

JOHANNA PÖYSÄ

**In Search for the Conceptual Origin of
University Students' Community
in a Confluence of On- and Offline
Learning Environments**

ETHNOGRAPHIES IN TECHNOLOGY-RICH, MULTI-SITED FIELDS OF STUDY



INSTITUTE FOR
EDUCATIONAL RESEARCH
UNIVERSITY OF JYVÄSKYLÄ

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In Search for the Conceptual Origin of University Students' Community in a Confluence of On- and Offline Learning Environments

Ethnographies in Technology-Rich, Multi-Sited Fields of Study

Johanna Pöysä



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Abstract

The general aims of the present thesis were first, to search for the conceptual origin of learning community and its reference points in the context of a technology-rich higher education milieu. The second aim was to develop appropriate methodological tools so as to study, analyse, and represent participants' perspectives in collective activities taking place in a confluence of online and offline, 'real-life' learning environments. Lastly, the aim was to explore what might create appropriate conditions for successful higher education practices to emerge, based on the values of community and collective learning, and thereby to contribute to educational design in technology-enhanced higher education settings. Due to the explorative and descriptive nature of this thesis, the emphasis was laid on the first two aims set for this work.

To encapsulate the concept of community, symbolic dimensions as ideal guiding principles for human relationships (e.g. Sarason, 1974; McMillan & Chavis, 1986; Hyypä, 2002; 2005, Vantage point I) as well as spatial metaphors associated with an emotional attachment to Place (see e.g. Relph, 1976; 1985; Tuan, 1977; Buttner, 1980; Seamon, 1982; 1983; 1993; Casey, 1996, Vantage point II) were seen to offer fundamen-

tal grounds and diverse perspectives for further examination of this complex and multi-dimensional phenomenon.

The data were collected in two separate empirical studies during the spring term 2002 (Study 1) and the autumn term 2002 (Study 2). Study 1 was conducted in a Belgian and Study 2 in a Finnish higher education context. The research participants in both studies were student teachers taking degrees in Germanic languages (Study 1) and in English Philology (Study 2).

Study 1 investigated what might generate and further amplify the participants' belonging to the unity in technology-enhanced higher education settings. The aim of Study 2 was twofold. Part 1 of Study 2 examined what constituted the 'territorial' reference points of the participants' unity over a technology-enhanced higher education course: how online and physical, 'real-life' surroundings were experienced to come together over the course (i.e. experiences of hybrid Place and its relational assemblies; Blum, 2002; Powell 2004). Part 2 of Study 2 aimed to visualise the process over which these relational assemblies were produced: how participants constructed their shared experience of 'Learning Place' over the research workshop (Mantovani & Riva, 1999; Ganbernini & Mantovani, 2003).

To study individual participants' perspectives in collective activities taking place in a confluence of on- and offline learning environments, an ethnographically oriented approach with its multiple methods was used. Data set 1 (Study 1) involved personal process notebook data as text notes, accompanied with observations in the online learning environment (Blackboard). Data set 2 (Study 2), in turn, involved personal process notebook data as text and visual notes, accompanied with observations in the online learning environment (Discussion boards, chat, shared documents in Optima, Net Meetings, videoconferencing) and also in offline learning environments (on campus).

From Data set 1, first, linear narratives (Textual memos) were compiled, followed by a qualitative content analysis based on the symbolic meanings of community by Mercer (2000). From Data set 2, an individual narrative was first constructed, followed by a polyvocal research account. Next, broad thematic categories for the experiences of hybrid Place (Blum, 2002) and its relational assemblies (Powell, 2004) were identified, followed by a descriptive account of how shared experience of Learning Place (Mantovani & Riva, 1999; Ganbernini & Mantovani, 2003) was constructed over time. In Study 1, the results showed that the force that structured the collective activities of the participants here was particularly the opportunity to voice out different perspectives on real-life and personal issues, be their standpoints conflicting or coherent, and having

these accounts heard in their 'professional community of teachers-to-be', as they characterised it. The idea of such a unity of loose connections (Bruhn, 2005) was not based on the values of mutuality or harmony. Rather, it resembled the idea of an open, communicational infrastructure for questioning and critique on an individual and collective levels of perspectives, respectively (Mann, 2003; 2005). In Part 1 of Study 2, in turn, the identification of hybrid Place experiences showed how participants' Learning Place did not exist solely in the online learning environment as opposed to offline learning environments on campus or at home, but their experiences of Place originated from a confluence of these divergent milieus, as a combination of offline, distributed, and online experiences of hybrid Place - as contextualised and subjective experiences (Barth, 1991; Mitchell, 1997). The way in which they made the use of communication technologies an 'ordinary' practice was silent, yet effective (Powell, 2004). Part 2 of Study 2 described the process over which these relational assemblies of on- and offline learning environments were produced to converge with their shared experience of the presence of their Learning Place. This description revealed the many creative and reasonable ways in which the participants made use of the social and material elements – including technological tools – available to them over the research workshop. In brief, their shared experience of being 'There' was not that much a visual creation based on advanced technology, but more imaginary by nature, yet with quite concrete connotations with respect to the co-participants' commitments and actual contributions towards the jointly agreed objectives and aims of their collective work (Kolb, 2000).

Descriptors: community, collective learning, collective activity, educational technology, learning environments, educational design, qualitative methods

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Oppijayhteisön syntyprosessi ja erityispiirteet teknologiatuetussa korkeakoulukontekstissa

Etnografinen lähestymistapa yhteisöllisen toiminnan jäljittämiseen
verkossa ja kasvokkain tapahtuvan toiminnan rajapinnoilla

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Tiivistelmä

Tämän tutkimuksen tarkoituksena oli jäljittää yhteisöllistä toimintaa ja toiminnan erityispiirteitä teknologiatuetussa korkeakouluoppimisen kontekstissa. Tutkimuksen tavoitteena oli myös tutkimusmenetelmällisten välineiden kehittäminen aineistonkeruuseen, aineiston analysointiin sekä tulosten kuvaamiseen erityisesti teknologiaperustaisen ja kasvokkain tapahtuvan toiminnan rajapinnoilla. Lisäksi työn tavoitteena oli edistää teknologiatuettujen oppijayhteisöjen suunnittelua tässä kontekstissa.

Tässä tutkimuksessa teknologiatuettuja oppijayhteisöjä on lähestytty kahdesta rinnakkaisesta teoreettisesta näkökulmasta. Yhtäältä, oppijayhteisöä tarkasteltiin sen symbolisten tekijöiden kautta, jolloin yhteisö erityislaatuisena sosiaalisena rakenteena koetaan toiminnan koossapitävänä voimana (mm. Loewy, 1993; McMillan & Chavis, 1986; Mercer, 2000; Sarason, 1974). Toisaalta, yhteisöä tarkasteltiin paikan käsitteen kautta (mm. Buttner, 1980; Casey, 1996; Relph, 1976; 1985; Seamon, 1982; 1983; 1993; Tuan, 1977). Yhteisön ominaispiirteitä teknologiaperustaisissa oppimisympäristöissä tarkasteltiin erityisesti hybridisen paikkakokemuksen avulla (mm. Blum, 2002; Mit-

chell, 1997; Powell, 2004). Yhteisön rakentumisprosessia tarkasteltiin vuorostaan paikan sosiaalisen rakentumisen ja jaetun läsnäolon tunteen rakentumisen kautta (mm. Mantovani & Riva, 1999; Ganbernini & Mantovani, 2003).

Tutkimuksen aineisto kerättiin kahdessa erillisessä osatutkimuksessa vuoden 2002 aikana. Tutkimuksista ensimmäinen toteutettiin belgialaisessa ja toinen tutkimus puolestaan suomalaisessa opettajakoulutuksen kontekstissa. Ensimmäisen osatutkimuksen tavoitteena oli etsiä tekijöitä, jotka ovat yhteydessä yhteisön ja yhteisöllisyyden tuntemusten syntymiseen teknologiaperustaisessa opettajakoulutuksen kontekstissa. Toisen osatutkimuksen tavoite oli kaksiosainen. Ensimmäisenä tavoitteena oli hahmottaa osallistujien kokemusten kautta toimijoiden todellinen oppimisympäristö; sen osatekijät ja kiinnepohdat teknologiatuetun yhteisöllisen oppimisen kontekstissa. Toisena tutkimustavoitteena oli kuvata prosessi, jossa toimijat yhdessä rakensivat kokemustaan hybridisestä paikasta ja ryhmän läsnäolosta tarjolla olevia sosiaalisia ja materiaalisia resurssejaan hyödyntäen (mm. Mantovani & Riva, 1999; Ganbernini & Mantovani, 2003).

Aineistonkeruussa tavoitteena oli erityisesti osallistujan näkökulman tavoittaminen osana yhteisöllisen toimintaa teknologiaperustaisissa oppimisympäristöissä ja teknologiatuetun ja kasvokkain tapahtuvan toiminnan rajapinnalla. Aineistonkeruussa sovellettiin etnografista lähestymistapaa, teknologiaperustaisiin ympäristöihin sovellettuna (mm. Pink, 2000). Yksilökokemuksia työssä tutkittiin prosessinaikaisten kokemusmuistiinpanojen avulla (Pöysä ym., 2003; 2004). Ensimmäisessä tutkimuksessa kokemusmuistiinpanot muodostuivat tekstimuistiinpanoista, joita toisessa osatutkimuksessa täydennettiin myös visuaalisten muistiinpanojen avulla. Kokemusmuistiinpanojen lisäksi opiskelijoiden toimintaa havainnoitiin verkkoympäristössä (mm. verkkokeskustelut, jaetut dokumentit/lokit, videoneuvottelut, chatlokit) sekä videoimalla kursseihin liittyviä tapaamisia kampusalueella.

Ensimmäisessä osatutkimuksessa aineiston analyysi sisälsi kaksi osavaihetta. Analyysin ensimmäisessä vaiheessa muodostettiin lineaarinen narraatio, eräänlainen tutkijan "muistio" ("Textual memo") tutkittavasti ilmiöstä, perustuen havainnoille yhteisöllisen toiminnan syntyprosessista ja toiminnan "elinkaarista" kahdessa erityyppisessä ryhmätehtävässä. Varsinainen analyysivaihe piti sisällään laadullisen sisällönanalyysin, jossa osallistujien tekstimuistiinpanot sijoitettiin neljään Mercerin (2000) kuvaamaan luokkaan yhteisön symbolisista merkityksistä. Toisessa osatutkimuksessa analyysi sisälsi neljä eri osavaihetta. Ensimmäiseksi rakennettiin jaettu tulkinta ("Split-text narrative") toimintaprosessista yksilötasolla sisältäen tutkijan ja tutkittavan (avain-

toimija) tulkinnan tarkastellusta toiminnasta. Analyysin toisessa vaiheessa rakennettiin moniääninen tulkinta, eräänlainen ryhmän kommunikaation "juoni" ("Communicational plot") työskentelyprosessista avaintoimijaryhmässä hyödyntäen monipuolisesti kerättyä aineistoa kokonaisuutena. Kolmas vaihe piti sisällään laadullisen sisälönanalyysiin, jossa kokemusmuistiinpanot luokiteltiin temaattisiin kategorioihin, perustuen hybridisen paikkakokemuksen ilmenemismuotoihin tässä kontekstissa. Viimeisessä analyysivaiheessa, joka pureutui työskentelyprosessiin tarkemmin, aiemmin rakennettu avaintoimijaryhmän kommunikaation juoni hajotettiin osiin ja analysoitiin vaiheittain toimijoiden työskentelyprosessin eri osavaiheiden mukaisesti.

Tutkimuksessa havaittiin mm., että yhteisöllisyyteen ja yhteisölliseen toimintaan usein liitetyt elementit kuten sopusointu ja keskinäinen yhteisymmärrys eivät tässä teknologiatuetussa korkeakoulutuksen kontekstissa ole välttämättä oikeita tapoja arvioida, onko syntynyt toiminta ja vuorovaikutus laadullisesti onnistunutta ja mielekästä itse toimijoille (Mann, 2003; 2005). Sen sijaan juuri mahdollisuus erilaisten näkemysten ja kokemusten vaihtamiseen ja näkemysten kohtaamiseen voi juuri toimia alkusäyksenä toimijoiden kannalta mielekkään yhteisöllisen toiminnan syntymiselle. Tarkasteltaessa yhteisöllistä toimintaa puolestaan paikkakokemuksen kautta, oli ilmeistä, että liian kapea-alainen näkökulma koulutusteknologiaan tässä kontekstissa olisi tuonut näkyväksi täten vain osan yhteisöllisestä toiminnasta ja toiminnan kentistä. Tässä tutkimuksessa toimijat hyödynsivät monipuolisesti ja luovasti tarjolla olevaa teknologiaa integroiden sen osaksi arkipäivänsä erilaisia käytänteitä. Toimijoiden todellisesta oppimispaikasta muotoutui näin sekoitus verkossa, kasvokkain sekä näiden rajapinnoilla koettua toimintaa. Osallistujien teknologiatuettu oppimisympäristö ei rakentunut yksinomaan verkkoympäristöstä, vaan muotoutui ensisijaisesti hybridiksi kokemukseksi "oppimisen paikasta" sisältäen kasvokkain tapahtuvan ja verkossa tapahtuvan toiminnan lisäksi näiden eri ympäristöjen rajapinnan, jossa kanssatoimijoiden läsnäolo syntyi näiden eri elementtien yhdistymisenä (Pöysä ym., 2005; Rohde ym., 2004). Toimintaympäristö muistutti muodoltaan enemmänkin paikallisyhteisöjä, joissa tieto- ja viestintäteknologiaa käytetään tukemaan yhteisön toimintaa nimenomaan paikallisella tasolla (mm. Rosson & Carroll, 2005).

Asiasanat: yhteisöt, yhteisöllinen oppiminen, yhteisöllinen toiminta, koulutusteknologia, oppimisympäristöt, koulutussuunnittelu, laadullinen tutkimus

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Preface

In retrospect, in the course of conducting this work, I have been honoured to be a member of multiple research communities in Belgium and in Finland. My subjective position moving – literally – between these different Places and different perspectives have provided me with a unique possibility to conduct this study in collaboration with many different people.

My work has its origin in Leuven. I arrived in Leuven as a post-graduate Erasmus student in September 1999, and in the autumn 2000 I started my doctoral studies in the Faculty of Psychology and Educational Sciences of K.U.Leuven. During my first year of stay, I was introduced to Prof. Dr. Joost Lowyck from the Centre of Instructional Psychology and Technology (CIP & T), who became the promoter for my doctoral thesis.

To Joost I address my deepest gratitude. I thank you for being such a warm, encouraging and wise mentor. Your support carried me through this process and the many fears of engaging in such research. I am grateful for the numerous occasions you found time for discussing with me. Particularly, your broad and profound experience and the multiple occasions you quickly verbalised the complex issues and disconnected pieces that I could not see myself were essential in the process of accomplishing this doctoral project.

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thanks to the kindly manner in which you paved my way for settling down at the university, in the Department of Education and in Leuven in general.

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The first reference point of this work crystallised around the Centre for Instructional Psychology and Technology at K.U.Leuven. I want to express my thanks to all the 'CIPTers'. Also, I would like to thank Prof. Dr. Lieven Verschaffel, as the Chair of the Centre always taking care that I could have the best possible infrastructure for conducting this research. Prof. Dr. Jan Elen I would like to thank for his many valuable comments and constructive criticism on my writings over this process of research. Also, I express my special thanks to Secretaries Karine Dens, Bartel Wilms and Ann Paredis for their particular helpfulness and kindness.

The other reference point of this work is situated in Finland, at the Institute for Educational Research at the University of Jyväskylä. In January 2002 I received a four-year research fellowship in the Doctoral programme for Multidisciplinary Research on Learning Environments and my collaboration with Prof. Dr. Päivi Häkkinen from the Institute for Educational Research initially started. That time I joined her research group 'ICT in learning and working environments' (TOP group) and I was honoured to have her as the supervisor for my doctoral thesis as well.

I express my warmest gratitude to you Päivi. During these years, owing to your positive and open attitude I have always felt my work being valued and meaningful. You have provided me with a safe, encouraging and supportive atmosphere to work on this project, so that I was able to peacefully concentrate on conducting the study in flexible ways and in those Places I found most appropriate for the project and also for myself at the particular points in time.

My special thanks go also to my TOP research group at the Institute with whom I was able to share the similar interests in the field of CSCL. I have truly felt being a member of a collective here. Especially I wish to thank Maarit Arvaja and Raija Hämäläinen walking on my side over this last, stressful year, in particular.

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My first data set for this work was collected at K.U. Leuven in Belgium. I would like to thank the students from Germanic languages willing to co-operate with me over the study. Also, I wish to express thanks to Prof. Dr. Michael Goethals from the Faculty of Arts. My second data set was, in turn, collected in co-operation with the research team of Prof. Dr. Sanna Järvelä from the University of Oulu in Finland. I would like to thank all the students and the colleagues in Oulu and in Jyväskylä with whom the process of research was shared. My special thanks go to Kati Mäkitalo for being my co-traveller over this process and later on, providing crucial comments on my writings.

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Lastly, I wish to thank my family: my parents Eeva and Esko, my brothers Jari, Jyrki and Jorma, my sisters-in-law Mervi, Sinikka and Riitta and my nieces Sanna and Outi

Preface

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Johanna Pöysä

Introduction

Introduction and aims of this study

In contemporary higher education, educational practices are increasingly fixed around web-based, collaborative learning environments, based on the broad frame of computer-supported collaborative learning (CSCL) approach (see e.g. Koschmann, 1996; Koschmann et al. 2002; Wasson et al., 2003). However, it is criticised that many of the contributions in CSCL camp often assume – or even take for granted – that the idea of joint learning combined with the use of educational technology will ensure that successful collective activities will thereby flourish (Crook, 2000; Lehtinen, 2003). Often, these expectations are rooted in studies that have limited their scope to include carefully selected and rather controlled aspects of the activities and of the environments designed for learning. In this work, a more holistic stance is taken. The study aims to acknowledge the diversity of social and material conditions surrounding these activities – as observed and as experienced. Attempts to define the borders, key actors, and essential elements of these contexts from the outside are considered to result in only partial interpretations of the activities under investigation (Dreier, 1999; Shumar & Renninger, 2002). Thus, it is the contention of this work that in order to gain a better understanding of the true acts of collaborations in technology-enhanced learning environments, one needs to draw on the experiences and memories of the participants involved in these practices. To be noted here, the scope of this work is not initially on evaluating

the desired end states of learning collectively but the primary aim of this study is to explore the instructional conditions of collective learning (De Corte, 2001) – principally, *where* collective activities take place in technology-enhanced higher education settings and *what forms* the activities take as the collective practices evolve and change in the process over time. Although taking this perspective has also brought along many quandaries and confusing aspects, confronting this complexity has been particularly inspiring in conducting this research.

In more specific terms, this thesis explores the concept of origin of community in technology-rich, higher education milieus. In general, educational research on communities has resulted in a rich mixture of different understandings of the concept of community. The concept is being used to denote to ‘social infrastructure’ (Bielaczyc, 2001; Bielaczyc & Collins, 1999), ‘communities of practice’ (Lave, 1996; Lave & Wenger, 1991; Wenger, 1998), ‘communities of learners’ (Brown, 1997; Brown & Campione, 1994) or ‘knowledge building communities’ (Scardamalia & Bereiter, 1992; 1994), for example. It is put forward here that in higher education, communities, if seen as an extension of the idea of web-based learning environments, could be welcomed as timely and innovative collective unities – as relevant paths to successful joint learning (Lowyck & Pöysä, 2001; Lowyck, Pöysä & van Merriënboer, 2003a; 2003b; Pöysä & Lowyck, 2005). In this study, community – as an ‘imaginary that inspires human learning’ (Anderson, 1992; cited in Cousin & Deepwell, 2005) – is assumed to crystallise as an open and inviting learning infrastructure that uncovers the nested complexity between individual and collective needs, various motivations and personalised objectives (Goodyear, 2000). The role the communicational technologies play here is that of the one of the building blocks of the collective unity; collective activities and mediating technologies are, thus, seen as merged and integrated units, not separate spheres of the activities (see e.g. Säljö, 1999; 2003).

