileged to be in the unique position of being in total control of the course design and presentation and were of the opinion that the participants themselves must always be a vibrant, creative and active ingredient in this new, innovative departure, irrespective of the final results of the experiments enacted.

Research Design and Methodology

We choose an explorative approach for our investigation of the myriad of possible effects of the online courses outlined on the web-based teaching and learning processes investigated. More specifically, in order to investigate this, we adopted a qualitative, electronic response questionnaire with the two main purposes of:

1. freely investigating students' perspectives towards the formation of COPs in their courses and assessing the effect of our courses on the formation, incidental or otherwise of COPs within both groups;
2. getting an idea of the views of the students on the more specific elements and nuances of a COP, which they perceived as being present in their course;

The questionnaire was distributed by e-mail to all participants of the two master courses, and the responses were collected by the teachers and kept anonymous. It was structured in three overall sections, obtaining respectively 1) information on the participant's age and sex, 2) information on the type of professional work of the participant, and 3) information on the participant's experience with the course.

Qualitatively, the questionnaire was formed and constructed from a Wengerian learning perspective emphasizing the three components of *engagement*, *imagination* and *alignment* as the main infrastructures of design (Wenger, 1998), and in order to obtain an idea of the more specific elements and nuances of a COP that the students perceived as being present in the two courses, we composed (as question 5 of the questionnaire) a list of Wengerian criteria used in the questionnaire, inquiring whether the participants perceived the courses as having:

- a. provided opportunities for discussion and a sharing of similar interests
- b. provided opportunities for reflection and exploration on issues which arose
- c. focused on and clearly articulated topics for discussion
- d. allowed for opportunities to learn from other's expertise, skills and competence
- e. provided opportunities to explore and discuss the latest developments in the field of study
- f. clearly outlined expectations for participation from the beginning
- g. allowed on-line and face-to-face relationships to become established
- h. gave a sense of passion among members in the pursuit of excellence
- i. actively encouraged enthusiasm, commitment and interest at all levels
- j. helped each other to solve problems of mutual interest
- k. provided opportunities for a good mixture of experienced and inexperienced people to share their experience
- l. provided opportunities and techniques for establishing group identity and nurture trust among members as a community
- m. supported engagement, imagination and convergence
- n. recognised and celebrated successes at all levels throughout the course
- o. encouraged feelings of ownership of the course at the outset
- p. provided opportunities for learning in a supportive environment
- q. actively promoted and supported collaborative group work
- r. other?

The participants were requested to choose at random as many elements from the list as they perceived – individually, and as members of a bigger 'master's community' – had characterized their learning process.

Findings

Education in its deepest sense and at whatever age it takes place, concerns the opening of identities – exploring new ways of being that lie beyond our current state. (Wenger, 1998).

The findings are based on the electronic responses to the questionnaire from 91 students (41 male and 50 female) in both Ireland and Denmark, and it was interesting to note that in excess of 95% responded within 48 hours and 100% response within the first week. All respondents (100%) indicated that the online learning courses lived up to their expectations, and many of the positive affirmations given affirmed this:

A: "The online learning course opened up so many possibilities..."

B: "I learned a lot – personal as much as professional. I was quite excited..."

C: "The use of the on-line forum made things so much easier for us to communicate..."

D: "It was the best course on the Master programme as we had so much to do with it ourselves..."

Because we deliberately confined the statements on the list of criteria to a myriad of points intrinsically associated with COPs, we wished to openly, in an un-biased fashion, assess whether or not some, or indeed any of these statements:

- were affirmed or ignored as a direct result of the participants' reflection on, and experiences of the online learning courses.
- were specific 'statements', which were more or less prevalent than others.
- suggested an element of cultural diversity in the participants' expectations to the online learning process.
- suggested an element of diversity related to gender in the participants' expectations to the online learning process.

