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DEVELOPING COMMUNITY IN ONLINE DISTANCE LEARNING

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ABSTRACT

Describes how a sense of community was developed among a group of learners participating in a course in teaching and training online conducted primarily online at a distance via FirstClass computer conferencing software. Drawing on the literature of online communities and their experience of running virtual team projects, the authors developed a method for creating a sense of community among course participants. This method included establishment of an email list prior to course commencement, a two-day face-to-face meeting which concentrated on developing knowledge and skills for participation as well as community building, and inclusion of community building activities among the initial online course exercises. Students responded positively to this combination of activities. Tutors spent less time assisting students with socialisation and adjustment to the online environment, increasing the time available for content-related tutoring. The authors confirm the importance of sense of community among online learners, and recommend closer attention be paid to factors associated with early development of community, including functional factors such as familiarity with the online environment. They conclude with recommendations for more structured research on how antecedent factors and events are associated with the development of online community.

1. INTRODUCTION

Educational theorists have long recognised that people learn from observing and interacting with others. Vygotsky (1978) observed that children learn from social relationships through others. Bandura (1977, 1997) observed similar forms of learning among adults who, he proposed, learn through their active involvement in interpreting and making meaning of their environment. Other educational theorists, drawing on both Vygotsky and the sociology of knowledge (Berger & Luckmann, 1966) have observed how knowledge can be constructed through collaboration in which an individual pieces together knowledge brought to the collaboration by others and places it in the context of relevant knowledge that he or she already has. The belief that adults, in particular, learn from one another through social construction of knowledge underlies the movement toward use of collaborative learning

at university (McGregor, 1992). This movement has been particularly strong in postgraduate teaching where each student can bring a great deal of existing applied or theoretical knowledge of the material to be 'learnt'.

The literature about experiences with online distance courses, whether based on collaborative learning or not, underlines the need for social interactions between learners. Early claims that, in an online environment, the sense of community which develops through socialization in a traditional classroom is lost (Willis, 1993) were followed by two streams of thought; one which considers that effective online learning (or e-learning) which occurs only at a distance requires special attention to the building of community and another which recognises the value, if not the necessity, of combining both virtual and face-to-face interaction. The first point of view is summarised by Palloff and Pratt (1999) who observed that the need to build a learning community was critical to the success of a virtual classroom. The second stream is represented by Dede (1996) who observed that "to succeed, distributed learning must balance virtual and direct interaction in sustaining communion among people" (p. 199).

Despite this general agreement about the importance of building a sense of community among students, there is a lack of analysis of the way this goal can be met within an online course. In practice, many online courses divide learners into groups who work together collaboratively rather than as a whole class. When such groups work together wholly online and at a distance, it can take several weeks of structured exercise to develop sufficiently cohesive groups to support effective collaborative learning (Knoll & Jarvenpaa, 1995). The authors' past experience in classroom-based courses which use online educational activities that call for computer-supported collaborative learning (CSCL) demonstrates that even those students who have met face-to-face in the classroom need time to learn to work collaboratively online, not just from the point of view of socialisation, but also because they need to develop the fundamental technical skills required to use the technology (Bielli et al., 1999; Klobas & Haddow, 2000; Renzi & Klobas, 2000).

Learning to work effectively with online collaboration technologies is not as trivial as implied by the providers of online courses which begin with content and assume students have (or can quickly and independently develop) the necessary technical skills. Teachers experienced with online courses will recognise that there are several related and critical technical issues to take into account: accessing the technology (hardware, software, network), learning to negotiate the user interface, and ability to communicate effectively online. If the online course is based on collaborative learning the number of the issues increases to include skills for effective teamwork and collaboration and the application of these skills online. To work within a collaborative online learning group requires members to interact effectively having solved any problems with use of the technology, to build social relationships and trust (Jarvenpaa, Knoll & Leidner, 1998) and to maintain a sufficiently high level of participation to guarantee that the collaboration among the group can produce the desired results. The interaction between all these factors further increases the complexity of the learning environment (Guice, 1997).