In spite of the growing wave of research in technology-enhanced communities, we do not yet fully understand how such unities evolve in educational settings. Generally, the concept of community continues to possess a positive image (see e.g. Bruhn, 2005; van den Besselaar et al, 2005), but in this work it is argued that to apply these optimistic premises in educational settings and to search for favourable social and material conditions for successful communal activities, we need to look at some of the special attributes of this unique setting and how these attributes interact within this setting. For example, why participants would mould such a unity and how technologies could con-

tribute to the development of the unity – what may serve as the concept of origin of the technology-enhanced community university students are forming.

However, acknowledging this rather ambitious inspiration to look for the origin of technology-enhanced learning community in the context of higher education, this thesis does not even aim at arriving in one universal, theory-based and empirically tested model to be applied in the design of a learning community in a higher education setting. In contrast, the theory-driven approach of this work looks at the phenomenon through different analytical lenses so as to get a deeper understanding of the phenomenon under study (Eskola, 2001). It aims to contribute to educational design, though, but acknowledging that such unities are socially constructed and situated practices and, therefore, always unique. Hence, to get an adequate understanding of 'community' in this specific context of study, a research design that constitutes a series of explorative and descriptive (case) studies with micro-level perspectives is most essential here.

In brief, the general aims of this thesis are:

1. To search for the conceptual origin of a learning community and its reference points in the context of technology-rich higher education milieus.
2. To develop methodological tools to study, to analyse, and to represent participants' perspectives in collective activities; taking place in a confluence of online and offline, 'real-life' learning environments.
3. To contribute to the design of technology-rich higher education practices, based on the values of community and collective learning.

The structure of the thesis

Chapter 1 provides a general description of the term 'community' today and epitomises the conceptual vantage points (I and II) that are guiding the empirical studies of this thesis. Also, the underlying theoretical approach to learning is discussed briefly. This chapter also introduces the methodological approach of this work, rooted in ethnographic traditions. The final part of Chapter 1 portrays the analytical frame of this thesis (i.e. the analytical 'eyeglasses').

Chapters 2 and 3 describe the empirical studies of this thesis. Chapter 2 starts with Study 1, guided by the theoretical vantage point I. In short, Study 1 aims at providing a static image of students' community and its stage in its lifecycle. The chapter starts with describing the participants and the instructional contexts of the study. Second, the data sources and the processes of analysis are discussed, and finally, the results of Study 1 are presented together with a brief conclusion.

Chapter 3, in turn, describes Study 2, guided by the theoretical vantage point II. This study contains two parts. Part 1 examines what constitutes the reference points of participants' unity over a technology-enhanced higher education course: how online and 'real-life' surroundings are experienced to come together over the course. Part 2 aims to visualise how participants jointly construct their shared experience of their 'Learning Place' over the technology-enhanced university course under study. Chapter 3 first describes the participants and the instructional contexts of Study 2 and provides information concerning the data sources and of the four different steps in the processes of analysis of Data set 2. The results of Part 1 and Part 2 of Study 2 are presented as separate sections, both concluding with brief syntheses of the results.

Finally, in Chapter 4, the findings of this thesis are discussed according to the three main questions raised for the work. Also, the methodological approach of this thesis is evaluated and the weak and strong points of this work, on a general level, are examined. The chapter concludes by offering some future prospects for research.

CHAPTER 1

The theoretical vantage points of this work

This chapter is structured first, to briefly discuss the concept of learning community and some of the points of view that dominate much of this research today. Second, the different theoretical vantage points of this work are introduced. This work looks at the community, on the one hand, as a collective unity, based on symbolic meanings as ‘the’ uniting value (Vantage point I); and on the other hand, as a spatial metaphor of ‘Place’ – referring here to a unity that is seen simultaneously as an entity, a state of being and, as a process of creating (communal) identity (Vantage point II). Hence, the vantage points of this study do not form one unified theoretical frame but should instead be considered as different lenses through which the phenomenon is looked at; particularly in the context of technology-rich higher education settings. These vantage points are therefore complementary and seen as equally potential perspectives to clarify the phenomenon under study. Further, the learning theoretical perspectives underlying this work – learning as situated, mediated and collective practice – is addressed in this chapter. Also, the methodological perspective, based on ethnographic traditions, is discussed. Finally, the analytical ‘eyeglasses’ of this thesis, together with the more specific questions posed for the empirical studies, are presented.

1.1 The concept of community: Background and the forms

Even a limited overview on the research literature on communities reveals that there is apparently no single mutually agreed definition of the term 'community' (e.g. Bruhn, 2005; Shumar & Renninger, 2002; van den Besselaar et al., 2005). In the English language, the basic origin of word 'community' is closely related to words 'communication' and 'common' (Davies & Herbert, 1993), which makes it an adequate term for groups of people with mutual interests and experiences and who communicate amongst themselves to pursue these interests (Mercer, 2000). Traditionally, people have always been part of local communities where close ties and personal relationships that go beyond casual acknowledgement, bind people together (Hyyppä, 2002; 2005). According to Bruhn (2005), these relationships are closer than casual ones because they are based, for example, on kinship and on common goals and values, which create positive feelings and result, in turn, in reciprocity and commitment. Communities and their members may vary, but community also entails a degree of stability in partnership and belongingness among members. Also, the community itself as a specific social construction may be 'the' uniting value (Loewy, 1993; see also Mercer, 2000). Peck (1987; cited in Bruhn, 2005, p. 11) epitomises the meanings of community as follows:

"If we are going to use the word 'community' meaningfully we must restrict it to a group of individuals who have learned how to communicate honestly with each other, whose relationships go deeper than their masks of composure, and who have developed some sufficient commitment to rejoice together, mourn together, and to delight in each other, make others' conditions our own."

This definition of community highlights it primarily as a closed unity of 'tight connections' (Bruhn, 2005). However, today communities also extend beyond particular physical locations and, accordingly, people may simultaneously belong to multiple communities – ranging from technology-enhanced or online encounters to 'real-life' interactions. Some scholars, however, have lamented the loss of 'true' community of tight connections (e.g. Young, 2001) while others say that community is still present, yet in different forms (Jones, 1995; 1999). Those who believe community is present but in novel forms, refer to communities enabled by information and communication technologies (ICT) (see e.g. Shumar & Renninger, 2002). Bruhn (2005) describes contemporary communities as loosely connected groups of varying sizes and shifting unities.

The ties that bind their members together are often privatised and specialised, and these changing unities, or networks (Wellman, 2001; Wellman & Gulia, 1999), meet the variety of changing needs and personal intensities of participants. The ways in which technologies enable contemporary communities to grow, may also vary. On the one hand, the advent of information and communication technologies has enabled 'online'¹ (Cothrel & Williams, 1999; Burrouws & Nettleton, 2002; Preece, 2000) or 'virtual' communities (e.g. Jones, 1995; McLaughlin, Osborne & Smith, 1995; Mitchell, 1995; Rheingold, 1994), where membership is based more on individuals' interests rather than on proximity and where the spatial and temporal resources are entirely symbolic (Shumar & Renninger, 2002). Following the well-known, pioneering definition of virtual community, put forward by Rheingold (1994), people do the same what they normally do when they get together, but do it with words on computer screens, leaving their bodies behind:

"In cyberspace, we chat and argue, engage in intellectual discourse, perform acts of commerce, exchange knowledge, share emotional support, make plans, brainstorm, gossip, feud, fall in love, find friends and lose them, play games and metagames, flirt [...] Our identities commingle and interact electronically, independent of local time or location" (p. 58).

These online communities, however, are not to be understood as mirror images of locales offline, but might have a potential to increase the sense of belonging and community, normally associated with behaviour in 'real-life' settings (Kolb, 2000; Langham, 1994). For example, in lifestyle groups (Burrows & Nettleton, 2002) or in groups of minorities (Eichhorn, 2001) the sense of belonging and community may be essentially derived from the shared experience of *displacement*. These unities are not to be understood merely as forms of communication, either, but as 'mobile sites of resistance' (Eichhorn, 2001, p. 574), identified principally as supportive. These unities may afford for sets of imagined and desired interactions, offering a possibility, for instance, for changed understandings of self (Lifton, 1993; Renninger & Shumar, 2002).

The boundaries between online or virtual communities and physical communities of 'real-life' are, however, often porous making it difficult to conceptualise either form

¹ The terms 'online' and 'virtual' are used interchangeably here to denote 'Internet' communities.

of community as a totally separate unity (Shumar & Renninger, 2002). Information and communication technologies (ICT) have also been, for example, harnessed to enhance and to support activities of local communities (e.g. Kavanaugh et al., 2005; Liff, 2005; Rosson & Carroll, 2005). Local communities are more often distributed over the Web, providing 'dislocations' for citizens by new means of communications and channels of information with regard to their local culture, schooling, political affairs, local administration and so forth. In this way, these distributed unities are, primarily, purported to enhance the quality of life in the local community (Weare, Loges & Oztas, 2005). Thus, local communities enhanced by ICT can be distinguished from online or virtual communities in the sense that the members of the unity are usually neighbours in the traditional meaning, living in physical proximity and sharing the same material, social and economic resources. The information character of such a unity is therefore primarily local (Rosson & Carroll, 2005). If these activities are built for the purposes of creating more democratic public spheres – not for the purposes of reducing communal costs – online locales may become an extension to physical ones, such as an electronic town hall might become to (Mitchell, 1995). In this way, the novel forms of communities might open up new possibilities to citizens to contribute to the 'building-up' of their local community, as well (Shumar & Renninger, 2002).

In Figure 1 below, the varied forms of existence of community today, and how these forms of existence are related, is presented by two roughly divided categories: 1) traditional and local communities versus 2) technology-rich, contemporary collectives of loose connections.

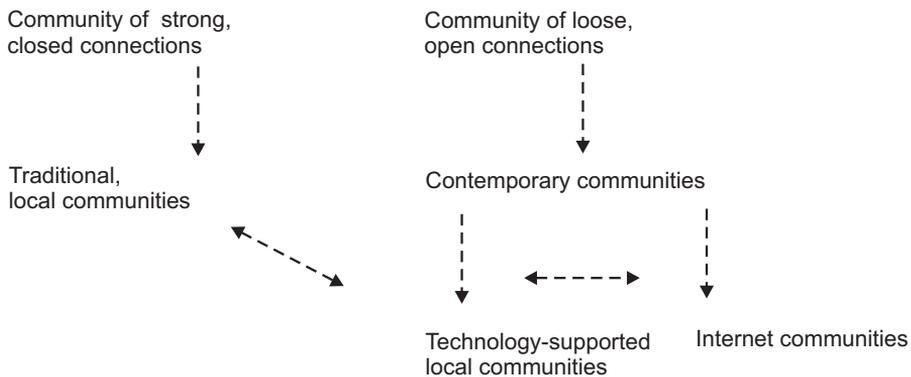


Figure 1. *The forms of existence of community today.*

Despite the lack of a one single, universally accepted definition or theory of community among the scholars, there are, still, two mutually agreed characteristic lines in this respect: first, definitions that stress the social interactions, and second; definitions that stress the locale (see e.g. Bernard, 1973). Community is, then, seen to offer ideal guiding principles for human relationships as a basis for belonging, stressing here the symbolic meanings of community as ‘the’ uniting value for its members (see e.g. Sarason, 1974). Also, community is seen through a spatial metaphor: as an emotional attachment to ‘Place’ (see e.g. Casey, 1996; Tuan, 1977). From the many definitions of community that have been offered, this work has chosen these two perspectives to serve as broad theoretical vantage points I and II to describe and to experience ‘community’ in a technology-rich higher education milieu. The following section deals with the first perspective, which stresses the symbolic meanings of community (Vantage point I).

1.2 Vantage point I: Community: ideal guiding principles for human relationships

Sarason (1974) describes symbolic meanings as a ‘sense of community’, which refers to a ‘feeling’ or ‘knowing’ that members are working together towards a common goal or participating in an activity that depends upon everyone’s contribution, while it might be limited even to a specific task or activity only (Bruhn, 2005). Following McMillan and Chavis (1986), there are basically four aspects of the sense of community identified by scholars: first, a sense of membership, second; a sense of influence, third; integration and fulfilment of needs, and finally; a shared emotional connection (see also Bruhn, 2005). The sense of membership implies being a part of a collective, while the sense of influence, in turn, is a subjective feeling of the possibility to have an influence on the collective outcome as a member of that collective. The integration and fulfilment of needs highlight the critical role of individual’s skills and abilities in regard to the collective outcome. The shared emotional connection means the positive experience of an individual in participating in collective activities and it also implies the acceptance of the other members. According to Sarason (1974), particularly, this experience of being valued by others makes community meaningful in terms of individual members. Kolb (2000) has expressed a sense of community as follows:

“There is a small community where I fit in, where I am at home with the conversation and feel that the horizon and the people are familiar enough that I can expose my vulnerabilities and ignorance with a little humour and confidence” (p. 123).

Communities do vary, change and ‘die’ as the members and their needs change over time, but as such, the concept also implies a degree of constancy and stability among its members (Bruhn, 2005). Mercer (2000) regards the community and its symbolic meanings, *per se*, to serve as a uniting value for its members and thereby provides a more ‘static image’ of community. He describes symbolic meanings of community as resources that the community, as a specific entity, offers its members for a shared intellectual activity.

These resources refer to joint former experiences (*history*), to a *collective identity* based on shared history, knowledge, scope and experiences of doing things together, to reciprocal *obligations* and shared *intellectual resources* and last, to specialised use of language (its *discourse*) (Mercer, 2000). According to Mercer, communities gather a mount of shared experience over time. It is expected that members will jointly recall and reflect on their experience, and in this way, produce a communal history. Also, shared experience will generate information and expertise, which members can utilise and which can be passed on to new members of the community. Likewise, the shared history and collective aims enable individual participants to find meaning and objectives for their own endeavours in relation to the others. Reciprocal obligations are assumed to give an access to other members’ intellectual resources, as well. Accordingly, certain roles and ground rules will guide appropriate behaviour. Furthermore, communities use language for interaction, but normally in a way that supports the specialised needs of that particular community. That is, if a group of people are willing to communicate about their special interests, they can adapt and extend language as a tool for doing so. The specialised language (discourse) may have a relatively consistent function within a community. Mercer (*ibid.*) argues that fluency in discourse is likely to be one of the noticeable signs of community membership. In this light, the core of a community may be seen as a process of creating shared and intentional communications rather than as an end as such (Erickson, 1997). Also, following Wertsch (2003), if the aim is to better understand these technology-rich contexts of learning, it is the mixture of face-to-face and technology-enhanced communications that should be considered; focusing especially on the qualitatively novel forms of communication the new technologies have enabled.

1.3 Vantage point II: 'Place' and its particular mode of togetherness

Adopting another, yet equally important perspective as the above-described Vantage point I (see section 2.2), in this work 'community' is also examined through a spatial metaphor of community – as an emotional attachment to 'Place'. In this section, Vantage point II is discussed, first, in terms of an *entity* [i.e. (hybrid) experience of Place] and second, as a *process* of constructing the shared experience of Place (i.e. social construction of presence).

Scholars in architectural and planning literature (see Buttimer, 1980; Casey, 1996; Relph, 1976; 1985; Seamon, 1982; 1983; 1993; Tuan, 1977) have for long studied communities by means of the concept of 'Place' and one's positioning with it – the changes in the ways in which a 'sense of Place' is created. Following Kolb (2000), it is argued here that the concept of 'Place', if seen as a particular mode of togetherness, could be transferable to online environments, and might, in turn, also contribute to better understanding of the technology-enhanced communities in the context of higher education (see also Pöysä & Lowyck, 2005; Pöysä, Lowyck & Häkkinen, 2005).

The different dimensions of a community may, thus, crystallise around the rich and vivid concept of 'Place'. As e.g. Tuan (1977) puts forward, an undifferentiated 'space' becomes a distinctive 'Place' when members come to know it better and endow it with particular value. Similarly, Harrison and Dourish (1996; see also Dourish, 1999) describe Places as those spaces that are valued – i.e. a space with something supplementary: social meaning, cultural understandings about its role, functions, nature and so on. Place is difficult to define in abstract and often definitions draw on duality as an essential quality of Place. In this sense, Place may be seen not only as an entity, a state of being, but also as a continuous and changing process of creating (communal) identity (Fernback, 1999). Places are constantly defined and redefined by the members of the unity (Casey, 1996) including, then, both individual and collective aspects; that is, the Place is experienced individually but held collectively. In other terms, Places derive their character from their social conditions (Dourish, 1999).

In its conventional meaning, the concept has a strong territorial connotation, Place attachment (Low & Altman, 1992). According to Casey (1996), Place gathers. Thus, Place is not empty of content but collects a history in the forms of individual and collective experiences and memories. This continued history allows people to return to a Place again and again not just as the same position or site but as the same Place. In this way,

Place has an identity and unique attributes, designated by its members and those attributes make it different from other Places. Casey (1996) says that being in Place refers to 'Erlebnis', lived experience, rather than to 'Erfahrung' as already elapsed and abstracted experience of a place. In other words, Places not only exist, but they happen and because this aspect of happening, they lend themselves well to narration, whether as a history or as a story. It is argued that the experience of Place is therefore merely situated and appropriate only to that particular Place, to its unique properties and cultural characteristics. Members engage themselves in certain Place, and sentiments of belonging and sameness are created essentially through interaction with and within that Place. But, the intensity of belonging may also vary and the same Place may, then, foster different experiences for different individual actors. These experiences are not always strong, intense or even positive but, still, distinctive (Relph, 1985).

1.3.1 From local Place sentiments towards Place experienced as hybrid

In contrast to conventional perspectives on 'Place', in more recent discussions, the sense of Place is derived from a variety of attributes traditionally connected to the concept of Place. The modern world seems to spin around communication technologies to a large extent, so that contemporary everyday life is full of elements from distant locales. Alongside face-to-face communications, day-to-day experience of living is performed and mediated using mobile technology or email, for example. This has extended the possibilities to exchange experiences without moving 'in' or 'out' the actual geographical place. These sentiments of belonging to Place often derive from Place experienced as *hybrid* (e.g. Blum, 2002; Mitchell, 1997; Powell, 2004).

The experience of Place as hybrid is not, thus, tied to a certain location and similarly, a certain location is not necessary to Place-making (Blum, 2002). Hybrid place experience may include a mixture of elements of constant, local places and elements from distant locales, containing also environments online. It is, then, an experience of about where the participant is, but it draws its meaning from the personal combination of the ingredients of immediate and distant locales. In other words, it is not completely about any one component but has qualities of them all (Blum, 2002). The concept of hybrid Place is not, however, to be seen as an abstract or solely de-contextualised metaphor of Place (Mitchell, 1997). She criticises that even though the dictionary definition of hybridity gives the term a meaning of 'a thing derived from heterogeneous sources or

composed of incongruous elements' (p. 3), to abstract it away or, in other words, to pull the concept out of its 'constitutive relations and contexts' (Kolb, 2000, p. 121) might result in limited and partial interpretations of its full reality. Thus, Mitchell (1997) finds it necessary (see also Powell, 2004) to situate any discussion of hybridity and subjects' positions within it in the frameworks of its 'history' and social relations of everyday practices of living (de Certeau, 1984). Hybrid Place is, then, not to be seen here as an 'in-between' position (e.g. Bhabha, 1994) nor, the concept does not point to 'place-ness' and 'non place' (e.g. Augé, 2005) either, but, is linked to a particular cultural frame of reference- to the situated practices of Place and to the lived experience of its history. In terms of technology-enhanced environments, this concept offers a possibility to highlight more broadly the whole setting in which the participant is actually present. Also, even if the mediating technologies of hybrid Place-experiences are less rich or more complicated than in face-to-face communications, hybrid Place may, still, become equally meaningful in comparison to Place-experiences connected to the characteristics of 'traditional', local places (Blum, 2002).