Firstly, the spread of choice over the 18 prescribed statements and the 775 total responses in question 5, ranged from the least popular (n, k, m, o, h, ranging between 3% - 5%), to the most popular (b, a, p, ranging between 8.6% - 9.8%). It became obvious to us as we assessed the spread of responses, that the students perceived all statements to have played a part in the online learning courses, thus affirming the existence of the main tenants of COPs in both courses, as outlined in our questionnaire. As response 'r' was open-ended, only 0.2% of the respondents opted to add an 'extra' point to the list which stated that "the online learning course was an example of best-practice within itself" (student response). See table 1 below for a more comprehensive breakdown of the spread of responses:

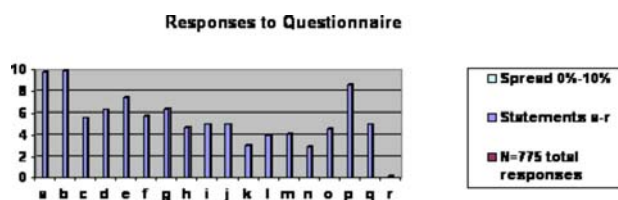


Table 1: Breakdown of the spread of responses

It is also noteworthy that there were 327 responses (in total) from the male participants and 448 responses (in total) from the females, and whereas the males choose statements a, b, p and g as their first choices, the females choose statements b, a, p and d in order of preference. The least popular statement among the males, apart from point r, was statement 'j' whilst among females it was statement 'n'. We agree, from our personal and professional experiences in facilitating courses, that it could be argued from a generalist, non-sexist perspective that these male and female choices are not surprising considering that the male persona and ego, in general, is more independent in not seeking external help in 'solving one's own problems', while the females generally are so conscientious and diligent, that they often forget to 'celebrate their successes as an on-going process'. These of course are our own perceptions, and not based (as yet), in any analytical or statistical forum.

We requested (in question 6 of the questionnaire) the participants to further define their reflective experiences, and choose one or two statements ONLY which best defined the quality of the online learning courses in which they participated. The male participants overwhelmingly choose statements 'b' and 'c', and their female counterparts choose statements 'q' and 'b' (see table 2 below).

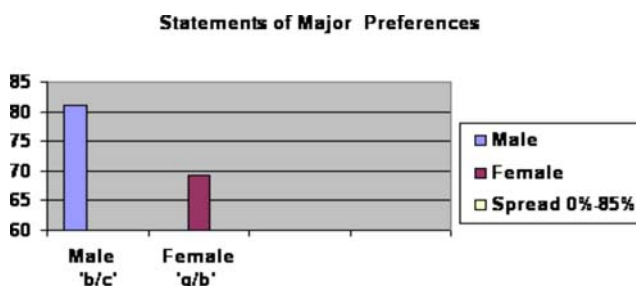


Table 2: Responses in relation to gender

Saint-Onge & Wallace (2003) in "Leveraging Communities of Practice for Strategic Advantage" support the Wengerian perspective on learning through COPs by identifying the "Five C's" as being common characteristics of a community of practice. The "Five C's" seem to mirror the 'preferential statements' of the participants on our courses (b, c and q in question 5 of the questionnaire) and may be summarised as:

1. *Conversations* - the key to learning.
2. *Collaboration* - the interdependency model that reflects our belief that we don't learn in isolation.
3. *Commitment* - the promise and willingness to participate in realizing the community's purpose.
4. *Connectivity* - the ability to work in virtual environments with the aid of technology infrastructure that connects us.
5. *Capabilities* - the link between strategy and performance - what it takes to achieve our goals.

Our students' choices would seem to confirm all of the above as being present in, and an integral part of, their online communities on the courses in Denmark and Ireland.

Although a qualitative study of empirical data as such was not the core ambition of this study, we did ask for more freely composed inputs from the students concerning their experiences. In question 7 the

students were asked: "In what way did the master's course NOT live up to your expectations?" The nature of the responses from Irish and Danish can be seen in the following illustrating examples:

While opportunities were certainly given to learn from each other's expertise, skills and competence, the interests and experience of the participants failed to converge in a general way, as it seems to me. I believe that this is partly due to coincidence (the exact combination of people), but also partly because of the technological development: Different work areas and tasks on the technology in general seemed to me to cause theoretical discussions of general topics as laid out by the course to provide the best opportunity for different expertises to nurture each other. (Student response from Ireland).

The course/study was more theoretical than expected. The expectation was that it would provide more hands on and technical discussions. I had expected a course with a more direct relevance or usefulness for everyday use and elaboration of ICT in learning. Instead I seem to find a very theory-laden course that focuses partly on basic theoretical issues, partly on a half-hearted (if you can say that in English?) introduction to (applied) qualitative research. (Student response from Denmark).