To deal with this complexity requires careful pedagogical design. Problems at the initial stages of a course can compromise the results of the full course. For students, course start-up is critical. Before students are expected to collaborate effectively on content-related tasks, they need to have the necessary skills to function effectively in what for many is a new learning environment. In addition to establishing the initial conditions which help students to develop the necessary skills, teachers need to carefully monitor the initial stages, with rapid intervention when problems which could undermine collaboration arise, for example, when a technology component is not working properly or when a student interacts with others inappropriately.

As more is known about online communities, the ways in which notions of online community can contribute to effective online learning have become better recognised. An online community of learners goes beyond social interaction online and encompasses shared purposes which include mutual provision of support as well as exchange of information, discussion of ideas, and chat and informal socialisation (Preece, 2000, p. 114). An online community would appear an ideal environment for effective computer-supported collaborative learning (CSCL); not only does it support the fundamental

communication activities necessary for CSCL but it has the added value of two characteristics that should increase the speed of the learning process based on collaboration: social control, or self-managed communication within the community, and the creation of a “Common Ground” which supports communication and exchange of knowledge (Preece, 2000, p. 156). In this paper, we describe how a community of online learners was developed in practice, and how the development of community has resolved some of the potential problems associated with CSCL.

2. A METHOD FOR DEVELOPING COMMUNITY IN ONLINE DISTANCE LEARNING

The preceding ideas came together in a postgraduate course in online collaborative learning conducted at Bocconi University in Milan, Italy for online educators and trainers. The course was conducted primarily online at a distance. Because effective course commencement is critical to the success of an online course, the course designers decided to emphasise development of a community of students and teachers from the beginning. Three separate but inter-related activities were designed to provide the foundations for an effective community of online collaborative learners: establishment of an environment in which a community might develop, including a web site and an email list initiated prior to course commencement, a two-day face-to-face meeting which concentrated on developing knowledge and skills for participation as well as community building, and inclusion of community building activities among the initial online course exercises. These activities are summarised in Table 1, which additionally identifies the stage at which each activity was initiated.

Table 1. A method for developing community in online distance learning

Time	Activity
Pre-course	Initialisation of class community environment: personal contacts, web site, mailing list; student selection and collaborative learning group allocation
Course initiation	Opening residential to develop sense of community as well as foundation knowledge and skills for CSCL
Initial online activities	Reinforcement of community and foundation skills for CSCL

From the course designers’ point of view, the practical activities planned to build the community included these actions:

- The preparation a web site with the instructions for the pre-course activities (mainly formal enrolment) and information about the first activity of the course
- The launch of an email distribution list welcoming the participants and giving instructions and support about was available on the web
- Planning for a two day course commencement in comfortable but simple accommodation
- Careful composition of the groups
- Planning for specific tasks and actions to build the community, ranging from encouraging a somewhat informal style of communication between teachers and the adult students, many of whom were peers, and providing each student with a university cap as a tangible representation of the community that they could see and show to others even when they were at a distance from their teachers and classmates.

3. APPLYING THE METHOD IN AN ONLINE COURSE

In October 2001, Bocconi University launched the course as a Corso di Perfezionamento in online education and training (<http://www.uni-bocconi.it/oet>, in Italian). The course, officially recognised as a postgraduate university course in Italy, is about half the duration of a Masters degree by coursework, and is therefore the equivalent of a Graduate Diploma in those countries which offer such a

qualification. The course grew from the University of London Institute of Education's international online Certificate in Online Education and Training (LOET), which Bocconi had previously administered in Italy. The Bocconi course (BOET) consists of three blocks and an assessment period, as shown in Table 2.