Consequently, as Lefevre (1991) says, Places are 'practiced' – mould according to the efforts and practices of those who use those Places. Also, hybrid Places can be individually experienced but still collectively shared: these experiences are maybe best understood as a continuum or a process, as a variable scale along which different elements (e.g. several locales and participants, different tasks and roles) display themselves at varying intensities (Blum, 2002). In a context of study in Internet cafés as hybrid Places, Powell (2004) describes these varying intensities of urban space and of virtual space as *relational assemblies* (see also Graham, 1998): as overlaps and relational patterns that come together as several kinds of online and real-life experiences of Place. In an Internet café, for example, her study on relational assemblies described how the integration of online space into offline space contributing to Place-making firstly, reinforced and extended the local communities, secondly it showed how technologies reshaped the physical, real-life space and thirdly, the study demonstrated, how the real-life and online experiences of e.g. playing online games in the Internet café overlapped in various ways. While Powell's (2004) study refers to Internet cafés and to public urban places in general, these notions might be of help to articulate the very local and personal ways communication technologies can become integrated to any practices of subjects in the course of contemporary everyday experiences of living. In this work it is expected that similar kinds of relational assemblies, described by Powell (2004; see also Graham,

1998), might occur in the context of technology-enhanced educational practice in higher education as well.

1.3.2 The concept of presence as a social construction

Presence can be seen as one aspect of Place (Casey, 1996). 'Presence' is commonly defined as a subjective experience of 'being there' (e.g. Heeter, 1992) or 'to be in' in a certain environment (e.g. Lanier & Biocca, 1992); based on a view, which maintains a distinction between the physical and symbolic dimensions of the realm (Gambernini & Spagnolli, 2003; Mantovani & Riva, 1999). In mediated environments, the concept is often derived from 'immersion' as defining a characteristic of a successful experience of presence (see e.g. Slater & Wilburg, 1997). However, Gambernini and Spagnolli (2003) point out that even the most sophisticated virtual environments do not create conditions for immersion if seen as a total experience of isolation from the physical environment. In contrast, even rather limited, text-only environments are reported to engender the experience of presence without being immersive at all (see e.g. Ijsselssteijn & Riva, 2003; Towell & Towell, 1997).

For example Mantovani and Riva (1999) have, in turn, contributed to the construction of the concept of presence and put forward an alternative point of view. They propose a cultural concept of presence – an experience of presence as a *social construction*. Their point of view stems from the perspective of social constructionism (Gergen, 1994). Reality is, thus, not somewhere 'outside', escaping social interchange and cultural mediation. In contrast, it is continually negotiated and filtered by artefacts, by means of which the participants adapt the environment to their needs and simultaneously adapt themselves to the environment to exploit the affordances it may offer to them. As opposed to 'artificial' environments (such as online environments), Mantovani and Riva (1999) argue that there are no 'natural' environments either: all reality is socially constructed and, in the same vein, there is no difficulty in accepting the mediated character of experience which the participants have of environments – both natural and artificial.

On the one hand, this inclusive perspective does not make any distinction between the symbolic and physical realm nor, on the other hand, does it locate the participant either 'inside' or 'outside' the artificial online environment (Gambernini & Spagnolli, 2003). In online environments the world participants are dealing with is not an 'artificial' world as opposed to a 'natural' one but they are faced with various devices that

mediate different types of interactions/interchanges between the participants and the environments (Mantovani & Riva, 1999). In this perspective, the experience of presence is a product of action, situated in a cultural framework that includes not only material, but also social, cultural, and symbolic aspects (Mantovani, Gambernini, Martinelli & Varotto, 2001). In this sense, action is not undertaken by isolated individuals but by members of a community, who face ambiguous settings of everyday situations in a shared cultural framework (Cole, 1996). The experience of presence is, thus, derived from the possibility for continuous negotiation of actions and their meanings within a shared cultural frame of reference (Mantovani & Riva, 1999).

1.4 Theoretical approach to learning behind this work: Learning as situated, mediated and collective practice

In the field of computer-supported collaborative learning (CSCL), multiple theoretical approaches have been applied to develop the use of communication technologies in regard to collaborative learning (Dillenbourg et al., 1996; Lehtinen, 2003; Littleton & Häkkinen, 1999). In this work, the underlying theoretical approach to technology-enhanced collective learning falls within the large agenda of situated learning (see e.g. De Corte, 2001; Greeno, 1989; 1998; Lave, 1996; Lave & Wenger, 1991; Wenger, 1998). Vygotsky's work (e.g. 1978) has provided a starting point for wider theoretical development known as 'cultural psychology' (Cole, 1996), which has come together with influences, for instance, from anthropology (Lave & Wenger, 1991) and cognitive science (e.g. Suchmann, 1987) to form the basis of situated learning. As Engeström (1999) puts it, situated learning is not to be seen as one single unified theory or a school of thought but, instead, as a broad frame that includes a selection of contextual and practice-oriented approaches of learning, inspired by the socio-cultural theory of learning (Cole, 1996; Säljö, 2001; Vygotsky, 1978; Wertsch, 1991a, b).

The socio-cultural stream, in general, begins with the expectation of the nature of action as mediated and as contextualised (Vygotsky, 1978; Wertsch, 1991). Thus, the unit of analysis is always practice, and the focus is on people in action using some kind of tools for defined purposes (Wertsch, 1991). Learning, in this perspective, is something to be looked through the ways in which social and cultural practices co-determinate the ways in which people approach learning in this broad frame. Learning cannot, then, be seen as mastering something as an isolated unit, but is always context-related

(Säljö, 2001). Within socio-cultural approach, Säljö (1999) is defining culture as a collection of ideas, values, knowledge and other resources that people gain in interaction with the world around them. In the definition he includes all the physical tools, 'artefacts' that are used in a daily life, varied types of information and communication technologies, transport and others. According to Säljö (1999), culture is both material and immaterial and there is definitely interplay between them.

Following Engeström (1999), the situated learning approach contains a weak and a strong version of the agenda. In brief, whereas the weak version argues for a perspective in learning as situated social practice, the stronger version considers learning first and foremost as a by-product of participation in any social practice. In short, the weak version, thus, says that contexts need to be considered in the study of learning. Learning is, then, not located only in individuals' minds but situated in the physical and social context (Greeno, 1989). In the stronger version, in turn, to be able to understand learning, one must start by analysing social practice. In terms of the strong version, learning is not so much about learning a topic but being a member of a collective (Collins, Mulholland & Watt, 2001). Like Booth (2001) formulates it, referring to Lave and Wenger (1991), learning is that of entering and becoming a part of a new culture, as progressing from being a newcomer to becoming an old-timer, as legitimising one's peripheral participation in the culture' (p. 1). Thus, the development of expertise is not only related to the nature of an individual's knowledge structures, but also to that person's access to relevant formal and informal cultural knowledge through participating in an expert community – in a community of practice (Lave, 1996; Lave & Wenger, 1991; Wenger, 1998). Since the patterns of participation change historically and across specific communities, the critiques suggests, however, (see e.g. Antonacopoulou, 2002; Engeström, 1999) that the mechanisms and the diversity of learning process are not fully conceptualised or explored further in this approach. Consequently, when learning is defined particularly as a by-product of participation in any social practice, Engeström (1999) calls for studies focusing minimally on some durable and socially important practice.

1.5 Ethnographic perspective on collective activities in a confluence of on- and offline learning environments

One of the main aims of this work was to develop methodological tools for studying individual participants' perspectives in collective activities taking place in technology-rich environments set for learning. Next, the ethnographically oriented approach with its use of multiple methods is introduced.

Ethnographical research conducted in online environments has recently received much attention (see e.g. Eichhorn, 2001; Gatson & Zweerink, 2004; Hine, 2000; Jones, 2002; Mann & Stewart, 2000; Seymor, 2001; Shields, 2003). This study explores fieldwork in the context of web-based university courses, where the author's work at the site was arranged primarily as a long distance practice. In this work, online community denoted eventually something more than just a community emerging merely in 'cyberspace' where neither physical location nor real bodies appear to matter. Instead, in the studies the contours of collective activities were often distributed across online and physical environments, in formal or informal situations. Herein, due to the particular quality of researcher's field as multi-sited, not restricted to face-to-face or online encounters nor to a single physical place, the study brought up questions of realisation of the interaction between the researcher and the research subjects on the one hand, and the form of the representation of the non-linear and multi-sited fieldwork, on the other. In the following section (Section 1.5.1), fieldwork in multi-sited fields of study is discussed and, the realisation of interaction between the researcher and the researched in the field here in forms of 'Participants' experience' method is introduced. Also, the issue of representing this multi-locale fieldwork is tackled in Section 1.5.2.

1.5.1 Constructing the field in the context of multi-sited study

Traditionally, ethnographic fieldwork has been marked by the notion of travel away, preferably to a distant locale, inhabited by 'exotic others' (e.g. Gupta & Ferguson, 1997; Van Maanen, 1988). In its most conventional form fieldwork has involved the phases of entering the field, carrying out the (prolonged period of) fieldwork, and finally, leaving the site (Okely, 1992). Normally, ethnography has been conducted in forms of intensive participant observations (Emerson, Fretz & Shaw, 2001) with corresponding interviews (Sherman Heyl, 2001), artefacts, archival document analysis (Hammersley

& Atkinson, 1995), media materials and so on. In ethnographical research, the main focus has typically been on group encounters; on small, localised communities.

However, for more contemporary ethnographers, the context of fieldwork has changed from exotic and unfamiliar settings to their usual residences and everyday surroundings (Amit, 2000; Caputo, 2000). Fieldwork often consists of a series of short visits to the site (Coffey, 1999): the researcher 'comes and goes' and normally, she or he is rarely a constant element of the fieldwork locale. In this sense, the distinction between 'home' and 'field' has blurred and, for the researchers, the travel is far more often an experiential rather than a physical displacement (Eichhorn, 2001). 'Fieldwork at home', however, does not only refer to a geographical location but also has a connection with the researcher's former experiences and familiarity with the phenomenon studied (Pink, 2000). Also, nowadays, the use of information and communication technologies is more often a part of research subjects' everyday experience of living, and in this sense a constant element of contemporary research settings, neatly interwoven with other social relationships and social practices of the informants (Gatson & Zweerink, 2004). In this way, both 'online' and 'real-life' environments may become congruent spheres of the researcher's field, and in turn, reshape ethnographic conventions.

Despite the continuities between on- and offline worlds, to carry out the fieldwork in a face-to-face setting or in an online environment is not quite the same. When conducting ethnographic research in an online environment the researcher does not make a visit to the field in the usual, spatial sense (Burnett, 1996). With remote technologies the ways in which the fieldwork is mobilised may constantly vary. For example, doing fieldwork via email the ethnographer can access the research setting via a computer, whenever and wherever appropriate (Hine, 2000; Mitchell, 1995). Additionally, allowing for more indirect interactions, communications technologies can provide the researcher with more leeway as to what extent to engage in the work at the site – in relation and as part of – her or his other tasks or personal roles (Pink, 2000). Also, communication possibilities pertinent to the variety of textual or visual formats available for the research participants (e.g. discussion boards, email, digital photographs, chat) may lend an experience composed of simultaneous interaction in discrete places (be they real or virtual), not possible with less technologically enriched ethnography. Yet, novel technology may take on several identities in ethnography and in this sense it should not be seen simply as another research tool enhancing communications (Pink, 2000). Rather, it may introduce a new and unique (experiential) dimension for the researcher

and the research subjects to share: a context where special modes of interaction may take place and develop. It is argued here, following for example Pink (2000), Eichhorn (2001), and Gatson and Zweerink (2004), that interaction entailed by virtual fieldwork may be essentially as much 'field-like' and equally informative, natural and rich compared to fieldwork rooted in ethnographic traditions.

However, while ethnography that incorporates new communication technologies can challenge the practice of conducting fieldwork, it may also pose certain dilemmas related to, for example, the particular quality of (text-based) online communication. Langham (1994; see also December, 1993) characterises online communication as a median between oral and literate extremes, having some of the features of ordinary discussion but lacking others. For example Mann and Steward (2000) point out the problem of interpretation that the researcher may encounter with text-based communication. They note that maybe even more than face-to-face communication, computer-mediated communication may lose some of its sense and meaning when read afterwards by people who had not been involved at the time. The limited possibility to interact with the informants in an online environment has been brought forward also by Franklin and Lowry (2001) and Jones (2002), for example. Yet, the researcher is still in a unique position to give an account of the fieldwork, based on her or his experiences of it and interaction with the others involved. This relationship remains in the course of writing processes, affecting the ways in which the researcher illuminates the life of the 'Others' (Coffey, 1999). Therefore, in order to get an adequate understanding of the field there is a need for instruments that would allow for the researcher to take not only a standpoint of a formal, unobserved participant observer (e.g. monitoring or scrolling discussion board sessions and archives available online) but also a more active role during the course of the study. Furthermore, in a field without a proper geographical locus, like in this work, it might be useful to develop methods that would also account for simultaneous interconnected and 'hard-to-grasp' events taking place between the participants – bridging interactions in online environments and the multiple ways of interaction in face-to-face situations (Barth, 1981; Shumar & Renninger, 2002).

1.5.2 Participant experience-method

In this study, to increase interaction between the researcher and the research subjects, and especially, to better identify how the participants themselves experienced and defined their actual contexts of activities, a participant experience method was designed

(see e.g. Pöysä, Mäkitalo & Häkkinen, 2003; 2004). Basically, the method was built on a personal process notebook (as text and visual notes) designed to serve a dual purpose: first, to bridge on- and offline environments and second, to reveal simultaneous or hard-to-grasp events in these environments.

As Bruner (1990) points out, narration has a central part in human communication providing consistency and permanence to one's experience. When people note something of their experience, either to themselves or to others, they tend to do this in a narrative form (Carr, 1986). In ethnographic studies, texts have traditionally played a minor role while oral interaction has been considered the main resource for analysis. However, following Hammersley and Atkinson (1995) for example, texts deserve more detailed attention as a material that can highlight participants' understanding and experiences concerning the social practices they are participating in.

Using notebooks for collecting experiences

Basically, a notebook² is a record of experience or activity, which may provoke participants' different moods and states of mind on a daily basis. It can record events that may otherwise be inaccessible or are taking place simultaneously (Mann & Stewart, 2000). By means of this tool researchers may have access to participant's perspective – to an 'insider's' view. Often, notebooks fit alongside other forms of data gathering to complement the data and represent divergent documentary evidence that can be made available for research purposes (Brady, 1999). Nonetheless, it is essential to combine a view of texts with an understanding of the contexts they belong to. Narratives become, thus, ethnographically meaningful and relevant only when there is a setting in which to situate them (Thompson, 1995).

a) Text notes: emails

The design of an online notebook specifies the kind of information that should be recorded or focused on. One option is to request participants to fill in a form and to send the file back at the end of the data-gathering period. This allows students to look back and refer to what they have written previously. Another possibility is to solicit students

² The term 'notebook' is used here as a synonym for terms 'diary' or 'journal'.

to send notebook entries as emails at regular intervals over the study period. Online notebooks, when carried out in the form of ordinary emailed entries, are comparable to 'snap-shots' at particular points in time. Again, as Mann and Stewart (2000) further add, the quick note-taking style of much email correspondence might decrease the sensation of being burdened by the assignment of writing entries on a regular basis. Participants' thoughts might also be more authentic since they do not have the former entries in front of them.

Even though an online notebook is expected to be less time consuming than a traditional one, this method also asks a lot from the respondents in terms of commitment. If the researcher is able to make personal contact and explain clearly to the participants what is expected from them and what is the purpose behind the request, obtaining, and also, retaining the co-operation of the participants might become easier. As not all respondents are immediately ready and enthusiastic to openly share their personal feelings, the researcher must take care to build a trusting relationship with them. Also, it is important to reach an agreement on the procedures and detailed instructions concerning the aspects to be focused on in the diaries (Hammersley & Atkinson, 1995).

b) Visual notes: photographs

Photographs taken by participants may allow another perspective or a sequence on the working processes to be presented simultaneously with the other forms of data. With participants' visual notes of other actors or of remarkable places and significant experiences, it is possible to capture special items or fragments that have a certain meaning for the participants. The photographs are, however, reflections of the photographer's points of view (Becker, 1974), the taken-for-granted assumptions underlying the pictures should be made visible (Harper, 1998). The more information there is about the occasion in which a particular photo was taken, why it was taken and in what situation, the more validity it has to the visualisation of the working processes. When including the point of view, voice and the experience of the author by means of a depiction or a short narrative, a single photographic image becomes part of larger narratives of participants' personal experiences.

1.5.3 Representing the non-linear, multi-sited field of study

In recent writings of ethnography, the relationship between the researcher and the 'audience' of the findings is widely discussed (Gergen & Gergen, 2002). In copious literature, ethnographic texts have been criticised due to the absence of the ethnographer as an active and embodied participant in the social settings and cultural processes studied in these texts (see e.g. Bochner & Ellis, 1996; 2002). However, ethnographic fieldwork has traditionally a biographical character (Coffey, 2002) and research diaries and field notes have long been used to record researchers' personal experiences in the course of collecting data. These private texts are rarely shared, however, but are often seen merely as parallel to the final, formal research accounts. Yet, more recently, as an alternative to the 'polished' and impersonal ethnographic writings, scholars have sought legitimacy for qualitative writings that make explicit also the personal telling of the fieldwork (e.g. Coffey, 1999; 2002; Ellis, 2002; Gonick & Hladki, 2005; Reed-Danahay, 2002). These novel forms of ethnographical representations have adopted genres traditionally found in literature, theatre and biographical practices, and are often displayed with visible authorship, multiple voices and more (see e.g. Bochner & Ellis, 1996; 2002; Ellis & Bochner, 2000; Fox, 1996; Lather & Smithies, 1997).

Although the more personal approach in ethnographic writings is widely accepted – even considered necessary – the account based on a researcher's fieldwork experiences involves questions that relate to the degree of the researcher's presence in the (re)presentations (Clandinin & Connelly, 1998). It is discussed, whether or not, and how a researcher's self should be written in the texts (Reed-Danahay, 1999 in Coffey, 1999). For Coffey (1999, p. 36), the two extreme positions of the researcher – 'ethnographer as stranger' or ethnographer's self as 'key focus of inquiry' – are to simplify the recognition of researcher's position as an outcome of complex negotiations during the fieldwork. Charmantz and Mitchell (1997) have taken a middle-stance here: if there is respect to the view of the others' there is deference to the view of the self as well. That is a merit for a visible authorship that would breach the received mode of writing that construes the researcher as a neutral voice. Research account is, still, the researcher's personal interpretation of the social worlds of others. Thus, instead of masking the presence of the researcher but including various voices and levels of thinking in the representation of research processes could give the reader an equal access to the interaction and shared experiences during the period of collecting data (Gergen & Gergen, 2002). As Gubrium and Holstein state (1997, p. 101), qualitative inquiry is 'especially sensitive

to representational matters because of its unique position at the lived border of reality and representation’.

1.6 The analytical ‘eyeglasses’ of this work

The analytical perspective of this work comes close to a theory-driven approach (see e.g. Eskola, 1998; 2001; Eskola & Suoranta, 1998). Unlike in strictly theory-based approaches, the analysis is not aimed to test and verify a set of preliminary hypotheses but, instead, to use the theoretical vantage points as analytical devices or tools in the processes of analysing the data. In this approach, the theoretical vantage points serve, then, as a broad frame for looking at the data through different analytical lenses. Also, in the course of the research process, the researcher may take on novel perspectives beside the initial theoretical starting points of the work. It also seeks to avoid, on the one hand, over-interpreting the data in the light of the vantage points and, on the other hand, diluting any unexpected aspects arising from the data that might contribute to the expansion of the theoretical vantage points of the study.

In this work, the analytical lenses for interpreting the data (Vantage points I and II) aimed at gaining a deeper, context-sensitive understanding of the concept of community in a technology-enhanced higher education milieu. Furthermore, the aim was also to look for, with open eyes and mind, the origin of community and its multiple reference points in this context. It should be noted that in this work the phases of ‘analysis’ and ‘interpretation’ were not seen as separate sequences but as intermingled phases in the research process as regards collection, organisation and examination of the material by ‘scanning’ it through the theoretical vantage points of this work.