In question 8 the students were asked: "Any other comments?". Illustrating examples of the, in general, positive responses from both Irish and Danish students were:

The course was a great experience. I learned a lot - personal as well as with regard to my professional life. So I was quite exited about it. (Student from Ireland).

I had no clear expectations before starting at the course, and the expectations I had never came close to the actual course subjects. I'm therefore not disappointed but surprised in the good sense of the word, with having gained a whole new understanding of ICT and Learning. (Student from Ireland).

The Teacher's approach; visibility and facilitation of work during the on-line discussions was a major contribution to the very positive experience with this particular course. (Student from Ireland).

Learning about online learning online has been an overall good experience and I believe that no papers or lectures could have provided the same level of understanding and I feel actually able to identify with the student's situation as well as the teacher's. (Student from Denmark).

The Master course has given inspiration and lots of new knowledge to add to my virtual work. It has been a privilege to have the opportunity to learn again and to do it in professional surroundings. (Student from Denmark).

I will never forget my enthusiasm for the methods explored in this course, and I have applied some of them myself with success. And I will never forget the role and importance of the moderator/facilitator of the course. (Student from Denmark).

From a cross-cultural perspective, it was interesting to note that there were no significant differences between the male/female and/or Irish/Danish responses at this quantitative level of research. Moreover the striking similarities in the responses of both groups, throughout the questionnaire, would again seem to affirm the 'international' and universal appeal of the tenants of COPs as defined and outlined by the authors and affirmed by the participants in the questionnaires.

Conclusions

Communities of practice are about content - about learning as a living experience of negotiating meaning - not about form. In this sense, they cannot be legislated into existence or defined by decree. They can be recognized, supported, encouraged, and nurtured, but they are not reified, designable units. (...) One can produce affordances for the negotiation of meaning, but not meaning itself. (Wenger, 1998, pp. 229)

The present study shows that online learning COPs build on the ability to work together, pool resources and accelerate learning within the context of courses. By their very dynamics, online learning COPs provide solutions to real issues, which confront other students on the courses. But more importantly, they inspire and inoculate all of us, students and tutors, with an on-going ability to learn in collaboration. The responses of the students (as indicated by tables 1 and 2) confirm that the main tenants of COPs, as identified and compiled by the authors and based on universally accepted characteristics of COPs, are recognised as being an integral part of the collaborative learning process.

By increasing the on-line master courses' meta-capabilities to collaborate and learn, the responses of the participants to our questionnaire show that learning as a matter of change through collaborative participation has taken place. We assert, that the two on-line master courses in question have led to a change and transformation of identities among the participants in both Ireland and Denmark.

Education in its deepest sense and at whatever age it takes place, concerns the opening of identities — exploring new ways of being that exist beyond our current state (...). It places students on an outbound trajectory towards a broad field of possible identities. Education is not merely formative — it is transformative. (Wenger, 1998).

Although our study does not suggest any differences in gender and culture, they may still exist. It is likely, that we will need a more qualitative 'tool' than the present questionnaire for their identification. Finally, there are other research aspects of online learning, such as e.g. comparative studies (also to similar programmes in other universities), design challenges, the concept of 'mindful learning' (Langer, 1997), etc., which potentially would be able to add interesting perspectives and perhaps clarify in more detail the findings of the present study. Consequently, all of these aspects represent interesting research challenges to be pursued in the future.

Acknowledgments

We thank the master students in both Ireland and Denmark for their willingness and commitment in providing a significant part of the empirical data used for this study.

Appendix A: Research Questionnaire

Virtual Communities of Practice — Cross-Cultural Masters' Programmes

This questionnaire has been prepared by both Dr. Elsebeth Korsgaard Sorensen, Ph.D. Aalborg University, Denmark, and Dr. Daithí Ó Murchú, Ph.D. Mary Immaculate College of Education, Limerick & Trinity College, Dublin, Ireland. Its objective is to function as a means of assessing some of the effects which the Master Courses may have had on the formation of Communities of Practice among the students following one of the two on-line courses offered in Denmark and Ireland, respectively.