Table 2. Structure of the Bocconi University postgraduate course in online education and training

Block	Duration	Content and goals
1. Foundations	6 weeks	Students develop foundation skills for participation in collaborative online learning and build a mutually supportive learning community. They study the pedagogical, historical and industry foundations of online education and training and e-learning.
2. Experience (International)	10 weeks	Students learn the effect of different approaches to design and development of online learning activities through participation in a range of activities. They participate in the international section of the LOET, experiencing different methods and styles of online learning in groups of students from around the globe. In additional work for Bocconi, they are asked to evaluate the role of cultural and linguistic differences in online learning, and to contrast the effect on learning of working in groups formed as communities those formed without community development.
3. Applications	7 weeks	Learning groups complete an applied industry project which involves application of their learning throughout the course.
Reinforcement and assessment	8 weeks	The collaborative blocks are followed by a period of individual reflection in which students write an essay and individual reflection on their learning.

Overall, the Bocconi course has a duration of 31 weeks part-time. It is conducted almost entirely by collaborative learning through computer conferencing using FirstClass software. Some web-based exploration is used as the basis for student discussions, but consolidation of learning in all lessons occurs through discussion. The primary discussion platform is asynchronous, but students may choose to participate in synchronous chat, the text of which can be saved and recorded as part of the record of discussion. (Most groups chose to use chat in this way at some stage during the course, and one group established and kept to a weekly appointment for a chat at a set time on a set day.) The FirstClass software is supported by the Institute of Education's service provider, Abacus, in the United Kingdom. While Abacus provides excellent technical support, a local help desk was also made available to enable students to communicate in Italian and over the telephone without being burdened with international phone costs.

3.1. Pre-course community environment: Initial contacts, web site, telephone, and email list

The course web site was prepared to inform interested enquirers about the characteristics and some details of the course. An electronic form was available to allow people to ask to be admitted to the selection for the course. At the deadline for these pre-enrolments, almost 200 applications had been received for the 30 available places. A sponsor, Trainet (an e-learning company, a division of Telecom Italia) offered ten scholarships for doctoral students with an undergraduate degree in psychology or in education. We were therefore able to increase the number of available places to 36, giving priority in the remaining 26 places to students with experience in teaching or training in the fields of school, university or business. The selected candidates were contacted by telephone, making an initial human contact between the university and the students.

A reserved area was added to the web site for the selected candidates. This area contained the instructions for formal enrolment and details (program and photos of the site) about the first activity of the course which was held over along weekend at a farm in Tuscany.

At the same time an email list was activated through Yahoo! Groups <<http://www.groups.yahoo.com>>. The list was designed to keep the students informed about the availability of information on the web site, how to reach the reserved area, and the availability of the course secretary in case of problems.

3.2. Pre-course preparation (course designers): Composition of collaborative learning groups

Before the face-to-face meeting, the course designers defined the size and composition of the groups based on these principles:

- Groups to be sufficiently large to provide diversity of background and knowledge, but sufficiently small to permit each student to be conscious of each of the others as an individual and to feel the need to contribute if the group was to function effectively.
- Spread the ten participants with psychology and education background over all the groups to assure that each group could benefit from at least one member who could support the educational theories if needed.
- Compose group members with people coming from different fields (school, university, companies) and having different levels and types of background experience to provide a range of points of view from which each online activity could be addressed.
- Ensure that members of each group were drawn from a mix of geographical areas to avoid that people who were able to meet easily face-to-face could, *de facto*, exclude others from the decision process
- Ensure that each group had a minimum of two males or two females, in case gender balance became an issue.

Six groups were formed, five groups of six and one group of five students. Each group was assigned the name of a planet (Giove, Marte, Nettuno, etc.) to reflect the metaphor that each planet is different but all belong to the same system (the whole class), rather than being in competition.