The above-mentioned analytical eyeglasses of this thesis contained two complementary vantage points, as discussed in this chapter. In short, Vantage point I looked at community as a unity based on symbolic meanings. It aimed at providing a perspective that considered community itself to be the uniting value for its members. The primary aim of the study was, thus, to unwrap the ‘static image’ of students’ community at a particular stage in its ‘life cycle’ (see Study 1).

Vantage point II, in turn, highlighted community with a spatial metaphor of Place. It viewed the unity at the same time as an entity, a state of being, and as a shared process of creating the communal identity of that unity. Therefore, Study 2 had two separate parts. Part 1 aimed at highlighting what forms participants’ unity took during the technology-enhanced university course: how the participants experienced their ‘Learning

Place' over the course under study. Part 2 aimed at visualising the process of constructing their experience of the Learning Place in a technology-rich, higher education milieu.

In more specific terms, the aims of the empirical studies were as follows:

- **Study 1:**
What might generate and further amplify the participants' belonging to the unity in technology-enhanced higher education settings?

- **Study 2:**
Part 1: What does constitute the 'territorial' reference points of the participants' unity over a technology-enhanced higher education course? How are online and physical, 'real-life' surroundings experienced to come together over the course?

Part 2: What forms does the unity take as the collective activities progress and change over the course? How do participants construct their shared experience of 'Learning place' over the research workshop?

In order to better demonstrate the connections between the theoretical vantage points and the empirical studies conducted for this thesis, in Figure 2 the theoretical vantage points and the questions set for the empirical studies are placed together to form the basis of the analytical 'eyeglasses' of this work. (The form of the figure is adapted from Eskola, 2001.)

The theoretical vantage points of this work

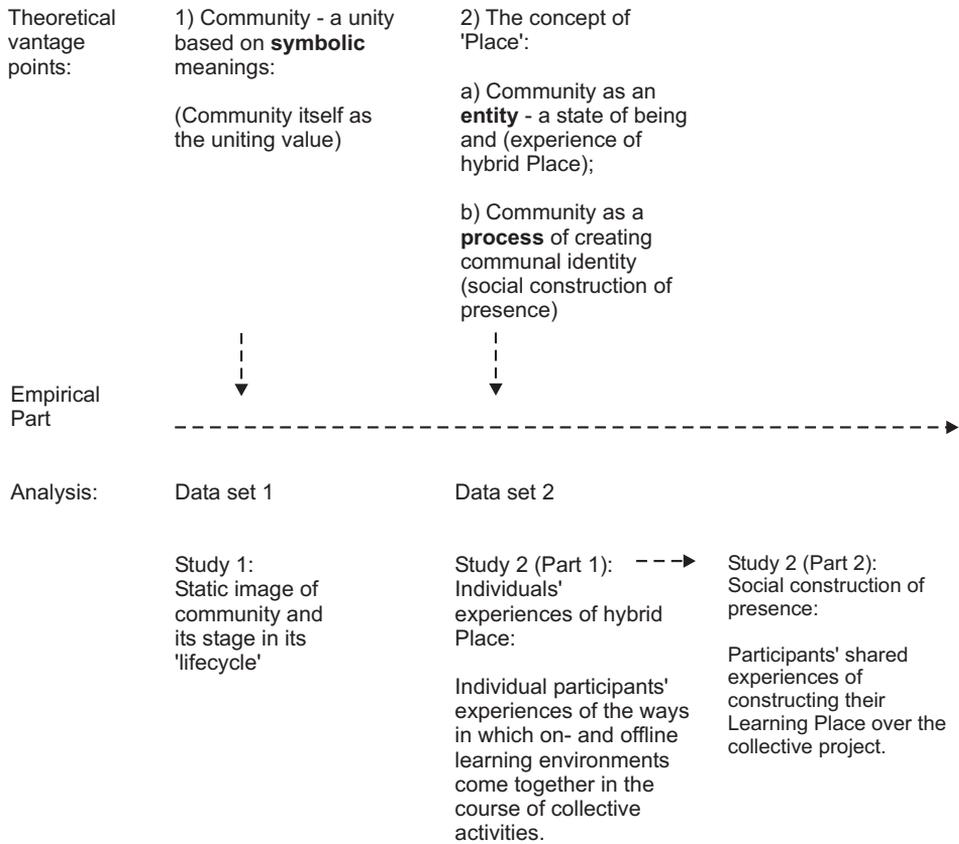


Figure 2. *The analytical 'eyeglasses' of the thesis.*

CHAPTER 2

Static image of community and its stage in its 'lifecycle' (Study 1)

In this work, the data were collected in two separate studies during the spring term 2002 (Study 1) and the autumn term 2002 (Study 2). Study 1 was conducted in a Belgian and Study 2 in a Finnish higher education context. The research participants in both studies were student teachers taking degrees in Germanic languages (Study 1) and in English Philology (Study 2). In both of the studies, the working language was primarily English.

Chapter 2 focuses on Study 1 and first describes the research participants and the instructional context of the study. Second, the sources of the data (Data set 1) and the relations between the different types of data collected are described here in more detail. Third, this chapter reports the steps taken in the analytical process for Data set 1. Finally, the results of Study 1 are presented, together with a brief conclusion.

The primary aim of the Study 1 was to investigate what might generate and further amplify the participants' (student teachers') belonging to a collective unity in the context of a technology-enhanced course in higher education. In more specific terms, the aim was to identify how individual participants experienced the development of their collective activities over two different web-based assignment designs in association with a three-week virtual seminar in a teacher education setting. Study 1 aimed at pro-

viding a static image of community and its stage in its lifecycle, considering the community itself as 'the' uniting value.

2.1 Research participants and instructional context of Study 1

Study 1 was a short-term, exploratory study conducted during the spring term 2002. The research participants were student teachers (n=24) taking degrees in Germanic languages at the Katholieke Universiteit Leuven (K.U.Leuven) in Belgium. The participants were following the Academic teacher education programme, organised by the Faculty of Arts. The programme was not a full-time study programme but students could follow it simultaneously with their Licentiate (Master) studies or additionally, after completing their degree. Hence, the research participants formed a heterogeneous group in terms of their age and years of study. At the time of data collection, some of the students were preparing for their final examinations while others were engaged in their teaching practice, for example.

The teacher education programme consisted of independent theoretical modules (courses in theories of learning and didactics, history and fundamentals of education and more) and also of a period in teaching practice. The course under study dealt with the topic of 'Self-reflection as a key element of teacher's professional competence'. Normally, this course was organised as a seminar starting with a lecture for all course participants and then followed by a period of solitary work (preparation of a lesson plan combined with self-reflection tasks). Next, participants were expected to attend a local gathering in sub-groups, in order to discuss the individually prepared tasks with their fellow students. The seminar would end up with a take-home exam.

For the research purposes, an alternative, technology-enhanced mode of working was set up. In the alternative mode (hereafter referred to as 'virtual seminar') students would have one face-to-face gathering over the three-week course, whereas two weeks of joint work (the second and the third week of the seminar) would take place in a web-based learning environment called Blackboard. Blackboard was chosen because it was part of the official educational platform named 'Toledo' adopted by the K.U.Leuven at that time.

In brief, Blackboard (BB) is an open and flexible application designed for the use of educational institutions. BB provides a set of tools that enable the course designer to customise the learning environment according to the needs of a particular course. BB

has course tools such as an announcement-tool, a course calendar, a tasks section, discussion boards, email, and a digital drop box for file exchange. In this study, the design of the virtual seminar was deliberately kept fairly simple. In Blackboard, the only tools chosen for communication and collaboration were discussion boards, email, the announcements tool and the tasks section. To a large extent, the web-based interaction would, therefore, rely on text-based communications. However, students were also encouraged to use private channels of communication outside BB, if necessary.

In the only face-to-face gathering, students were introduced to the virtual seminar and got some information about the use of the web-based learning environment as well. In addition, they were informed about the research that would be conducted on the virtual seminar. Yet, after the face-to-face gathering, students could still choose their preferred medium to work on the course topic. Participation in the virtual seminar was hence wholly voluntary.

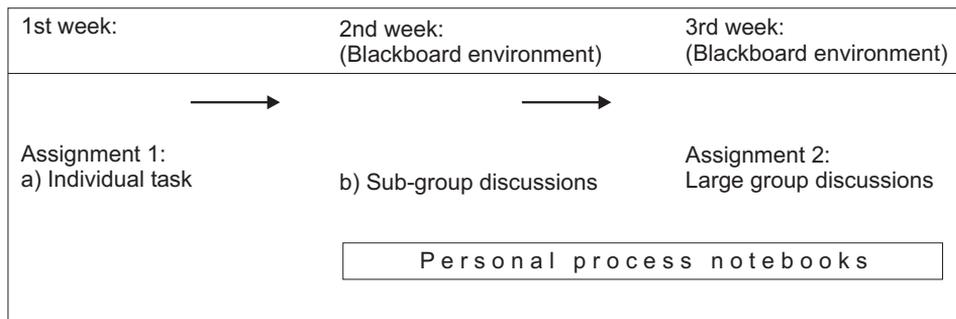
Basically, the virtual seminar involved two assignments (see Table 1). Assignment 1 contained two tasks that were building upon each other. The first task (1st week) was to individually prepare a lesson plan (in the context of secondary school language learning) and also to accomplish two sub-tasks of self-reflection. When signing up for the virtual seminar, students were invited to convene into groups of 3–4 co-students. During the second task of Assignment 1 (2nd week), individually prepared documents would then be jointly analysed on discussion boards within sub-groups. In this spirit, the forums in BB were designed to be discrete ‘meeting areas’ for the members to come together and to discuss in privacy. Therefore, to diminish the feelings of insecurity and distrust, each discussion forum provided access only to the members of the sub-group plus to the researcher (the author of this work) and to the instructor who came from the Faculty of Psychology and Educational Sciences of K.U.Leuven.

In Assignment 2 (3rd week), in contrast to the previous one, discussions in the BB environment were open to all the course participants. To facilitate discussions, four confrontational statements, which had to do with teaching and teaching profession in general, were published on separate discussion boards in BB. During that week, students were expected to react to the statements and to develop arguments for the ongoing debate with their fellow students. A personal process notebook (see Section 1.5.2 for more detailed description of the method) would replace the written take-home exam normally required in the seminar.

In addition, a detailed documentary guide for the different assignments was placed in the BB environment, in the tasks section. Whenever necessary, students could go

back and re-read the aims and the schedule of the seminar and check the instructions for the different assignments to be undertaken. Also, in the tasks section of BB, students could also find back the presentation on the theoretical background of the tasks they needed to perform given by the instructor of the seminar during the face-to-face meeting at the onset of the seminar. In addition, throughout the seminar, the researcher was there to provide personal guidance via email or on the phone, if necessary.

Table 1. *Design of the virtual seminar.*



2.2 Data sources (Data set 1)

The data set 1 comprised only written data: personal process notebooks as a primary source, complemented with observations of web-based discussions on discussion boards in the Blackboard environment. In the study, the personal process notebook provided information concerning activities both in physical and in online milieus, whereas the complementary observations were focussed on the online activities only.

Individual participants' experiences of collaborations were collected through personal process notebooks (aforesaid, a fuller description of the method, named 'Participant experience-method', can be found in Section 1.5.2). It was expected that observable communications only would not give adequate information to understand the exchanges in the groups (see Barth, 1981; Shumar & Renninger, 2002). Likewise, it was assumed that discussion board data would make explicit only a minority of the exchanges between the research participants. Personal notes were therefore assumed to grant access to events that might otherwise remain invisible or be simultaneous with the communications in Blackboard.

The implementation of the notebook closely resembled that of an ordinary email correspondence. Simultaneously with the web-based discussions (the second and third week of the seminar), students were asked to send personal notes (i.e. text notes) as emails to the researcher, from two to three notes per week (see Example 1). For these text notes, the students were encouraged to reflect on their personal experiences in collective activities over the virtual seminar. The main pieces of information to be included in their notes were: a) date and time the note was made; b) description of the situation (the context, the other participant(s), the issue); and c) the media used (e.g. email, discussion board (small group/whole group), telephone, SMS, other, or a face-to-face situation). On the basis of the given structure, students were, still, invited to personalise their writings. When carried out in the form of ordinary emails, the personal process notebook was expected to yield more authentic responses, like unique 'snapshots' at particular points in time (see e.g. Mann & Stewart, 2000). However, despite the quick note-taking style of email correspondence, the method was expected to be rather demanding and time-consuming. Therefore, to motivate students, the notebook was announced to replace the written take-home examination at the end of the course. In the process of research, the researcher always replied to the note received and if necessary, asked further questions on the themes under study. In this sense, email correspondence became parallel to an online interview.

Example 1 (*a text note*):

Date: Fri, 19 Apr 2002 11:26:03 +0200
From: [STUDENT C2]@student.kuleuven.ac.be>
To: johanna.poyasa@ped.kuleuven.ac.be

[...] *"Hello, this diary entry actually deals with the 16th of April 2002 when my colleague group member [STUDENT C1] (group C) paid me a visit (face-to-face). This visit was just a social call, but it did not take long before we started talking about the assignments on blackboard. Both of us had already posted our preparation and the reflection on the blackboard site and started wondering what was being expected of us. We decided to read through the information on the bb-site again and see if anything had been added. The information was relatively clear but it still left us with quite some questions. One of the major questions was what we were expected to say in the reaction on the group members' preparations. We both agreed that they were all very solid: the same material and practically the same development. It therefore took a little while before the reactions to the preparations were posted. If I were to describe my feelings at this time, I must say, I was quite insecure. Not that so much depended on it, but just because I did not really know in what way to react on the other's preparations."* [...]

In Study 1, the experienced perspective was complemented with observations of collective activities in the Blackboard-environment. Observations included monitoring the discussions in the discussion boards and, when not possible to stay on the site, reading the archives of the posted messages.

In total, the 24 participating students sent 118 process notes, which was approximately five notes per student, totalling 114 pages of typed documents (from 2–9 pages per student). Most of the entries sent were of good quality and reflective, resulting from true elaboration on the issues pertaining to the given assignments. In the entries the research subjects depicted many identical experiences, providing the researcher with comprehensive insights on the two diverse communicational infrastructures generated over the course. The researcher archived all the email correspondence with the research participants.

The BB environment automatically archived all discussion board messages posted during the virtual seminar. In total, the transcripts of the web-based discussions contained 236 messages in sub-groups (from 18 to 55 messages in groups of four students; from 8 to 48 messages in groups of three students) and 133 messages as the whole group of participants. Altogether, discussions in sub-groups comprised a total of 187 pages of typed documents (from 8 to 49 pages per group) while in the large group discussions the amount was 109 pages (from 21 to 37 messages per statement). From the outset, the messages posted by research participants were mostly relevant and pertinent to the aims set for these tasks. An overview of the data is presented in Table 2 below.

Table 2. *Data Set 1 (Study 1, Spring term 2002).*

Written data (Produced by the research participants)	In total:
Personal process notebooks: Text notes	118 notes (114 pages of typed documents)
Discussion board messages: Sub-group discussions	236 messages (187 pages of typed documents)
Large group discussions	133 messages (109 pages of typed documents)

2.3 Constructing the field of Study 1

At the onset of Study 1, the author became a formal research participant in the first face-to-face meeting of the seminar under study. The introductory meeting was organised together with the instructor of the seminar. In the meeting, first the former mode of working on the seminar topic was introduced and then followed by a presentation concerning an alternative mode set for working on the seminar topic. The assignments that would be part of the alternative mode (named virtual seminar) were launched and the students were also given some initial information concerning the learning platform, Blackboard, in which the seminar would primarily take place. Students were also told about the research that would be conducted on the virtual seminar. So, students could still opt for the traditional mode of working and participation in the virtual seminar would be, then, wholly voluntary. Subsequently, 24 students signed up for the alternative mode of working.

In collecting the data, the researcher was not acting as an expert of the course content but rather as a tutor. The idea of adopting such role was primarily to give students a feeling that she was always available for them and keen on helping. The tutoring role proved quite varied: sometimes the author was helping the students with some very practical issues of the virtual seminar (e.g. providing technical support in using Blackboard) while in other occasions it was more about facilitating and supporting ongoing interaction via email. For example, the researcher periodically sent out group mails basically to remind the students of the different assignments to be undertaken or just to encourage them to interact with the others involved. She was also supervising that the individual participants and groups would keep on working on the assignments and that the discussions would run to the schedule.

Further, the participant experience method (in the form of personal process notebooks) used in this study was built on a personal email correspondence between the individual research participants and the researcher. Over the virtual seminar, the researcher gave a personal reply to every text note received from the students and asked clarifying questions if needed. The purpose of this interactive aspect of the participant experience method was to make the participants feel they 'were heard' in the course of these activities. However, the researcher did not participate in the interaction in the Blackboard environment but was only observing the student discussions.

2.4 Relationships between the data utilised in Study 1

The primary aim of this study was to adopt the individual participants' (experienced) perspectives on collective activities over the virtual seminar. Therefore, in the analysis, the main focus was not particularly on the discussion board data in Blackboard, but rather on the personal process notebook data produced by the individual participants. Thus, in the process of analysis, the web-based discussion data were complementary to the notebook data. The discussion board data were thus scanned through from the narrators' (student teachers') perspective with respect to their personal experiences of the activities over the seminar. By the same token, individual participants' interpretations concerning the discussions in BB could be contrasted with the authentic discussion data (Example 2, Section 2.5.3).

Figure 3 below illustrates the relationships between the different types of data utilised in this Study 1.

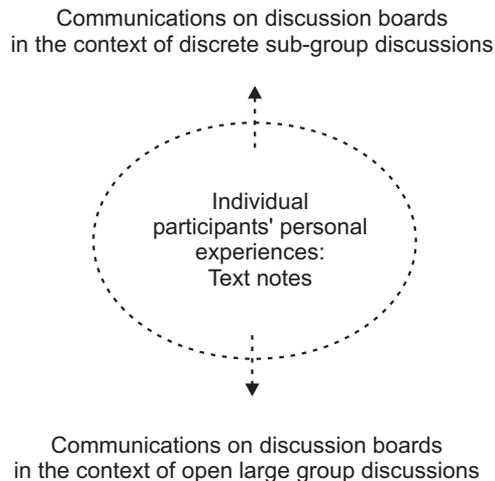


Figure 3. Relationships between the different types of data utilised in Study 1.

2.5 The process of analysis for Data set 1

Due to the participant perspective chosen (see Section 2.4, Figure 3), the notebook entries received the most attention in the analysis and formed thus the actual data basis for the analysis, yet accompanied with observations in the online learning environment (Blackboard). In practical terms, a major advantage of the online context was obviously that all the materials could be easily transferred into textual documents for later analysis. The archived email correspondence (i.e. personal process notebook data as text notes) and discussion board data were first collected into a more unified format – ‘textualised’ – and prepared for further analysis (Cook & Ralston, 2003). The ‘Ethnograph’ software for qualitative data analysis (<http://www.qualisresearch.com>) was used in this phase. Next, the material was printed out, read through a number of times and last, the segments of special interest within the themes under study were searched and marked manually.

Next, the analytical process for Data set 1 is demonstrated. In short, from Data set 1, first, linear narratives (i.e. ‘Textual memos’; see Section 2.5.1) were constructed. With ‘Textual memos’ we mean here syntheses of the researchers’ observations on participants’ processes of building their collective unity/unities over the two diverse assignment designs pertaining to the virtual seminar (i.e. ‘lifecycles’). The memos were constructed by epitomising those activities the researcher came to understand as essential. The memos were displayed with fragments from the personal process notebook data (text notes). Since the second, actual phase of the analysis as qualitative content analysis (see Section 2.5.3) was not expected to say too much about the processes themselves (i.e. communities’ ‘lifecycles’) but more about the ‘composition’ of the unity (i.e. its ‘static image’), this pre-face of the analyses of Data set 1, as we might call it, was used to complement the content analysis of Data set 1.