All information provided by you will be treated in the strictest of confidence and no reference whatsoever will be made to any person by name or identity number.

Based on your own personal experiences during your masters' Programme at MIL (Denmark) and MIC (Ireland), please answer the following questions to the best of your knowledge.

Please tick **ONE** answer only to as many questions as possible

1. Are you ?

Male	<input type="checkbox"/>
Female	<input type="checkbox"/>

2. Into which Age bracket do you fall?

20-25	<input type="checkbox"/>
26-30	<input type="checkbox"/>
31-35	<input type="checkbox"/>
36-40	<input type="checkbox"/>
40+	<input type="checkbox"/>

3. Which of the following terms would best define your present working status?

Administrative (business)	<input type="checkbox"/>
Administrative (education)	<input type="checkbox"/>
Management (business)	<input type="checkbox"/>
Management (education)	<input type="checkbox"/>
Workforce (business)	<input type="checkbox"/>
Workforce (education)	<input type="checkbox"/>
Private (business)	<input type="checkbox"/>
Private (education)	<input type="checkbox"/>

4. Have you found that this Masters Course has lived up to your expectations?

Yes	<input type="checkbox"/> (If you tick Yes, please go to Question 5)
No	<input type="checkbox"/> (If you tick No, please go to Question 5)

5. Having answered Yes or No to question 4, please tick as many YES or NO of the following points as you wish to support your answer;

	<i>My Masters' Course</i>	YES	NO
a	provided opportunities for discussion and a sharing of similar interests	<input type="checkbox"/>	<input type="checkbox"/>
b	provided opportunities for reflection and exploration on issues which arose	<input type="checkbox"/>	<input type="checkbox"/>
c	focused on and clearly articulated topics for discussion	<input type="checkbox"/>	<input type="checkbox"/>
d	allowed for opportunities to learn from other's expertise, skills and competence	<input type="checkbox"/>	<input type="checkbox"/>
e	provided opportunities to explore and discuss the latest developments in the field of study	<input type="checkbox"/>	<input type="checkbox"/>
f	clearly outlined expectations for participation from the beginning	<input type="checkbox"/>	<input type="checkbox"/>
g	allowed on-line and face-to-face relationships to become established	<input type="checkbox"/>	<input type="checkbox"/>

h	gave a sense of passion among members in the pursuit of excellence	<input type="checkbox"/>	<input type="checkbox"/>
i	actively encouraged enthusiasm, commitment and interest at all levels	<input type="checkbox"/>	<input type="checkbox"/>
j	helped each other to solve problems of mutual interest	<input type="checkbox"/>	<input type="checkbox"/>
k	provided opportunities for a good mixture of experienced and inexperienced people to share their experiences	<input type="checkbox"/>	<input type="checkbox"/>
l	provided opportunities and techniques for establishing group identity and nurture trust among members as a community	<input type="checkbox"/>	<input type="checkbox"/>
m	supported engagement, imagination and convergence	<input type="checkbox"/>	<input type="checkbox"/>
n	recognised and celebrated successes at all levels throughout the course	<input type="checkbox"/>	<input type="checkbox"/>
o	encouraged feelings of ownership of the course at the outset	<input type="checkbox"/>	<input type="checkbox"/>
p	provided opportunities for learning in a supportive environment	<input type="checkbox"/>	<input type="checkbox"/>
q	actively promoted and supported collaborative group work	<input type="checkbox"/>	<input type="checkbox"/>
r	Other?	<input type="checkbox"/>	<input type="checkbox"/>

6. If you had to choose **ONE /TWO** of the points (a - r) **tick in Question 5 as the MOST important for you, which would it (they) be ?**

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7. In what way (if applicable) did the Masters' Course **NOT** live up to your expectations?

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8. Any other comments?

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Thank you for your co-operation in completing this questionnaire.