3.3. Course initiation: The residential meeting

From their initial contact with the course secretary, it was emphasised to each student (by phone contacts, the web site and the email list) that the initial face-to-face meeting was mandatory for the course participation. The activities for the residential face-to-face meeting were structured in this way:

- A *general introduction* to the course with the delivery of the course material, the presentation of the teachers and tutors and the description of the activities planned for the face-to-face meeting. This session established an initial expectation that online collaborative learning required participation and knowledge sharing among group members.
- A *knowledge audit and introductions* exercise designed to establish, from the beginning, that each group contained individuals who had knowledge that others did not have, but that no individual was an expert in the entire area of study. In doing so, the lesson to be drawn was that members of each group (and the class as a whole) would learn a great deal if they shared their knowledge. It was further used as an initial exercise in differences in learning styles and work preferences, to underline that different members of the group would prefer different modes and hours of work, and to draw the lesson that these differences should be accommodated and used for the group's benefit rather than as a source of criticism. The exercise was tiered: each student was requested to fill in a form with the description of their knowledge of different aspects of online education and training and their work preferences; students then shared their information with all the members of their group; and finally each group prepared and gave a presentation of their group to the class, using a template that was designed to reinforce the primary goals of the exercise. This exercise established an initial practical basis for knowledge sharing and mutual respect within the collaborative learning groups and within the class. The beginnings of a sense of community could also be seen by the end of the exercise.

- A *technology training* session dedicated to training in FirstClass software, using structured exercises in a PC laboratory. This session provided the fundamental technical skills needed for effective online collaboration using the course software.
- A session on *communication and collaboration* designed to reinforce the value of using many forms of communication and to introduce notions of psychological interdependence in collaborative work. In the first part of this session, the students were asked to build an object from pieces of Meccano; their only instruction was a picture of the object, and no verbal or non-verbal communication on progress was provided. In the second part, the students were permitted to work in their groups, using all appropriate modes of communication. During each part, several students played the role of observer, taking notes of how the process was running. The lessons from these activities were drawn together in the third part of the activity, when the whole class was involved in a discussion about the process of building the object under the two different communication regimes. The session was mediated by a community psychologist who used several techniques which confronted students to approach the activity and the de-briefing as members of a community rather than as individuals.
- A session on *learning styles* which used a simple but entertaining exercise to more formally address differences among learners' preferences and styles for learning, and presentation of a framework which reinforced the educational goals of this initial face-to-face meeting, and provided a practical guide to the next steps, which were to be taken online. Some tips for online collaboration were included, to enforce the contacts between the members, including: a reminder to use all the media available (phone, cellular phones, private mail) because, just because the formal course activities are designed for online completion, there is no prohibition on communicating by other means; strong reinforcement that learning is a group responsibility; and a suggestion that any absences be reported to the group and the tutor so that activities can be adjusted to take account of the absence.
- A *final* formal session in which the framework of the course and the activities performed during the meeting were reinforced and students were able to clarify doubts about methods, scheduling, and support in an intensive and highly interactive session with the whole class.
- The residential closed with each *group meeting* with its tutor for the first block of online activity. At this meeting, tutors were asked specifically to establish the logistics of working online with their groups, including the hours in which they would be available for 'consultation' online.

The site chosen for the meeting was a critical element in building the students and teachers into a learning community. The selected site was a Tuscan farm which specialises in agritourism (<<http://www.fattoriadimigliarino.it/presuk.htm>>). It was dedicated entirely to course participants, so that it seemed to be their space rather than a temporary lodging shared with others. All meals were provided by the owners, using farm produce, and the quality and quantity exceeded all participants' high expectations of eating in Tuscany, adding an additional focus for the building of community among participants. The location, Migliarino, was far enough from the temptation of the nearest city (Pisa) to keep the students all together to facilitate building of the sense of community and to ensure that all were available to participate in the sessions needed to build necessary knowledge and skills of the technical course environment, the course method, and underlying theories. Of course, the night owls also found their way to Pisa, and an organised session in the city provided all with a chance to see the famous Tower.

3.4. Initial online course activities

Online course work began immediately after students returned from their residential weekend. The first five weeks' activities were structured so that during the initial period they would concentrate more on reinforcing their skills with the technology and the basics of computer-mediated

communication (CMC) and progressively build to the point where the focus was primarily on content rather than method. Salmon, 2000, provides a particular good model of the relationship between time spent developing CMC skills and time spent on content are inter-related. Figure 1 illustrates how the emphasis was expected to vary.