Second, the attempt to capture the static image of community thus involved qualitative content analysis – primarily on the symbolic meanings of community (see Mercer, 2000). In brief, in the analysis the participants’ personal process notebook data were allocated in the four categories of symbolic meanings of community as put forward by Mercer (2000). As Shumar and Renninger (2002) point out (see also Barth, 1981), participants often experience the unity and its symbolic meanings in varied ways, and likewise, the same occasions within the unity are usually seen differently by its different members. Acknowledging and honouring the multiple lines of thoughts and varied interpretations of the same occasions, when illustrating the results also the analytical

categories should therefore be presented through several examples, originating from different participants and different circumstances of activities.

Below, in Figure 4, the analytical process and outcomes for Data set 1 are summarised.

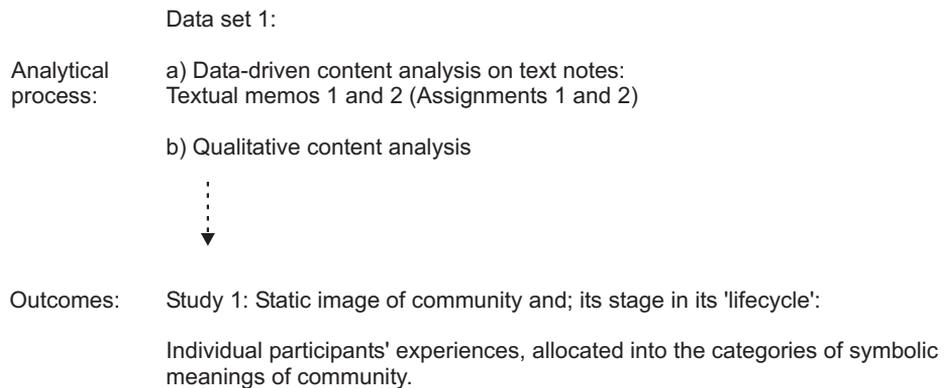


Figure 4. *The analytical process and outcomes for Data set 1.*

In the next section the analytical process for Data set 1 is described in more detail, illustrated with examples of various steps of the analysis.

2.5.1 Linear narratives: 'Textual memos'

In the first phase of the analysis of Data set 1, descriptive accounts in the form of linear narratives over the two different assignments were constructed on the basis of data-driven analysis on personal process notebook data (text notes). While the study was basically looking for the static image of community, the underlying idea of the narrative was simply to construct – in the form of 'textual memos' – an abstraction of the 'lifecycle' of the unity over the two assignment designs of the virtual seminar. As a pre-analysis of the personal process notebook data, it provided the author with crystallised images of students' processes of building their collective unity/unities over the two assignment designs pertaining to the seminar.

As was expected in the design phase of the study, the two different, technology-enhanced assignment designs were reported to generate two qualitatively different infra-

structures for participants' shared enterprises to develop. In general, the first assignment in self-selecting sub-groups was experienced to conjure up an arena in BB to interact in an atmosphere of privacy and confidentiality, whereas the second assignment in the whole group of students invited the research participants to create a more open communicational context in BB, also, for discussing 'real-life' issues that they were struggling with as student teachers, for example. In Textual memos 1 and 2, the researcher's interpretations are illuminated together with data excerpts from the participants' personal process notebooks.

Next, the linear narratives (the textual memos) are displayed, starting with Textual memo 1, which deals with Assignment 1 in sub-groups, and followed with Textual memo 2 on Assignment 2, which involved the whole group of students. To mark smaller episodes within the narrative, the texts are split into three different phases identified from the notebook data by the researcher. In Textual memo 1, for instance, these three phases are titled as 1) 'Slow start of the discussions', 2) 'Broadening the scope of the discussions- e.g. from personal tasks towards general didactic issues' and 3) 'Finishing up: a point of saturation'. An overview of the qualitatively different phases identified in the memos is first presented in Figure 5.

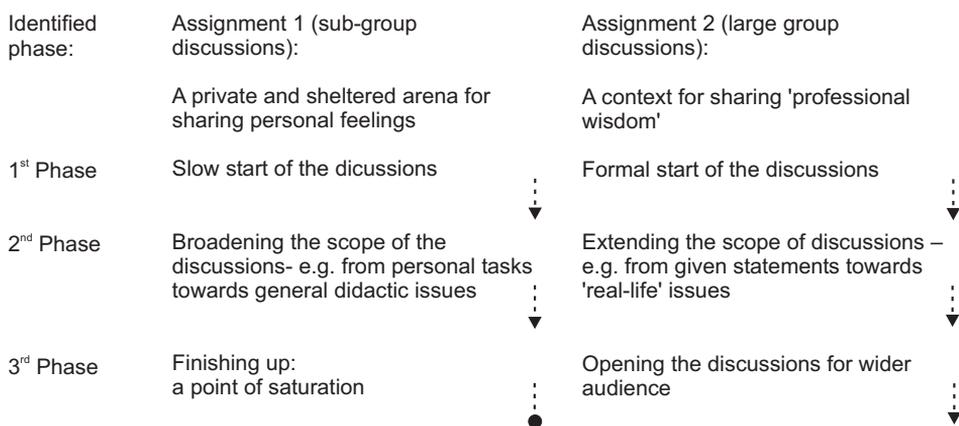


Figure 5. *An overview of the qualitatively different phases in the course of undertaking Assignments 1 and 2.*

As a technical detail in the analysis of Data set 1, to protect the confidentiality of the participants, the participants were coded with a capital letter pointing to the particular sub-group and with a number to denote the participant within that sub-group; e.g. the code 'C1' refers to the 'Participant number 1 in Sub-group C'. The data excerpts are in their original style of writing. Also, to be reminded here, the textual memos served as pre-phases of analysis of Data set 1 and therefore the same data excerpts might also appear in the second phase of the analysis of Data set 1 (see Section 2.5.3).

Textual memo 1:

Assignment 1:

A private and sheltered arena for sharing personal feelings

In the first assignment, the web-based interaction was organised around small-group discussions in Blackboard-environment, scheduled for the second week of the seminar at issue. In both web-based assignments the discussions were structured by specific objectives. Here, in Assignment 1, discussion board was devoted to discussing the individual assignment (lesson plans and reflection tasks) with the co-students in groups of three to four participants. At this phase, the discussion boards were for the exclusive use of the group participants only. Aforesaid, in most of the sub-groups the membership was gained by acquaintance, based often on a common study background.

1st Phase: Slow start of the discussions

The discussions on the preparations were experienced to start slowly. Students wrote that after posting their own lesson preparation and reflection tasks it was not totally clear for them first, how the discussions would continue and second, whether their reactions would be in the 'expected' direction. Therefore, some of them rather preferred to wait and see how the others had contributed to the tasks. The participants discussed these concerns also collectively in sub-groups; face-to-face or over (instant) messaging, for example.

[...] *"I talked with a girl (face to face) who also does this alternative task. She told me she was waiting to post her work so that she could look at the others' work first, to see if hers was alright. In fact, that was exactly what I was doing as well."* [...] *"I have the impression that the same thing will be happening as to the comments on the others: everyone seems to be waiting to see what sort of comments the others will give."*[...] (Text note, B4, 16.4.)

[...] *"(In the 16th of April) A colleague group member paid me a visit (face-to-face). This visit was just a social call, but it did not take long before we started talking about*

the assignments on Blackboard. Both of us had already posted our preparation and the reflection on the Blackboard site and started wondering what was being expected of us. We decided to read through the information on the bb-site again and see if anything had been added. The information was relatively clear but it still left us with quite some questions. One of the major questions was what we were expected to say in the reaction on the group members' preparations. We both agreed that they were all very solid: the same material and practically the same development. It therefore took a little while before the reactions to the preparations were posted." [...] (Text note, C2, 19.4.)

To share their personal thoughts and to leave the documents open for comment was not that uncomplicated and easy. Likewise, the process of formulating comments on co-participants' personal creations was sensed to involve a certain level of delicacy and tactfulness.

[...] "Commenting upon someone else's work is a delicate issue. I am not quite sure myself about what I should write. On the other hand, this task is also quite intensive." [...] (Text note, B4, 16.4.)

[...] "It was rather easy to react on their lesson preparation but that was not the case with their reflection. I mean sometimes these are personal thoughts, feelings and experiences to which I cannot comment." [...] (Text note, C1, 17.4.)

Participants noted being enthusiastic to gain reactions for their preparations. Likewise, they told being appealing as non-participating role to merely read how the others have performed the similar tasks too.

[...] "I was delighted to actually find comments on both my lesson preparation and the reflection, as for some days I had been waiting for them, but patience is indeed something that must never be forgotten with all things. I tried to give an answer to the questions of my fellow group members and to the comments too. Emotionally, I really was happy to find the comments and I think they all were very appropriate and to the point. All people have different ways of seeing things and it is interesting to find out how others think about your way of thinking..." [...] (Text note, A3, 18.4)

[...] "After some problems with my internet-connection and after a busy week of teaching practice, I have finally been able to post a few comments. Firstly, it is exciting and interesting to learn what others have done with the same material. It is quite exciting to wait what other will think of he comments I posted today." [...] (Text note, A4, 19.4.)

But, in contrast, it was criticised that to gain only positive reactions on their personal preparations was considered unchallenging and was experienced not to result in monitoring their own inputs that was the initial aim set for the task here.

[...] *"Of course, I was pleased with their quite positive reactions, but in a way, it is also a pity. After all, the forum is intended to make you reflect upon your own work, and purely positive criticism, though nice to hear, does not challenge you to do that."* [...] (Text note, B4, 16.4.)

2nd Phase: Broadening the scope of the discussions- From the personal tasks towards more general didactic issues

However, as the discussion progressed over some messages, participants wrote that the group soon enlarged their scope to include issues other than they found to be pertinent to the assignment at hand. For example, more general ideas about teaching emerged. This progress was experienced as positive.

[...] *"Everyone is actively participating now. I replied to all comments, I actually wrote quite a lot. We discuss about certain aspects now, sometimes less directly in relation with the lesson or reflection itself. Our thoughts start to spin around, and we get to other didactic issues, e.g. the use of group work, the kind of education we had, the way to teach vocabulary, etc."* [...] (Text note, A1, 20.4.)

[...] *"I enjoyed reading all the comments made both to my lesson preparation and that of others. When the discussion about reading aloud was read by me, I even took my methodology course and had a look what they actually said about that issue. I think that by now our discussion has definitely started and most things have been said. I like it very much that all people in the group are cooperating and discussing" [...][...] "The fact that everyone has to write something gives many different ideas what wouldn't have been the case with an oral discussion (personally I think I wouldn't react that much either)." [...]* (Text note, A3, 20.4.)

[...] *"At the beginning of the online discussion, I thought we all more or less had the same thoughts and convictions, but it becomes more and more clear that we completely differ on certain points."* [...] (Text note, B4, 20.4.)

Also, participants were positive about the critical remarks of their co-students and were demonstrating a positive level of tolerance to different perspectives. They wrote that conflicts become like catalysts to discussions to develop.

[...] *"[B4] had quite some critical comments, but I didn't feel threatened by it. Firstly because she often was right and secondly because she sometimes wasn't right, but she just didn't understand what I meant. So I could explain it." [...][...] "I saw [B4], who asked me if I wasn't upset by her comments, and I assured her that I wasn't, and that I found her remarks very interesting. Furthermore, that's the purpose of blackboard. We're supposed to reflect, not just to give each other compliments all the time."* (Text notes, B1, 18.4 and 20.4.)

[...] *"When the point is to have a discussion, it is good to have some more radical viewpoints within your group. That way, your own ideas are challenged as well. You have to defend what you stand for, and in order to do that, you need to reflect upon your own position to try and find arguments."* [...] (Text note, B4, 21.4.)

Participants reported that they found their shared discussions and the mode of working focused and professional-kind:

[...] *"The idea of discussing in smaller groups via the internet and via an official way is much more professional than meeting up at somebody's house and first chatting for hours about trivial things before actually starting to work."* [...] (Text note, G3, 16.4.)

Participants' joint debates with their fellow teachers-to-be turned out to be sources of inspirations for them. They recognised, for example, many useful ideas and possibilities that could enrich their true art of teaching later on.

[...] *"It is interesting to become aware that there are more possibilities, and that not every teacher does the same things with the same material."* [...] (Text note, B4, 17.4.)

[...] *"The discussion was mainly about how to evaluate the different stages of a lesson and what use the stages have considering the goal(s) of the class. This was actually also quite fun. Discussing our lesson preparations we sometimes mocked at each other, exaggerated or imagined how pupils would react." [...] [...] "Finally I'd like to say that the lesson preparation and group discussion board is already yielding profit. [D2] and I who do some group work together decided also that we are going to use some of the lesson preparation for our group work. This will save us quite some time."* [...] (Text note, D3, 23.4.)

[...] *"I think it is so interesting to read other people's version of a lesson preparation on one and the same topic! Some of the others' didactic ideas appealed so much to me to the extent that I will try and use them in the near future as well."* [...] (Text note, G3, 16.4.)

3rd Phase: Finishing up: a point of saturation

When the first week of web-based discussions came to a close, participants wrote that a certain saturation point was reached. They told they had discussed the assignment from many different angles and it looked as if the communications were literally 'drying up'. For example B1's experiences over this final stage were as follows:

[...] *"I already mailed yesterday, so not much has changed. It's almost the end of the discussion in small groups, and I think that's OK. We had nice discussions, but I get the impression that it's slowing down now, there are not many new topics anymore. Now we're ready for the large group discussion..."* [...] (Text note, B1, 21.4.)

Textual memo 2:

Assignment 2:

A context for sharing 'professional wisdom'

In contrast to Assignment 1, discussions in Blackboard were now open for all the 24 participants. Discussions were devised around four relatively provocative statements that had to do with subjective theories of teachers'. The statements were published in four separate discussion boards. The participants' task was to react to the statements of opinion (individually) and also, to respond to the comments made by the other participants.

1st Phase: Formal start of the discussions:

Participants wrote that it was not that easy, at first, to orient themselves to the large group encounters after the discrete discussions in sub-groups. For example, some of the students disliked the idea of posting one's personal insights to a general message board for everyone to see. Since they hardly knew many of their co-participants by name, the lack of confidence became acute here.

[...] *"Much less interaction in comparison to the discussions in small groups, I think of two major reasons: 1) one does not read all the threads so easily; 2) I suppose the people who made up a small group, knew each other, which (and this is only an assumption) encourages interaction. I think the shy people are less shy when discussing in small groups on line. This is also the effect when discussing in larger groups, although I think they experience a bit more 'fear' to get their things published."* [...] (Text note, A2, 26.4.)

[...] *"Now there are so many names that you can't keep track of it. There are some people in the teacher training I know by name, but mostly I don't know the names, so there is a blind spot when I see the name of a participant. It is a pity perhaps, that you can't relate the statement to the person in reality, just because you don't know the name."* [...] *"Also, you can interpret a comment more fully if you know whose it is."* [...] (Text note, B1, 25.4.)

Participants' first notebook entries reflected a certain level of disappointment with the varying quality of the contributions.

[...] *"I checked the website tonight. There were many new reactions (I think I read about 40 reactions...), but only a few interesting ones. I have the impression that most people are only saying something because they HAVE to say something – and not because they have something to say, which is something completely different."* [...] (Text note, B4, 25.4.)

For example, participants commented that the joint discussions appeared to be more a collection of individual responses, not essentially building on others' contributions.

[...] *"I only spent a short amount of time on the virtual platform this time and I have to admit that my positive feelings have slightly diminished as I feel the discussion is stuck. It's true that everybody has placed their point of view on the virtual platform but it's like I can sense a lack of interest in each other's opinion. I can't add a lot more to this. I can't react on my own messages, can I?"* [...] (Text note, G3, 19.4.)

Similarly, participants found that the discussions were engaged too much in a spirit of mutual agreement.

[...] *"My first impressions are that the reactions quite often go in the same direction. Sometimes there are only minor differences in opinion."* [...] (Text note, A4, 18.4.)

[...] *"I've just visited the discussion forum for the last time this week. In 15 minutes I'm going home. I've read the last messages (just quickly read through them). I find it is too much of the same. All this messages with every time almost the same arguments. I like to discuss, but a discussion should rather be short but powerful and interesting, than lasting to long, without having much to say. I'm not saying that there I haven't learned anything, and that is was never interesting."* [...] (Text note, D1, 26.4.)

Accordingly, students reported that the formulation of the assignment (referring to the four statements posted in BB) might have been the actual obstacle to lively and authentic discussions to arise. For example, the views presented in the opening statements were, particularly, too provocative and difficult to agree with.

[...] *"The statements are quite difficult (but they do stimulate reflection, so that's a good thing). Most of the time they refer to the order of the elements in the decree. They often choose for one aspect of teaching above another one, where I would like to combine both."* [...] (Text note, B1, 23.4.)

[...] *"I met [C2] in 'de Appel' today. We talked about our work in the blackboard environment." [...] [...] "We found that the statements of the plenary discussion are not very controversy, so everybody has more or less the same opinion."* [...] (Text note, C1, 24.4.)

[...] *"I just posted another two comments on the blackboard site and in contrast to the first two messages, which were posted on Monday, the 22nd of April, I found it a lot more difficult to form my opinion. Firstly, I think this was because more pupils had already posted messages and a lot of opinions – many that I could agree with – were already formed. And secondly, it is due to the kind of statements posted. After having*

read all the other messages I feel that there is a lot of uncertainty regarding certain formulations in the statements. I also feel that some of these statements do not always offer good opportunities for giving comments." [...] (Text note, C2, 26.4.)

However, the situation described in the earlier excerpts was also experienced as an opportunity to extend on others' reactions, to promote your own ideas and in this way, to deepen the ongoing discussion.

[...] "Most of the time, the opinions of my fellow teachers- to- be seemed to run along the same lines. The reactions were not all too radical and more or less in the line of expectations. That's why I had better not waited that long to react. The question that troubled me was 'how to put forward my own ideas in an original way, because so much was already revealed by the others'. When I read their reactions, I agreed most of the time with their thoughts, but just reacting on this and saying 'yes, I agree...' was something that I did not like doing." [...] [...] "In the reactions, I did not want to express so much a reaction on the statements only that had been put forward but I wanted to react on other students' reactions." [...] (Text note, D2, 27.4.)

[...] "In the evening, I've written an opinion to statement 4 in relation to the reaction of [F3]. There is no special reason why I've chosen this statement first; perhaps it seemed the most complicated one and as a consequence it evoked questions more quickly. I've also read the other reactions and many of these ideas coincide with my own ideas. This makes it more complicated to write an interesting answer, but of course this is also some kind of a challenge..." [...] (Text note, E1, 22.4.)

[...] "Perhaps you don't have a clear opinion on each of the four statements, then reading what others think about this might inspire you or activate your own thoughts about this matter." [...] (Text note, D2, 26.4.)

2nd Phase: Extending the scope of discussions– e.g. from the given statements towards 'real-life' issues:

Subsequently, as the discussion progressed, many of the students reported that they were able to broaden their viewpoints about current issues and in this way, also the differences in their opinions became clearer.

[...] "The topic is broadening. Although it's getting further away from the original statements, I think that's a good thing. Most people have more or less the same ideas about the statements in general, but when they start digging deeper and thinking further, all kinds of discussions and questions pop up. [C1] even looked something up on the internet." [...] (Text note, B1, 23.4.)

[...] *"The discussion with the whole group goes just fine. But maybe we are sometimes a bit too far away from the statement which we are asked to comment upon. But nevertheless it is all very interesting. I hope we can keep on discussing and that other people will come in with new ideas, thoughts and opinions."* [...] (Text note, E2, 24.4.)

[...] *"I have had some time to think about the other statements, and I hope I have added some 'new' and 'refreshing' ideas. I really think it was a difficult task."* [...] (Text note, E3, 25.4.)

One of the most inviting debates that came up in the large group discussions arose from a statement about teacher education. Concerns as well as positive observations of their teacher education programme were brought up and shared with the co-attendants.

[...] *"It was funny to see how many things are said about the statement about the teacher-training-program. It is funny...well it is rather alarming don't you think? I am glad that, in this task, there is some room to criticise our program."* [...] (Text note, B2, 28.4.)

[...] *"Interesting was for instance the brainstorming about how the teacher training could be changed, as most students find it too heavy."* [...] (Text note, B1, 23.4.)

This issue seemed to enjoy much success. The participants corresponded that some of the students were rather emotionally involved in the debates.