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References

- Bates, A. W. (1999): "Managing Technological Change: Strategies for Academic Leaders" San Francisco. Jossey Bass.
- Collis, B. (1997): Experiences with Web-based environments for collaborative learning and the relationship of these experiences to HCI research. Published in the Proceedings of the Working Conference of IFIP WG 3.3, Sozopol, Bulgaria
- Collins, T., Mulholland, P., Watt, S. (2001). Using genre to support active participation in learning communities, in Proceedings of the First European Conference on Computer Supported Collaborative Learning (Euro CSCL 2001), Maastricht, the Netherlands, pp 156-164.
- Cecez-Kecmanovic, D., Webb, C. (2000): A Critical Inquiry into Web-Mediated Collaborative Learning. In Aggarwal, A. (ed.): Web-Based Learning and Teaching Technologies: Opportunities and Challenges. London: Ideal Group Publishing.
- Danielson, J., Lockee, B., Burton, J. (2000): ID and HCI: A Marriage of Necessity. In Abbey, B. (ed.): Instructional and Cognitive Impacts of Web-Based Education. London: Ideal Group Publishing.
- Harasim, L. (1999). A Framework for Online Learning: The Virtual-U. IEEE Computer Society Journal "Computer", 32(9), 44-49.
- Kersey, D. & Bates, M. (1978) : Please Understand Me — Character & Temperament Types. Prometheus Nemesis Book Company. Del Mar, CA.
- Koschmann, T. D. (ed.) (1996). CSCL Theory and Practice of an Emerging Paradigm. Lawrence Erlbaum Associates Publishers, Mahwah, New Jersey, pp 1-23.
- Langer, E.J. (1988): The Power of Mindful Learning. Cambridge, Massachusetts: Perseus Publishing.
- Persichette, K. A. (2000): A Case Study of Lessons Learned for the Web-Based Educator. In Abbey, B. (ed.): Instructional and Cognitive Impacts of Web-Based Education. London: Ideal Group Publishing.
- Powers, M., Guan, S. (2000): Examining the Range of Student Needs in the Design and Development of Web-Based Course. In Abbey, B. (ed.): Instructional and Cognitive Impacts of Web-Based Education. London : Ideal Group Publishing.
- Saint-Onge, H. & Wallace, D. (2003): Leveraging Communities of Practice for Strategic Advantage. Burlington, MA : Butterworth-Heinemann.

Sorensen, E. K. & Takle, E. S. (1999): Distributed Collaborative Learning across Disciplines and National Borders. In C. M. Hoadley and J. Roschelle (Eds.), *Proceedings of the Computer Support for Collaborative Learning (CSCL) 1999 Conference* pp. 575-581. Palo Alto, CA: Stanford University [Available from Lawrence Erlbaum Associates, Mahwah, NJ]. <http://www.hum.aau.dk/~vipol/papers/elsebeth/portfolio.htm>

Sorensen, E. K. (2002): "Part of the Online Teachers Curriculum: Designing for Collaborative Knowledge Building Online". *Society for Information Technology and Teacher Education International Conference*, Vol. 2002, Issue. 1, 2002, pp. 995-999.

Sorensen, E. K. (2003a): A Challenge in E. Orchestrating the Symphony of Collaborative E-Learning. Accepted for publication in the *International Journal of Innovations in Higher Education (IJIHE)*. (In press)

Sorensen, E. K. (2003b): Intellectual Amplification through Reflection and Didactic Change in Distributed Collaborative Learning. *The International Journal on E-Learning (IJEL)*. Vol. 1, Issue 2, 2003. <http://dl.ace.org/6527> (In press).

Wenger, E. (1998): *Communities of Practice. Learning, Meaning, and Identity*. Cambridge University Press.

Woodruff, E. (2002). *CSCL Communities in Post-Secondary Education and Cross-Cultural Settings*. In Koschmann, T., Hall, R. Miyake, N. (eds.): *CSCL 2. Carrying Forward the Conversation*. Lawrence Erlbaum Associates, Mahwah, New Jersey, pp 157-168.

[1] The administration of MIL takes place at Aalborg University, but the curriculum is developed and offered in joint collaboration between selected departments of five Danish universities (Aalborg University, Aarhus University, Copenhagen Business School, the Danish University of Education, and Roskilde University). The program is the result of ten years of research collaboration between groups of people from these departments.

[2] The administration of MEd. And MA in Education takes place at Mary Immaculate College, University of Limerick Ireland. The curriculum is developed and offered by the College Department of Education and awarded by the University of Limerick. The programme is the result of many years of research collaboration between expert groups of people at Mary Immaculate College.