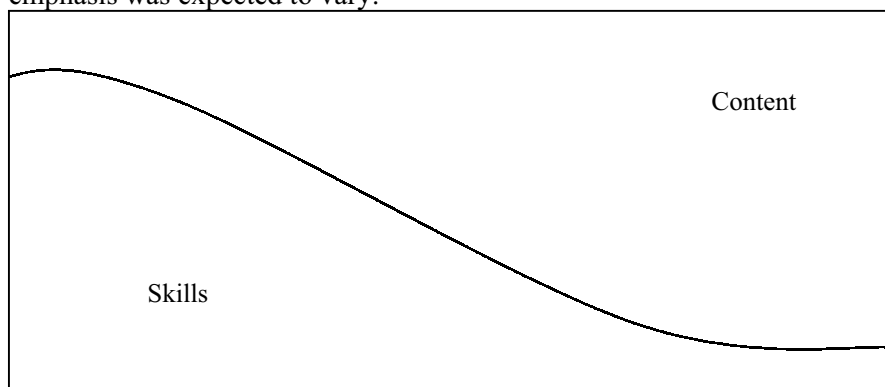


Figure 1. Relative emphasis on foundation skills and content during an online course

The activities for the first week were particularly important because they were designed to reinforce online both the skills and sense of community initiated at the residential meeting. The goals for the first week were described in this way:

By the end of this week, you should:

- *as an individual participant, have loaded the FirstClass software and become familiar with FirstClass, the course environment in FirstClass, and some other course technologies.*
- *have an understanding of some fundamentals of the psychology of groups and communities, and the role of collaboration and knowledge sharing in effective group work.*
- *as a member of a collaborative learning group, become familiar with the members of your group and begun to develop a “sense of team”.*
- *have contributed to the development of a collaborative learning environment among all Italian course participants, through participation in activities at Pisa (or discussion of those activities) and by completing the Scheda di Presentazione [a structured form introducing each student] (accessible from the course web site), and among international course participants by completing the FirstClass resume.*
- *be familiar with the course objectives and methods, and the requirements for award of the Bocconi Corso di Perfezionamento and the University of London Certificate in Online Education and Training.*

The student instructions following the residential meeting say:

Complete your preparation for the formal course activities, which begin next week, in FirstClass, and in your groups. Make sure you are comfortable working with the course technology and that you are getting to know each member of your group and how they like to work. Some things to do:

- *Check that your software is loaded correctly in each location from which you plan to use it, and that you are familiar with the FirstClass environment for the course. Complete any FirstClass or workshop tutorials and exercises that you have not yet completed.*
- *If you have not yet done so, complete the Scheda di Presentazione for course participants (see course web site) and the FirstClass resume.*
- *Use your group’s area within the Italian conference area (e.g. Piazza – Giove) in FirstClass to get to know members of your group and to practice computer conferencing with FirstClass.*

- *If you were at the Pisa meeting, but one or more of your group members was unable to come, please welcome the new members to your group. Assist them to become familiar with FirstClass and the course, and to help them to feel a member of the team. (Don't forget that you can use the phone or other media to make contact, if you wish!)*
- *If you were unable to attend the Pisa meeting, invest time in getting to know members of your group. You may want to ask them something about themselves or their ideas or the Pisa meeting. You can find out which group you are in at the course web site.*

In these instructions, the novelty for an online course is the introduction of a social control inside the groups and the attention paid to developing a sense of community also for those who were not able to be present at the residential meeting (three students, one who accepted a late place, one who was unwell, and another who at the last minute was not able to fly from her place of residence in Ankara, Turkey).

4. OBSERVATIONS ON THE METHOD IN PRACTICE

4.1. Pre-course community environment

The email list was designed to broadcast the instructions to complete formal enrolment. The communication style used on the list was very informal and friendly. The messages were written by the course co-ordinators with the purpose to inform but at the same time to warm up the atmosphere and to involve the students in a new adventure.