[...] *"The only comment that I found really interesting (also because it was a little provoking – and that is what a discussion is for) was that of [B2], where he talked about how teacher training only nearly killed off his enthusiasm for teaching."* [...] (Text note, B4, 26.4.)

[...] *"The discussion with the whole group seems to be going very well, but I wonder whether the forum isn't becoming a kind of complaint-book or a place where everyone can criticise the teacher training. Naturally, discussing the statements brings about thoughts/ideas/suggestions to make the teacher training more effective, and then complaints can easily come in to. If these "ideas" are relevant, then there is nothing to worry about, but now and then I have the feeling that some students are deviating a bit too much from the statement which they have to comment upon."* [...] (Text note, E2, 27.4.)

Consequently, a flurry of emails arrived, telling that students have actually lacked a place of this sort to share their ideas and concerns about their study programme, for example.

[...] *"Apparently there was a strong need for a forum. Perhaps it's out of place here, but there were some discussions about the teacher training in which frustrations came to the surface. But that's good as well: it may be relieving to say what you think once, and this forum was the first opportunity for us to really do this."* [...] (Text note, B1, 26.4.)

[...] *"But we [Group D] also discussed the comments on the discussion forum. In fact we agreed that the demands made in the teacher's training are quite heavy and are sometimes de-motivating. The reactions from students on this subject in fact depart from the original statement 3 given. But I think this in fact illustrates that there's all lot of discontent among the students."* [...] (Text note, D3, 25.4.)

3rd Phase: Opening the discussions for wider 'audience':

Furthermore, the participants suggested opening the discussion for all, both the staff and the students of the teacher education programme. They found the discussions were largely building on issues that might help the teacher educators to improve the programme, for example.

[...] *"In the small group discussions last week, we were commenting upon each other, in the hope we would all profit from that. It only seems logical that the criticism (positive and negative) that we are outing this week is not just an outlet for us, but that it should also go to the people involved. They could read some very valuable things on the forum, I think."* [...] (Text note, B4, 25.4.)

Also, some expertise from the field could have brought a valuable contribution to the discussions.

[...] *"During the discussion of the topics on blackboard, another interesting point of discussion was raised by [B4]. She wonders whether the courses we are taught during the teacher training are all necessary and useful."* [...] *"This is perhaps difficult to judge by teachers-to-be. I suppose we will later find out whether we have the feeling that we really learned something out of the courses."* [...] *"Isn't it possible to ask some "professionals" to react to our discussions? I think it would be excellent if we could end this week of discussion with a small discussion with teacher who already has some years of experience. Not to find out the answers of course, it will remain opinions. But I think it can be interesting to see whether our opinions match with those of the "real" teachers."* [...] *"It could give the discussion an extra dimension, and it would be a nice way of ending up, I think."* [...] (Text note, A1, 27.4.)

Likewise, it was expected that student teachers from other faculties might, for their part, bring in different resources and novel perspectives on the debates.

[...] *“There was also a suggestion that perhaps the discussion could be attended to by people with a different background, e.g. educational psychology, so that we could learn even more from each other.”* [...] (Text note, B1, 26.4)

When the second week of networked learning came to a close, some of the students felt they were not finished with their discussions about the teacher education programme, in particular. Accordingly, they commented that besides the standard courses, to set up a permanent context for informal discussions online might be beneficial. The discussion board could serve as an open forum not only for subject-related discussions but also to discuss and to reflect upon their own experiences in the teacher education programme, for example.

[...] *“And maybe, although this sounds cheesy, we can make the program better together. Why not have a permanent internet-site where students can propose things to make the program better or something like that...”* [...] (Text note, B2, 28.4.)

2.5.2 Synthesis of Textual memos 1 and 2

The next table (Table 3) summarises the researcher’s observations concerning the participants’ shared processes of building their collective unity/unities over the two assignment designs (i.e. Textual memos 1 and 2). The synthesis is divided into three different phases identified from the notebook data by the researcher. In sum, looking at the life-cycles of the unities here, during Assignment 1 in sub-groups, students’ unities fell apart as soon as they accomplished their shared assignments, whereas in Assignment 2, the more open assignment design (i.e. open discussions around different statements), allowed for opening for departing from the ‘script’ of the course design here (see e.g. Kolb, 2000) in forms of ‘side conversations’ on real life issues that concerned them personally, such as the teacher education programme they were participating.

Table 3. *Synthesis of Textual memos 1 and 2.*

	Assignment 1: Sub-group discussions	Assignment 2: Large group discussions
1st Phase	<p>Slow start of the discussions: Discussions experienced to start slowly:</p> <ul style="list-style-type: none"> • Students preferred to wait how the others would react on the tasks. 	<p>Formal start of the discussions: Difficulties to orient to large group encounters:</p> <ul style="list-style-type: none"> • Disliked the idea of presenting their personal insights in an open forum.

<p>Not easy to expose personal reflections and lesson preparations for comments:</p> <ul style="list-style-type: none">• Significance of the quality of their own contributions.• Comments on co-participants' personal documents prepared with care: the issue of 'delicacy'. <p>Critical notions:</p> <ul style="list-style-type: none">• Majority of the exchanges oriented to too similar targets.• Harmony came at the expense of differences in opinions?	<p>Disappointment with the quality of contributions:</p> <ul style="list-style-type: none">• 'Discussion' was more a collection of individual responses with less group identity.• Discussions (too much) engaged in a spirit of mutual agreement.• Nature of the assignment obstacle to lively discussions to arise: seen as too provocative, resulting in too long message threads. <p>Participants, still, saw opportunities:</p> <ul style="list-style-type: none">• To extend on the issues presented.• To qualify and deepen the discussions.
<p>2nd Phase: Broadening the scope of the discussions – e.g. from the personal tasks towards more general didactic issues:</p> <ul style="list-style-type: none">• Groups broadened the scope of the discussions.• Discussing issues not only pertinent to the tasks of Assignment 1.• Participants positive about the critical remarks of their co-participants: brought the group closer together.	<p>Extending the scope of discussions – e.g. from the given statements towards 'real-life' issues:</p> <ul style="list-style-type: none">• Differences in the opinions became clearer.• Sharing delicate and personal experiences.• Most inviting debate arose from the statement about teacher education: concerns and positive observations were brought up.• Some of the students were rather emotionally involved in the debates: not considered only positive by the co-participants.
<p>3rd Phase: Finishing up: A point of saturation:</p> <ul style="list-style-type: none">• Topics were discussed from different points of view.• Discussions were literally 'drying up'.	<p>Opening the discussions for wider 'audience':</p> <ul style="list-style-type: none">• Willingness to open the discussions for staff members of the programme and to invite other experts and students from other faculties.• Participants not finished with the discussions yet: Proposals to set up a permanent online site for informal discussions.

2.5.3 Qualitative content analysis on symbolic meanings of community

In order to capture a static image of community, the final phase of the analysis was realised in terms of qualitative content analysis. In the analysis, the notions of symbolic meanings of community, as put forward by Mercer (2000), were used as a broad lens to guide the analysis (see Section 1.2). The categorisations used for Data set 1 were not used with the aim of looking for empirical evidence of them as such or verifying them as taken-for-granted understandings. Instead, the coding scheme, by breaking the unity into smaller parts, helped capture the static image of community that the students themselves were depicting.

As discussed in Section 2.4, the analysis of Data set 1 was built on the participants' perspective and therefore the personal process notebook entries received the most attention here. In the first phase of the qualitative content analysis (e.g. Krippendorff, 1980; Miles & Huberman, 1994), after first reading the personal process notebook entries (i.e. text notes) roughly through, a more fine-grained analysis was made. In this work, the set of categories for coding the text notes were developed in relation to Theoretical vantage point I (see Section 1.2). Thus, 'coding' refers here to allocating the text notes to four categories established on the basis of Mercer's (2000) notions on the symbolic meaning of community. In short, the categories chosen were: *history*, *obligations*, *collective identity* and *discourse* (a more detailed description of the categories can be found back in Section 1.2). These categories were seen a) as enlightening, b) covering sufficiently the diverse aspects of the phenomenon under study and also c) discrete enough: even though the categories were linked, they were not overlapping. According to Rose (2001), these characteristics should be recognised when designing categories for coding. Following Lutz and Collins (1993), developing the categories in relation to the theoretical concerns might also make the categories immediately more interpretative. However, to be noted here, due to the many definitions and interpretations of community, it would have been impossible to find appropriate categories to meet them all, neither was it the intention here.

Thinking back of the process of coding, one text note usually contained several themes and thus included elements that had to do with more than one category. Therefore the unit for categorisation was selected to be any integrated whole that reflected the element. In this work, the unit was sometimes a paragraph, a sentence or a clause. In some cases, if one unit included elements of more than one category, such units were

coded to every relevant category. Also, if the respondent described the same occasion several times, it was coded only once, which particularly made the coding more accurate to perform manually. However, what was obviously the weakness of the analytical process in terms of reliability here was that instead of using several coders going through the same procedure independently, cross-checking the results and refining the coding where necessary (see Rose, 2001), in this study only one coder (the author) was available. However, to increase reliability, the author coded the text notes several times and, finally, went through all the codings within each category as separate and also counted some frequencies (see Table 4). However, the main and original purpose of categorising the notebook data was to break the image of the unity into smaller parts, not compile statistics for the categories. Even though these simple frequencies might be problematic to interpret (Rose, 2001), they gave a rough overview on the size of the categories and also indicated possible decrease or increase for these items within the two assignment designs.

Further, to increase the validity of the study, the interpretations are illustrated with different examples from different participants with regard to the two qualitatively different assignment designs. As was witnessed in the process of analysis, for example, the ways in which participants experienced their particular unity and its symbolic meanings were often varied and likewise, the same occasions within the unity were also understood differently by its different members (Barth, 1981; Shumar & Renninger, 2002). To make this more explicit, an example of the varied interpretations different participants made from the same occasion is presented here (see Example 2). Example 2 includes an excerpt from the discussion board data, contrasted with two rather opposite interpretations of the posting.

The excerpt is from Assignment 2, where the forum was open to all the course participants. To facilitate discussions, four confrontational statements, which had to do with teaching and teaching profession in general, were published on separate discussion boards in Blackboard. During that week, the students were expected to react to the statements and to develop arguments for the ongoing debate with their fellow students. The data excerpt here is from the discussion around Statement 3, which reads as follows:

Statement 3:

"In the decree, emphasis is put on the co-operation and collaboration between teachers and colleagues, parents and other experts outside school. Traditionally,

teacher training programmes are focused more on the development of individual knowledge and competencies. So, this must be changed: in the new teacher education programmes various dimensions should be integrated to prepare professionals with adequate co-operative and collaborative foundations and skills."

In the left column (See example 2) stands an excerpt from the discussion board data. The posting here represents the rather colourful discussions around the Academic teacher education programme, arising from Statement 3. The right column displays the two opposite opinions on this response, derived from the personal process notebook data. In brief, in Excerpt A Student B4 is describing the rather provocative postings, digressed from the original assignment given, with highly positive terms, whereas Excerpt B represents a less radical point of view. What was interesting here, were the different interpretations as to how Assignment 2 and the discussions on the given statements should be accomplished. Student B4 accepts this 'freedom of opinion' taken, but for Student E2, accomplishing the task in a 'required' matter comes at the expense of broadening the shared discussions. These notebook excerpts here were coded into the *Obligations* category.

Example 2:

Discussion board data:

Date: Tue Apr 23

Author: [B2]@student.kuleuven.ac.be>

Subject: My opinion on the matter

Dear all,

[...] "I think we still spend too much energy on useless activities. I do not want to bring some people's work down. I am sure there are a lot of people who work very hard, trying to make the teacher training as good as possible. That said, I think the most important thing a student of a teacher training-course should learn is enthusiasm and fun to teach." [...] [...] "But I think without pleasure, without knowing that your job is creating positive energy for pupils, there is no way you can become a good teacher. And with all respect for those who work hard to get a good course for us, i am very sorry to say that the

Excerpts derived from the notebook data, coded into 'Obligations' category:

Excerpt A:

[...] "The only comment that I found really interesting (also because it was a little provoking – and that is what a discussion is for) was that of [B2], where he talked about how teacher training only nearly killed off his enthusiasm for teaching. I didn't react on the statement, simply because I could not say more than "I agree"!" [...] (Text note, B4, 26.4.)

Excerpt B:

[...] "I have a few remarks concerning the discussion forum. The discussion with the whole group seems to be going very well, but I wonder whether the forum isn't becoming a kind of complaint-book or a place where everyone can criticise the teacher training. Naturally, discussing the statements brings

<p>one thing I lost during the course is this drift, this urge to teach and work with teenagers in a school. I am sorry to say that some examples we got in our teacher program were very poor. Both in teachers' skills and fluency. Both in fun to listen to and the message they had to share. Adding courses on cooperation and whatever is proposed in the statement would, again, add more of boring and energy-eating hours of seminars. I am sorry to say this, but I think I am not the only one who thinks this." [...] [...] "Again, my aim was not to destroy all the energy people have put in our course, but I would like to alarm those in charge to PLEASE make the course more enthusiastic, more practical, more fun, more useful and less boring, less grey less time-consuming, less chaotic and far from reality." [...]</p>	<p>about thoughts/ideas/suggestions to make the teacher training more effective, and then complaints can easily come in to. <u>If these "ideas" are relevant, then there is nothing to worry about, but now and then I have the feeling that some students are deviating a bit too much from the statement which they have to comment upon.</u>" [...] (Text note, E2, 27.4.)</p>
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In sum, as was said earlier in this section, in order to make the study more valid, and to illustrate the multiple lines of thoughts and varied interpretations of the same occasions, the analytical categories are presented through examples from different individual participants. Similarly, since the seminar involved two qualitatively different assignment designs that created different circumstances for activities to develop, the excerpts are also intended to reflect the categories in both conditions of the seminar (i.e. Assignment 1 in sub-groups; Assignment 2 in the whole group of students).

2.6 The results (Study 1)

Aforementioned, on the basis of the analytical tool, participants' personal online notebooks were allocated to four categories of symbolic meanings of community – *history*, *obligations*, *collective identity* and *discourse* (Mercer, 2000). In Table 4, the categories are presented together with the number of excerpts of certain kinds of experiences by individual participants according to the different conditions of the course design. In both assignment designs, the largest categories were *obligations* (n=267) and *discourse* (n=88).

Table 4. *Classification of students' descriptions of the symbolic meanings of community in the context of virtual seminar.*

Symbolic meaning	Assignment 1: in sub-groups (n)	Assignment 2: as whole group of students (n)	All together (n)
History	17	7	24
Obligations	155	112	267
Collective identity	11	24	35
Discourse	52	36	88

Next, the different categories are described in more detail. The elements that were part of each category are explained and illustrated by excerpts from participants' online notebooks. Aforesaid, the excerpts are derived from different participants and, from the both conditions of the seminar design (from Assignment 1 and 2).

2.6.1 History

The *history* category included descriptions of experiences that derive from students' former acquaintances with other participants; based e.g. on friendship or a common study background. Participants connected this aspect to the special qualities of mediated, literate forms of communication in Blackboard.

First assignment:

In Excerpt 1 Student C3 reflects on certain tensions and artificiality regarding the use of remote technologies brought into the situation. She points out the contradiction between the nature of the first assignment and the use of mediated communications when accomplishing the assignment; particularly with the people she knows as friends.

Excerpt 1:

[...] "Yesterday our discussion in small groups started" [...] [...] "Initially, I had a weird feeling about the whole thing because it feels a bit unnatural commenting on somebody's work using the internet. Indeed, it is more natural to reflect on somebody's work by simply telling him or her. With Kevin I felt this awkwardness a bit

already. But Anneke is one of my best friends and so it's really strange not to tell her face-to-face but to do it indirectly.' [...] (Text note, C3, 18.4.)

Second assignment:

In Excerpt 2, Student B1, in turn, reflects on the situation in large group discussions. She finds the shared background as an optional resource to gain a better understanding of other participants' statements of opinion- not as a necessary condition, though.

Excerpt 2:

[...] "Now there are so many names that you can't keep track of it. There are some people in the teacher training I know by name, but mostly I don't know the names, so there is a blind spot when I see the name of a participant. It is a pity perhaps that you can't relate the statement to the person in reality, just because you don't know the name." [...] [...] "But of course it's not necessary to know who you're talking to, although it's nicer and has a more human dimension. Also, you can interpret a comment more fully if you know whose it is." [...] (Text note, B1, 25.4.)

Participants' experiences coded in the history category reflect the meaning of former experiences of doing things together. In the first assignment the composition of the sub-groups was based mainly on personal contacts, which could explain the higher frequency of History references during Assignment 1 (see Table 4). Members who came outside the circle of fellow students or were not friends, reported experiences of estrangement and difficulties in working out how to act and respond according to the norms governing interaction in their online groups. In this case, the design of the first assignment – the preferred mode of grouping, particularly – did not recognise the risk of some students becoming isolated or marginalised (see e.g. Reynolds & Trehan, 2001). Students that were not acquaintances reported that it constrained their participation in and contributions to the shared assignments (see also Mann, 2003). In the first assignment, the unquestioned or idealised interpretations of the values of traditional community (mutuality, harmony and more) might also have undermined the benefits of 'learning from difference' here (Hodgson & Reynolds, 2005). In contrast, the second assignment design that was organised as a simultaneous activity for the whole group of students and, around less personal tasks, did not similarly embody the values of consensus as a basis for discussions to arise.

2.6.2 Obligations

The experiences of the students as online learners faced with the conventions of technology-enhanced communications were linked to the experiences coded in the *obligations* category. This category included descriptions of experiences that derive from individual and reciprocal responsibilities related to the fulfilment of the assignments. The descriptions dealt with participants' expectations of the roles and ground rules when completing the assignments together. The participants connected this aspect with sharing intellectual resources and thus learning from and together with the co-participants, staff members or other experts outside the virtual seminar. Likewise, this aspect was connected to learning new modes of working; for example, learning how to collaborate and also how to utilise communication technologies in joint learning.

First assignment:

The next excerpt deals with the lack of full understanding of participants' responsibilities in relation to the first assignment. In Excerpt 3, Student B4 refers to a face-to-face discussion with her fellow student. At this point, shared routines had not yet been established. They share concerns about the quality of their contributions in comparison to those of the others and therefore rather prefer to wait and see how their co-students have performed the tasks. Likewise, this is expected to happen also with respect to commenting on co-participants' contributions.

Excerpt 3:

[...] *"I talked with a girl (face to face) who also does this alternative task. She told me she was waiting to post her work so that she could look at the others' work first, to see if hers was all right. In fact, that was exactly what I was doing as well." [...]* *"I have the impression that the same thing will be happening as to the comments on the others: everyone seems to be waiting to see what sort of comments the others will give." [...]* (Text note, B4, 16.4.)

The next excerpts deal with the issue of sharing intellectual resources with the other participants and thereby learning from and together with the co-participants. In Excerpt 4 Student A1 notes that as the discussions have been going on for a while, their sub-group is broadening the primary scope of the discussion. They are, for example, sharing more general ideas and inspirations about teaching with their fellow students.

Excerpt 4:

[...] *'Everyone is actively participating now. I replied to all comments, I actually wrote quite a lot. We discuss about certain aspects now, sometimes less directly in relation with the lesson or reflection itself. Our thoughts start to spin around, and we get to other didactic issues, e.g. the use of group work, the kind of education we had, the way to teach vocabulary, etc.'* [...] (Text note, A1, 20.4.)

Second assignment:

In Excerpt 5 Student D2 refers to his experiences during large group discussions. He writes that the other participants' reactions can provide a good opportunity to reflect on your own insights and in this way to broaden the scope of your current thinking.

Excerpt 5:

[...] *"And, you can also learn from the other members of the larger group. In reading the reactions of your fellow members you learn how they feel about the profession of a teacher. You can either see your own opinions supported or rejected and as a consequence you can come to new insights and adjust your own subjective theory" [...][...].*" *If one can support one's own opinion with solid arguments why not listen to it and make use of these others' insights? Perhaps you don't have a clear opinion on each of the four statements; then reading what others think about this might inspire you or activate your own thoughts about this matter."* [...] (Text note, D2, 26.4.)

Obligations-related experiences revealed that one factor constraining engagement in joint work stemmed from the assumptions participants made concerning the reciprocal obligations, particularly in the beginning of the study. Particularly during the first assignment, students had adopted different understandings of what was correct e.g. in terms of the task fulfilment and appropriate behaviour, based on their former experiences in conventional learning contexts. They did not always check out their assumptions and if they did, it seemed that they did not want to take any risk and to break the assumed code of behaviour (see e.g. Conrad, 2002). Also, discussions were reported to take place outside the web-based environment with people they know. As a result, informal, overlapping groups and pairs were formed that met occasionally face-to face or used other modes of communication outside Blackboard (chat, GSM, for example). In this way, they jointly constructed sources of orientation (Mynatt, O'Day, Adler & Ito, 1998); but, notably here, these sources of orientation were often based on unquestioned assumptions of what was expected from them, also in terms of the requirements set for the seminar. These underlying assumptions were experienced to limit their own con-

tributions and influence the processes of learning. The nature of Assignment 1, as primarily task-driven might be particularly counterproductive for communal activities to flourish (Cousin & Deepwell, 2005). This aspect may also partly explain the larger number of notions in the *Obligations* category compared to Assignment 2 (see Table 4).

2.6.3 Collective identity

The category of *collective identity* included descriptions of experiences that derive from, on the one hand, in the first assignment, experiencing the group to provide support in forms of sharing (e.g. similar goals, problems and future challenges as teachers-to-be and) and, on the other hand, in the second assignment, experiencing the group to provide support needed in bringing conflicting and delicate issues into public (e.g. problems related to the teacher education program) (see Hodgson & Reynolds, 2005).

First assignment:

In the next excerpts participants depict their experiences during the first assignment in sub-groups. Sharing the lesson preparation makes it possible for Student A1 to relate her problems to those of the others, and in this way to find a meaning and direction for her own endeavour jointly with the others (Excerpt 6).

Excerpt 6:

[...] "We all had difficulties with doing this lesson the way we liked to without spending more than 50 minutes. Also when preparing other lessons this was one of my major problems. It was nice to hear that I'm not the only one who has problems with this and get tips about how to solve the problem. And also try to help the others with solving their problem." [...] (Text note, A1, 23.4.)

In Excerpt 7 Student B1 writes that in the discussions participants are drawing on their own expertise – not only on what they had learned at the university but also on what they have experienced during the practice.

Excerpt 7:

[...] "There are some good remarks, everybody is honest and serious. Even if we only write short comments, there's often a lot of content in it, based upon what we think about teaching, what we learnt at the university, what we experienced in our teacher training practice." [...] (Text note, B1, 20.4.)

Second assignment:

Participants reported that what was particularly inspiring were the moments when they were able to extend and elaborate on the pre-defined assignments and topics for discussions. Student B2 in Excerpt 8 points out that the quality and the present structure of the teacher education programme seem to generate an engaging object for joint discussions to arise. He is pleased with the opportunity of this sort for discussing concerns related to the study programme and implies the improvement of the teacher education programme as a focus they could jointly pursue.

Excerpt 8:

[...] "It was funny to see how many things are said about the statement about the teacher-training-program. It is funny...well it is rather alarming don't you think?' I am glad that, in this task, there is some room to criticise our program." [...] "And maybe, although this sounds cheesy, we can make the program better together. Why not have a permanent internet-site where students can propose things to make the program better or something like that..." [...] (Text note, B2, 28.4.)

Experiences of collective identity emphasise the relevance of the assignments in terms of participants' individual and shared interests and existing needs. The different assignment designs seemed to result in two largely different infrastructures and discussion processes. In self-selecting sub-groups, the situation was seen as an arena in which students were willing to interact in an atmosphere of agreement and harmony, seemingly avoiding too harsh communications. Some of them were criticising, however, that the harmony came at the expense of true differences of opinions. In this sense, the quality of discussions emerging here was limited to sharing (Ellsworth, 1989). Participants noted, for example, that at the close of the first week of web-based discussions a certain saturation point in the discussions was reached. They wrote they had discussed the issues from many different angles and it looked as if the communications were literally drying up. In contrast, the whole-group discussions were experienced to invite participants for discussions in which the conflicting points of view were mainly regarded as positive; as catalysts for authentic themes in discussions to arise. This aspect might have an effect on the increase of notions coded into this category as regards Assignment 2 (see Table 4). It was reported, for example, that it became possible for them to create an open infrastructure that provided the support needed for questioning and critique and stating different views on issues. Mostly, the differences became accepted without an expectation they should be somehow resolved (see e.g. Young, 1986).

2.6.4 Discourse

The *discourse* category included descriptions of experiences that derive from the use of language during the discussions. These descriptions deal with the form and purpose of the language used. The next Excerpts 9 and 10 deal with the *form* of the language used in both assignments.

First assignment:

In Excerpt 9 Student A2 connects this aspect to the assignment designs. In the first assignment, discussions are structured by specific questions and involve only few participants, which makes the discussions easy to follow:

Excerpt 9:

[...] *"The discussions we had were in small groups which makes the length of the threads and reactions ok. I think – but this I will experience this week – that working with a larger group of people might cause some communication and reference problems."* [...] (Text note, A2, 23.4.)

Second assignment:

In contrast, in the second assignment (see Excerpt 10) less elaborate comments on the statements often result into long messages and lengthy message threads, which make the general line of reasoning hard to follow:

Excerpt 10:

[...] *"The questions are more abstract, more difficult to deal with. I think that they could take a while when discussing Face-to-face. This is clear when you look at the length of the threads. I have the impression that only the long ones are able to give a good answer. The short ones are good as a reaction, but miss some clearness."* [...] (Text note, A2, 26.4.)

The next Excerpts 11 and 12, in turn, depict the *purpose* of the communications.

First assignment:

In Excerpt 11 Student G3 describes the factual and focused discussions in sub-groups as positive from the participants' point of view, pointing out the professional quality of communications.

Excerpt 11:

[...] *"The idea of discussing in smaller groups via the internet and via an official way is much more professional than meeting up at somebody's house and first chatting for hours about trivial things before actually starting to work."* [...] (Text note, G3, 16.4.)

Second assignment:

In Excerpt 12 Student B4 tells that the large group discussions were largely building on issues that could have a valuable contribution to practice; to help teacher educators to improve the programme, for example. She suggests opening the discussions also for the staff members of the faculty.

Excerpt 12:

[...] *"In the small group discussions last week, we were commenting upon each other, in the hope we would all profit from that. It only seems logical that the criticism (positive and negative) that we are outing this week is not just an outlet for us, but that it should also go to the people involved. They could read some very valuable things on the forum, I think. For example: it has been said a few times on the forum that our teachers don't seem to co-operate very well themselves, since we often get the same content in 4 of 5 courses and / or seminars. It is important that the people organizing teacher training for Germanic languages students start realizing things like this!"* [...] (Text note, B4, 25.4.)

Experiences coded into the discourse category show that interchanges in Blackboard-environment were described as focused and germane to the assignments, particularly during Assignment 1. Within the context of the seminar, what was considered fluent and appropriate was a certain 'professional tone' in discussions reflecting their position here as teachers-to-be. However, what was interesting here were the conflicting observations (particularly, over the self-selecting sub-groups of students), which showed that simultaneously with their web-based discussions, in their personal notes the participants also depicted various contacts with their fellow students, often intermingled with other social activities – face-to-face or using other channels of communication. This might also explain the higher number of notions of this category for Assignment 1 (see Table 4). Generally, this category illustrated the hybrid character of the collocated participants' unity over the 'virtual' seminar (Rohde et al, 2004; Pöysä, Lowyck & Häkkinen, 2005). Accordingly, the web-based learning environment was not the only resource for communication but their interaction was realised in a confluence of various

online and offline environments, in formal and informal ways. Often mutual trust was already established elsewhere and the collaboration platform constituted just one component of students' larger learning environment; devoted predominantly to the completion of the shared assignments.

2.7 Synthesis

The aim of this small-scale study was to examine how individual participants (student teachers) experienced their collective activities over two different web-based assignments, pertaining to a three-week virtual seminar that was designed for the values of technology-rich community in higher learning. In this study, the idea was to examine the origin and formation of the collective activities of these learners not only through observable communications in the web-based learning environment but primarily considering individual participants' experiences of the collective activities, on- and off-line. In the study, the notions of symbolic meanings of community (shared *history*, reciprocal *obligations*, *collective identity* and *discourse*) (Mercer, 2000) were used as an analytical tool to examine the ways in which participants themselves experienced collective activities over the seminar. To be noted here, the analytical tool has its basis on more traditional communities. Although the short period of data collection limited the possibility to draw any conclusions about longer-term development, the categories identified from participants' personal notes opened a contextualised view into the early phases of development of collective activities in this particular context. Table 5 summarises the results of the qualitative content analysis on the symbolic meanings of participants' unity/unities over the virtual seminar.

The material in the main dictated that the episodes that were meaningful in participants' terms were often flourishing in unplanned and improvised occasions deriving from the formal acts of collaboration (Crook, 2000). Particularly, students' opportunities to voice out different personal experiences on real issues that concerned them truly and equally, and having these accounts heard, were reported to result in lively and purposeful engagements in their 'professional community of teachers-to-be', as they might call it. Coming back to the definition of community, the force that structured collective activities in this context did not reflect the realities of the afore-mentioned static image of community in which symbolic meanings are usually driven by values of harmony and mutuality, for example (Bruhn, 2005). In contrast, in this study the characteristics of students' collective activities indicated that to define the conceptual origin of the

Table 5. *Categories of the symbolic meanings of the participants' unity/unties over the virtual seminar in a teacher education context.*

Category of the symbolic meaning of community	Description of the symbolic meaning of community
History (n=24)	Former joint endeavours (friendship, common study background)
Obligations (n=267)	Reciprocal responsibilities (rules and appropriate behaviour concerning task fulfilment: personal creation / formulating comments on others' creations)
	Sharing intellectual resources and learning from/together with the others (co-participants, staff members, experts outside study context)
	Learning how to collaborate
Collective identity (n=35)	Finding a meaning/purpose for shared endeavours (sharing experiences, e.g. developing the teacher education programme together)
Discourse (n=88)	Specialised use of language (form and purpose)

unity the university students were forming, it might be best to address it as a communicative event; originating from simultaneous and overlapping activities in multiple, informal and formal, sub-communities or communities of peers (Hodgson & Reynolds, 2005; Mann, 2005). Mann (2003; 2005) defines such a unity as a specific social construct where participants' engagement in shared activities and joint products are predominantly based on the possibility to meet others and openly share perspectives, be they conflicting or coherent (see also Hodgson & Reynolds, 2005). The communicational ideal of such a unity of loose connections (Bruhn, 2005) is not a process that seeks for a mutual agreement or a consensus as a basis for belonging. Instead, the aim would be to construct an open infrastructure for questioning and critique on an individual and collective level, respectively. In this unity, instead of practicing 'the art of niceness' (Conrad, 2002) and keeping differences at distance or smoothing them out, the various interests and roles could be seen as the actual basis for belonging and learning, supported in multiple and changing sub-communities of students (Hodgson &

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Reynolds, 2005). This, in turn, could allow the participants to contribute in ways that are meaningful and productive for the realisation of their own potentials as well as the requirements set for learning (Mann, 2005).

CHAPTER 3

Experiencing 'learning Place' and its social construction (Study 2, Part 1 and Part 2)

Chapter 3 focuses on Study 2 and first describes the research participants and the instructional context of the study. Second, the sources of the data (Data set 2) and the relations between the different types of data collected are described here in more detail. Third, this chapter reports the steps taken in the analytical process for Data set 2. Finally, the results of Study 2 are discussed in two parts (Part 1 and Part 2). The results sections conclude with a brief synthesis of the results of the sub-studies.

The aim of Study 2 was twofold. First, (see Part 1) it was examined what formed the 'territorial' reference points of the participants' unity over a technology-enhanced higher education course: how the research participants (student teachers) experienced the on- and offline learning environments to come together over the study (i.e. experiences of hybrid 'Place' and its relational assemblies). Second, it was studied (see Part 2) what forms their unity took as the collective activities progressed and changed over the technology-enhanced course. In more specific terms, the aim of Part 2 was to visualise the process in which these relational assemblies of on- and offline learning environments were produced: how the participants jointly constructed the experience of *their* 'Learning Place' from the social and material elements that were available to them over the technology-enhanced university course.

3.1 Research participants and instructional context of Study 2

Study 2 was conducted during the autumn term 2002 as a part of the SHAPE research project funded by the Academy of Finland. The university course under study was an eight-week technology-enhanced course, orchestrated as a collective activity between the University of Oulu and the University of Jyväskylä in Finland. The course was a regular part of the curriculum of the participating universities and therefore, instead of separate testing situations in non-contextualised research settings, the situation provided a possibility to conduct a more extensive study in a natural context of higher education.

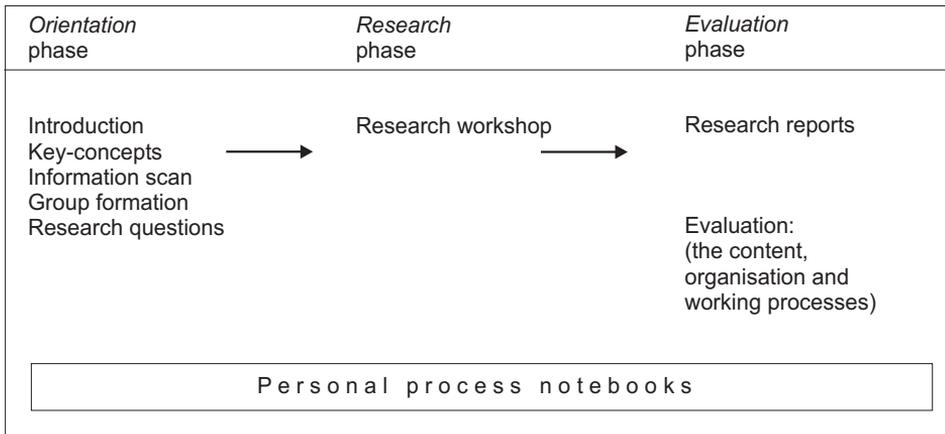
The research participants were teacher trainees majoring in English philology at the University Jyväskylä (n=13) and at the University of Oulu (n=9). The staff members (university lecturers and researchers) came from the University of Oulu (n=2), the University of Jyväskylä (n=3) and the University of Leuven (n=1). Simultaneously with the research activities, both of the staff members from Oulu and two members of the Jyväskylä group were acting as teachers of the course, whilst one of the Jyväskylä members and the member from Leuven (the author of this work) were acting as researchers only. The students in Oulu started their course two weeks earlier than the students in Jyväskylä and therefore both of the locations had tailored starting procedures for the course.

The course, entitled 'Culture and communication in virtual environments', was designed to take place in the Discendum Optima environment. Like the Blackboard environment used in Study 1, Optima is a platform for (collaborative) learning activities and similarly intended to be relatively neutral by nature. The platform supports multiple text-based communications, carried out on discussion boards, via shared documents and folders, email and chat rooms. With this set of tools, Optima provides course designers with a possibility to customise the workspace according to the specific needs of the course activities. For example, the designers may create user profiles that define which components of the environment the participants may have access to and what kind of objects they are allowed to construct. In this context, objects refer to documents, folders, links, discussion boards and so forth. The Optima tools chosen for the SHAPE 2002 study included the document sharing option, the discussion boards and chat rooms. The participating students were given rights to access discussion boards, documents, and the statistics on the (co-) users' activities. The statistics were available

in numerical form (e.g. how many messages an individual participant had sent/read, how many objects opened and documents created) and also as diagrams concerning discussions on a particular discussion board.

The course was designed around the 'doing research with' metaphor and included three different phases (see Table 6). The first phase, labelled as *Orientation*, was aimed to inform the participants about the organisation of the activities over the course and about the domain of the course in general. In this phase, the participants in Oulu and in Jyväskylä had local face-to-face meetings where the web-based learning environment was introduced and the course rationale discussed with the students. Also the research procedures were introduced. In brief, the research workshop, as the course was called, entailed students to formulate joint research topics connected with the domain of culture and communication in virtual environments. To orient themselves for the assignment, students were to first chart the field by jointly analysing the key concepts of the course (culture, communication, virtual environments) on a general discussion board in Optima and also by reading articles of their own choice or from the reading list placed in the resource library in Optima. In this phase the primary task of the students was to form research groups with their fellow students and to choose specific topics for their research within the domain of the course. The realisation of the second, i.e. the main phase of the research workshop, labelled as *Research*, was left rather unstructured. In this phase the main task of the sub-groups was to make a profound analysis of their research topic and also to draft a joint research report. The sub-groups could choose the ways in which they wanted to pursue their joint research agendas and also, they could decide themselves the final form of their research report. Finally, in the third phase (labelled as *Evaluation*) all the groups would present their joint products during a videoconference meeting between Oulu and Jyväskylä. The course would finish with an evaluation discourse concerning the content, organisation and working processes of the course. Evaluation was to take place in the Optima-environment. In addition, over the research workshop, participating students in Jyväskylä were requested to reflect on their personal experiences of the collective activities and write their thoughts in a personal process notebook (see Section 3.2 for more detailed description).

Table 6. *Different phases of the technology-enhanced research workshop.*



3.2 Data sources (Data set 2)

In qualitative research in general, multi-method approaches are used, for example, in order to examine different levels of the same situation or to focus on different aspects of the same phenomenon (Dillabough, 1999; Luttrell, 1999; Mann, 1998). For example, the experiential perspective can be complemented with participant observations. In the context of technology-enhanced activities, observation can be referred to as reading, monitoring, lurking, and other such terms (Jones, 1999; Lotfalian, 1996). Even though the primary aim of this study was to adopt an individual participant’s perspective on collective activities, in a confluence of on- and offline learning environments, in order to understand the participants as rounded individuals, the use of multiple methods was particularly justified here. In brief, Data set 2 comprised written data in forms of personal process notebooks (text and visual notes) produced by the Jyväskylä participants, Personal log produced by Oulu participants, discussion board messages, shared online documents and recorded chat sessions. The video and audio recordings comprised videotaped face-to-face meetings at the Jyväskylä campus, recorded Net Meetings and a videoconference meeting.

To identify how participants themselves experienced the overlapping and coexistent contexts of study, Participant experience- method was designed (fuller description of the method can be found in Pöysä, Mäkitalo & Häkkinen, 2003). The method was built on a personal process notebook, designed particularly to act as an instrument, first,

to bridge the physical and online surroundings and second, to reveal simultaneous events or events that were taking place outside the web-based learning environment. In this study, the personal process notebooks were collected from the participants in Jyväskylä only and, were built in the design of the tailored course of Jyväskylä. However, some voluntary staff members (n=5) and one student in Oulu were reflecting their observations in an online document, named 'Personal log', placed in the Optima environment (for a fuller description on the method developed by an Oulu-based research group, see Saarenkunnas, 2004). For the purposes of this study, only one personal log was utilised, produced by the active student member in Oulu.

In short, the personal process notebook consisted of text notes (regular emails with the author; see Example 3) complemented with visual notes (photographs together with a short depiction; see Example 4). The underlying principle of this method was to build up a frequent email correspondence between the researcher and the researched. Over the course, participants were solicited to send personal notes as regular email entries, approximately two entries per week. The researcher's task was always to reply to the note received and ask further questions, if needed. In this sense, the method would remind an online interview. In the notes, participants were encouraged to reflect on their personal experiences first, in social and communicational processes (as groups, dyads and more) on- and offline; and second, to describe how they experienced their learning environment and its various patterns (on- and offline) in relation to these shared processes.