As result of this, students quickly took ownership of the list and started first to greet each other. An unexpected outcome that enforced the building of a cohesive community from early in the course resulted from some students who had been offered a place deciding not to accept the offer because they did not identify with this mode of working or with the steady flow of fellow students' greetings. The 35 students who accepted places became a cohesive group with a high motivation and enthusiasm to communicate with one another.

After posting their initial greetings, the students quickly moved to a second phase when they tried to arrange shared transport to the residential meeting. Although not very successful for this purpose (most students arrived at the meeting on their own) this second phase had the benefit that, from the moment each student arrived, all quickly identified a classmate from the list, putting a face to the name and city or town of origin. They also recognised the course co-ordinators who put on their name badges their email nickname instead of a formal name and surname.

Students who had technical difficulties used the list during the first weeks to contact other students and tutors. Class members who had ironed out the difficulties responded, through the list or by email or by phone.

The list had nearly 100 messages during the first twenty days (up until the end of the first week of the online activities of the course) and was used during the course for communications not directly related to the course activities (mainly announcement of events) and as backup in case of unanticipated problems with other course technology.

4.2. Course initiation: The residential meeting

The residential meeting met its goals with outstanding success. Reports written by students and teachers immediately after the meeting emphasised the role of the location and the hospitality, food and natural environment in contributing to an environment in which they felt a sense of community. The students' report of the meeting emphasized that it developed a sense of community and commented enthusiastically that the food contributed to the overall atmosphere, decreasing the anxiety

of intense and concentrated activity. (For Italians, as for foreigners, the opportunity to spend a weekend on a Tuscan farm promises warm hospitality, fine food and beautiful surroundings!) Throughout the course, students have made references to the importance of the meeting in their written reflections on the course, confirming that the meeting met its goals of establishing the common ground associated with a learning community. In contrasting their experience as students of the BOET with their experiences in the international block of the LOET, which did not have a face-to-face component, several noted that they believed an initial face-to-face meeting which concentrated on community building and development of foundation skills is a critical factor in developing an online course in which effective online collaboration and learning occur.

The course designers were able to observe that, from the first student activity (knowledge sharing and introductions) the students developed a strong identity with their groups. They also observed how the sense of community was developed, not just between students, but between students and teachers because all the staff of the course (ten people and the sponsor) were involved in the activities.

4.3. Initial online activities

The first week of online activities encouraged students to practice their use of the technology, to re-contact each other online, and to learn about differences in their written communication and work patterns. During this week, most students were able to join their groups and to send greetings which reinforced their sense of social commitment to one another. A very small number of students experienced technical problems into the second and third weeks, but by then, the groups were sufficiently cohesive and functioning for members to contact each other by phone or private email to provide moral and technical support. Students have continued to provide such support during inevitable technical downtimes, but also when personal or work matters have taken group members away from planned course activities.

The first week's activities reinforced two elements of preparation for online collaborative learning introduced at the residential meeting: fundamental technical skills, and the social controls of a self-managed student learning community. In comparison to the two previous years in which Bocconi tutors had worked only on the LOET, which does not include these activities, tutors felt they spent less time addressing technology problems or counselling students on appropriate online communication. With an appropriately skilled and self-managed community, it was possible for both students and tutors to focus on content earlier in the course, and to a greater extent, than when attention had not been paid to developing either fundamental skills or sense of community.

5. CONCLUSIONS

One of the outstanding indicators of the success of this approach has been that there is 100% participation in the course at the time of writing (week 18). Students have repeatedly noted that they value the combination of activities designed to establish pre-conditions for successful CSCL by establishing both the necessary skills and a sense of community. An unexpected positive outcome has been the reduction in time spent by tutors assisting students with socialisation and adjustment to the online environment, and an associated increase in time available for content-related tutoring.

While this paper provides evidence that the activities planned for this course effectively created a cohesive and effective online learning community, this report takes only a small step toward research into the creation and maintenance of effective online learning communities. More structured research is required on how antecedent factors and events are associated with the development of online community. In particular, closer attention should be paid to the nature of process of early development of community, including the role of functional factors such as student familiarity with the online environment within which the course is delivered.

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