Example 3 (a text note):

Subject: Tenth entry

Date: Thu, 31 Oct 2002 09:24:47 +0200

Situation: Discussions all over campus with Lisa, Optima work alone

Media: F2F, Internet

[...] *"Ok. First, some answers to your questions. We use only Optima, not e-mail. That seems to suit us because we visit optima quite often. I think one of our ideas is that everyone can follow our process (at least I would like to do an experimental project). So, all our discussions are in Optima — I usually write down also the things that we have discussed with Lisa face-to-face, either as my own thoughts (if they are such), or as "me and Lisa this-and- that". After using chat with Lisa we have not used chat, mostly probably because we are never there at the same time. Another reason could be that I (and I think Lisa too) do not have much experience of chat, so we don't consider it as a medium. So, all you see in our folder is basically all we have done.*

I think we've had a couple of good discussions with Lisa lately. Kind of what we want from all this and how much effort we have to put into it. I personally think that Lisa and I are interested in the feelings that working in Optima raises in us. I hope that we get Tina excited about this, too (well, I think it is not too difficult to get her excited ;)). I even took a picture, let's hope it is a good one! We went to have a "quick" cup of coffee before we go and search books for our proseminar, but it turned out to be a really refreshing discussion about proseminars and Optima, too. i really felt good after that, though I can't tell what we discussed exactly... But I think this experimenting-idea came to me then.

So, our task for this week is to come up with a research question. Have a folder for that already!

Sara" [...]

In Study 2 participants were also asked to make visual notes as photographs over the course (see Example 4 below). At the onset of the study, students were given disposable cameras and sketchbooks and they were asked to document places, events or people they found to be important for them during the course. The photographs were to be accompanied with a short description explaining why the particular picture was taken and link the photograph this way to the larger context of the course. It was expected that photographs taken by participants could allow another perspective or a 'sequence' on the working processes to be presented parallel with the textual data. Also, when combining the photograph with a description, an individual photographic image would, then, become part of larger narratives of participants' personal experiences. The disposable cameras and sketchbooks were collected at the end of the course. In addition, over the course, students were also encouraged to take digital pictures, if possible, and send them together with relevant descriptions via email to the researcher.

Example 4 (a visual note):



[...] "I took this picture because this was probably the first time we came to an *Optima* meeting and were quite happy about that. Or at least that was the situation with me (Sara). We are just about all grouped: You can see Eva and Ester on the background, but, Juho, Aili, Eila and Ainamaria did not fit into the picture. Ida and Eriikka are still wondering a bit. And, we are grouped on the front... Nevertheless, we are all getting on quite well with *Optima* (I suppose, all of us having our topics just about decided), and that is great!" [...]
(Visual note, Sara, 17.10.)

Observations in online environment included monitoring the discussions in discussion boards in *Optima*, and, when not possible to stay onsite, reading the archives of the posted messages. Also, the processes of constructing the shared group documents in the online learning environment were observed over the research workshop. In addition, in the course of collecting the data, communications that required synchronous participation, such as Net Meetings, videoconference and chat sessions, were recorded. Furthermore, to capture students' working practices in offline learning environment, the weekly face-to-face meetings in computer labs at the Jyväskylä campus were videotaped.

As a result of free group formation in the Orientation phase, students convened into six sub-groups (see Table 7). Geographically, four of the sub-groups were co-located in Oulu or in Jyväskylä, whereas in two sub-groups (named as 'Communicating thoughts' and 'Teaching and technology') the members were remotely located. At its peak population, the workshop involved 22 participants, but after the grouping process one student dropped out altogether and another one preferred individual work.

Table 7. Six sub-groups of the research workshop (named after the research topics of the group).

Sub-groups	Members from:	
	Oulu	Jyväskylä
1 Virtual identities and games	3	-
2 Roles and play (fullness) in IRC	3	-
3 Communicating thoughts	1	2
4 Teaching and technology	1	2
5 Teaching culture and the Internet	-	4
6 Spoken English in the classroom	-	4

The material produced in the sub-groups was rather varied. In total, the transcripts of the web-based discussions in sub-groups ranged from 11 to 54 messages in the co-located groups and from 24 to 144 messages in the remotely located groups. The number of created objects, in turn, ranged from 7 to 41 in the co-located groups and 15 to 54 in the remotely located groups. The recordings from the nine face-to-face meetings during the Orientation and Research phases at the Jyväskylä campus comprised approximately 13.5 hours of video data. However, due to the poor quality of videotaped data from the face-to-face meetings in Jyväskylä, these recordings were not used for the process of analysis of this study. The videoconference between Oulu and Jyväskylä, which was part of the Evaluation phase, yielded 90 minutes of recordings.

During the eight-week period of data collection, 13 students in Jyväskylä sent 66 text notes in total; the range was from 2 to 19 entries per sender. The so-called visual notes, in turn, contained 84 photographs together with a short depiction, taken by 9 students from Jyväskylä; from 4 to 27 photographs by each. Personal logs resulted in 97 pages of typed data. However, aforementioned, for the purposes of this work only one Personal log, produced by the student member from Oulu, was utilised. This log contained 12 entries, resulting in 5 pages of typed document. The author also archived the weekly emails received from the co-researcher from the University of Jyväskylä. Normally, the emails were written just after the weekly face-to-face meetings at the Jyväskylä campus, in order to inform the author about the contents of the meeting and about noteworthy communications over the meeting. Table 8 summarises the data produced during Study 2.

In ethnographic research in general, data collection is integrally connected and overlapping with analysis (see e.g. Hammersley & Atkinson, 1995). Analysis starts during the collection of data, and initial interpretations are made long before the actual phase of analysis begins. Also, during the work at the site the researchers may not have a choice as to whom they can rely upon as key informants. In Study 2, during data collection, the six sub-groups appeared not to be equally informative about their collective working processes. For example, the co-located groups from Jyväskylä reported that they met mostly face-to-face for the shared research project. Thus, only a minority of the group activities was visible in Optima environment and their shared encounters could not, therefore, be followed continuously over the whole eight-week period of data collection, particularly, from distance.

In Study 2, alongside the observations in the Optima environment, the author was primarily in touch with the individual participants in Jyväskylä through a series of per-

Table 8. *Data Set 2 (Study 2, Autumn term 2002).*

Written data	Material produced	Video and audio recordings	Material produced
Personal process notebook: a) Text notes b) Visual notes (from 9 students)	66 notes 84 notes	Recorded Net Meetings (Group 3)	2.5 h discussion data
Personal log from the student in Oulu	5 pages of typed document (12 entries)	Recorded chat sessions (Group 3)	4 pages of typed data
Discussion board data	276 messages	Recorded videoconference	1.5 h discussion data
Created objects in group folders	146 times of modifying the object	*[Videotaped F-2-F meetings (Jyväskylä)]	13.5 h discussion data
		* were not used in the actual analysis due to the poor quality of the video recordings	

sonal emails, as part of the personal process notebook method used in the study. However, not all students were natural 'diarists' and accordingly, the personal experience-method resulted in a regular exchange of experiences with but a few students. As said earlier, in this study Sara from Group 3, 'Communicating thoughts' (referred hereafter as CT group), as the most active notebook writer, became first the key individual informant for the researcher. Along with Sara's contributions, the activities of the CT group, in particular, caught the attention of the researcher and her colleague in Jyväskylä from the beginning of data collection. Sara's regular contributions concerning the social relationships and overlapping contexts over the course enabled the author to follow the crossings between online and physical surroundings from an individual participant perspective, and thus gain a more unified view of the pieces of information and separate episodes that were visible in the Optima environment.

The CT group had three remotely located members, studying at different universities, Sara and Lisa in Jyväskylä; Tina in Oulu (Note: made-up names) and, therefore provided a good example of students who were not only meeting face-to-face but needed communication technologies for collaborations. The CT group provided rich data from both individual and group-level perspectives. In addition to the personal process

notebooks and the Personal log, the students also used communication modes other than Optima, including synchronous ones, such as Net Meetings and chat. During the research workshop, the collective work of the CT group was crystallised around a shared document online (named Project log). The document was evolving over the workshop and eventually manifested their joint work. Overall, the actual analysis for this group involved data obtained from discussion boards and shared online documents, personal process notebooks (Sara and Lisa), Personal log (Tina), recordings of Net Meetings, chat and a videoconference. Tables 9 and 10 summarise the data utilised in the analysis (Table 9 describes the written data; Table 10 lists the video and audio recordings and the chat logs).

Table 9. *Written data, Group 3 'Communicating thoughts'.*

Written data	Material produced by:		
	Sara	Lisa	Tina
Personal process notebook:			
a) Text notes	19	5	-
b) Visual notes	4	7	-
Personal log	-	-	12
Shared online documents, including e.g. the 'Project log' (number of times of modifying the object)	50	44	78
Discussion board data (number of messages)	43	12	54

Table 10. *Video and audio recordings and chat logs, Group 3 'Communicating thoughts'.*

Video and audio recordings	Material produced
Recorded Net Meetings	2,5 h discussion data
Recorded videoconference	1,5 h discussion data
Recorded chat sessions	4 pages of typed data

3.3 Constructing the field of Study 2

In Study 2, due to the participant experience method used, the author approached the collective activities over the course primarily from the perspective of the participating students in Jyväskylä. However, the process of data collection was shared with the other researcher, Dr. Kati Mäkitalo, in Jyväskylä. As the two researchers thus approached the field from different angles, Dr. Mäkitalo was more involved in documenting the face-to-face encounters (weekly meetings in computer labs), whereas the author of this work was personally linked to the students through regular email correspondence. Nonetheless, at the onset of the study the author met the students twice in Jyväskylä to give instructions on how to compose the personal process notebook and also, to explain details concerning the contents and the purpose behind the task, personally with all the respondents. For the most part, however, the work at the site was grounded on interacting with students from distance. It was assumed that certain trust should be developed between the researcher and the research subjects in the first place so as to better allow for witnessing participants' personal thoughts with no direct involvement in the authentic situation (Hammersley & Atkinson, 1995). In this study, the researcher's experiences reinforced the view that the basis for the formation of mutual trust and loyalty between the researcher and the researched was largely grounded on the first face-to-face encounters with the informants.

In this study, the position of the author was rather different from the one the instructors occupied over the course. In the above-mentioned Optima environment (discussion boards and online documents), the role the researcher took was consistently that of an observer, following students' work from distance with no involvement in the actual exchanges. The researcher also reminded the students of her still being 'There' by contacting non-active participants by personal messages in addition to the emails sent to the whole group of respondents during the fieldwork. Over the research workshop, the primary role of the researcher was thus merely to stimulate Jyväskylä students' notebook writing activities. In addition, when the course came to close, as a final stage of the notebook, the researcher asked some clarifying questions. The questions were as follows: 'Did you belong to some other kind of group or activity outside this course, related to your studies?' 'Could you shortly describe it?' The idea behind these questions were primarily based on Dreier's (1999) notions that point out that people tend to participate in several social contexts and social practices, with different personal meaning and commitment involved in them. Even though these questions were complementary, it

was assumed that these aspects might, still, be helpful to better understand the participants' engagement in the current unity/unities, as well.

Alongside the data collection, the author and her colleague in Jyväskylä were sharing their observations via email. These emails were normally linked with the weekly face-to-face meetings at the Jyväskylä campus. They were sharing the contents of the meeting and noteworthy communications over the meeting. In general, these one-to-one conversations helped the researchers to manage the many facets and simultaneity of students' interaction taking place over the course and also provided an opportunity to discuss and share the experiences of the ongoing data collection and the methods used in this study. The email correspondence between the researchers was utilised in the initial phases of the analysis (see Section 3.5.1).

3.4 Relationships between the data utilised in Study 2

Due to the multiple methods used in this work, the collection of data resulted in a relatively large amount of different types of data (written, verbal and visual data). However, the primary aim of this work was to adopt the participants' (experienced) perspectives; thus, the material produced was scanned through from the viewpoint of their experiences in the collective activities over the course under study. In the process of analysis, the personal process notebook data and Personal log therefore served as an 'opening' for further analysis. Yet, in the study, the use of communication technologies facilitated many crossings between on- and offline environments, connecting various places, people and perspectives. Thus, to better interpret this complexity and the many levels of interaction, the other types of data provided different perspectives and served as a resource for data triangulation. In Study 2, the personal communications between the researchers in Jyväskylä and the researcher in Leuven, in turn, provided for the author of this work a shared 'eagle-eye view' on the activities over the research workshop. Figure 6 describes the relationships between the different types of data utilised in this work.

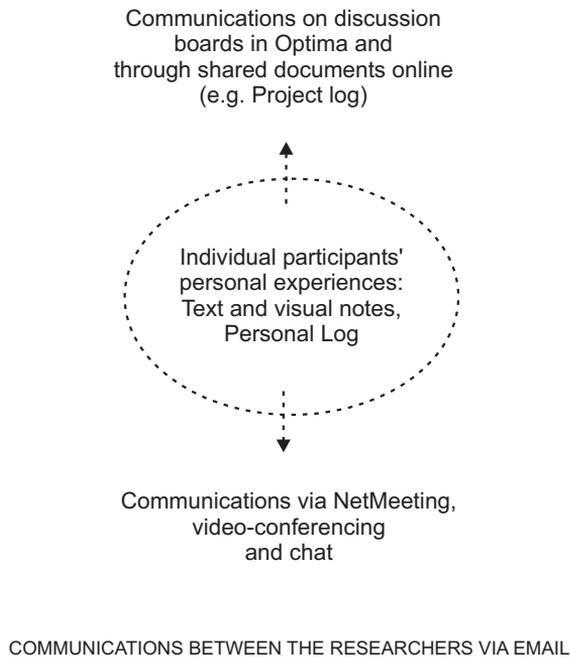


Figure 6. Relationships between the different types of data utilised in Study 2.

3.5 The process of analysis for Data set 2

In the vein of Study 1, due to the participant perspective chosen (see Section 3.4, Figure 6), in the process of analysis for Data set 2, the notebook entries (text and visual notes) together with a Personal log, received the most attention and, thus, formed the actual basis for the analysis; yet, accompanied with other forms of data such as discussion board messages, online documents (e.g. 'Project log'), chat logs, a recorded videoconference and Net Meetings.

Next, the analytical process of Data set 2 that involved various steps is illustrated. From Data Set 2, first a split-text narrative from the experiences of an individual key-informant, 'Sara', was formed (Step 1). Second, a polyvocal representation of the collective activities of the whole key-informant group (Group 3, 'Communicating thoughts') in a multi-sited field of study was compiled (Step 2). Third, thematic categories of hybrid Place and its relational assemblies of the participants of Group 3 were identified (Step 3, see Study 2, Part 1). This third phase of the analysis aimed at provid-

ing a more static image of participants' unity by breaking students' unity into smaller parts. Finally, the communicational plot was broken down with a running analysis structured according to the different phases of the research workshop (Step 4, see Study 2, Part 2). The aim of this final, fourth phase of the analysis was to visualise the process in which the relational assemblies of on- and offline learning environments were produced: how participants jointly constructed the experience of their 'Learning Place' from the social and material resources that were available to them over the research workshop.

Below, in Figure 7, the analytical processes for Data Set 2 and the outcomes of the analyses (Part 1 and 2 of Study 2) are summarised.

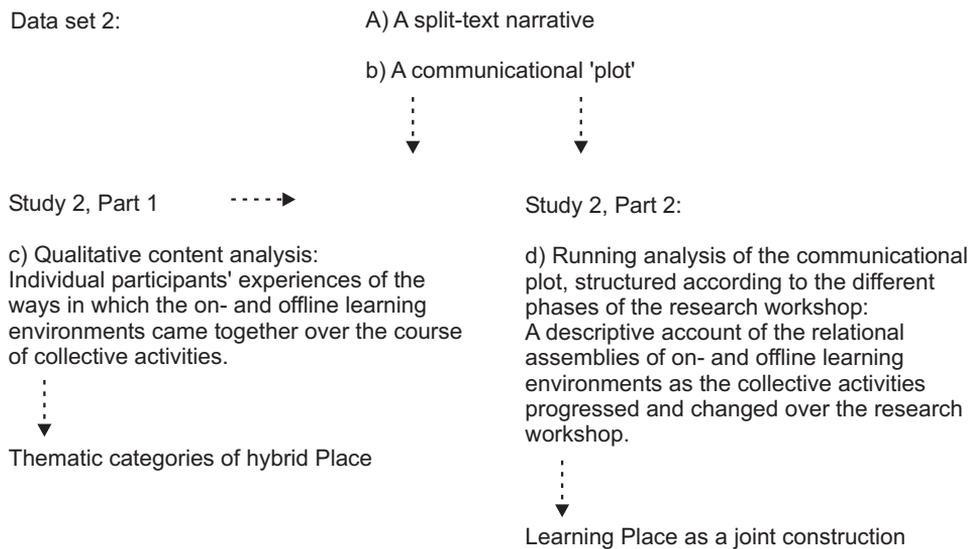


Figure 7. *The analytical process and outcomes for Data set 2.*

In the next section the analytical process for Data set 2 is described in more detail and highlighted with examples of the different steps of the analysis.

3.5.1 A communicational 'plot' as a tool for further analysis

As has been described above, Data Set 2 comprised many different types of material (text and visual notes, Personal log, discussion board data, shared online documents, recorded Net Meetings, videoconference and chat sessions). Likewise, interaction entailed by the research workshop was shifting and changing, in time and in space, and became therefore difficult to present through a linear narrative. The material collected, particularly from Group 3 ('Communicating thoughts') allowed for the author to set out a retrospective account of the participants' encounters. A polyvocal research account – perhaps best characterised as a communicational 'plot' – was drafted to reflect the essence of this rich vein of interactions taking place in Group 3. The plot was outlined by the author alone, drawing on her memories and experiences of the social processes studied here. Yet, to increase validity of the analysis, the plot was commented and verified by the colleague in Jyväskylä with whom the process of research was witnessed and shared (see Section 3.3).

With the polyvocal research account, the researcher was not looking for any 'representational exoticism' (see Amit, 2000, p. 4). Rather, the account could be characterised as an 'expansion of the writing of the field' (Tierney, 2002). The main focus of the text was not on the researchers' selves, but it still reflects the adopted approach of the researchers' participation in action-with-others through the notebook method. Primarily, the account was intended to make the students' shared, sometimes simultaneous encounters more visible for the readers. But above all the plot was aimed to assist the further analysis of the collective activities and the resources (be they material or of a social origin) students were relying on over the course. In this early phase of the analysis, bringing the researchers' voices into the text was just a way to demonstrate to the readers the researchers' positions in coping with the conditions of the multi-locale field – not as central characters of the activities, but following participants' shared encounters mostly from distance.

3.5.2 The first step: An individual's tale: A split-text narrative (Sara's tale)

The first step of drafting a polyvocal representation was to make a narrative from the perspective of an individual student (the key-informant Sara) in the form of a split-text narrative. (A fuller description of the individual account can be found in Pöysä et al.,

2003). Technically speaking, with the ‘split text narrative’ we mean here a split-screen format of research account (see e.g. Lotfalian, 1996) in which the text is laid out so that the research subject’s voice (as authentic data excerpts) is placed on the right column and, the researcher’s voice is, in turn, placed on the left column. Setting these two voices side by side is an attempt to represent the process of analysis in a more visual format.

Next, an example from the Orientation phase of the research workshop is illustrated (Example 5). The interpretation focuses on Sara’s experiences during the process of forming the research group in a confluence of physical and online surroundings. The author’s interpretation of the process is supported by quotations from Sara’s notebook entries, discussion board messages and from the shared online document Project log.

Example 5. Sara’s tale

Researchers’ voice	Sara’s voice
<p>This was a preliminary phase of the research workshop. During this period, web work was mainly done in the ‘Key Concepts*’ discussion board, but also the discussions in the ‘Who’s who’ discussion board did continue. During this phase the aim was to form research groups. Students were active to find common interests with each other.</p>	<p>[...] <i>“Especially I think it is problematic that the people in Oulu have had this web course going on for so much longer than we (a week, two?). They already have discussed their ideas and made study circles, whereas we are only learning to function in the environment. I think it would be easier for me, if we had started at the same time.”</i> [...] (Text note, Sara, 3.10.)</p>
<p>[*The participants charted the field of this course by analysing the key concepts (culture, communication and virtual environments) and reading articles of their own choice or from the reading list (in the folder Resource Library).]</p>	<p>[...] <i>“All the people in Oulu seem so ‘professional’ in these kinds of things, whereas my experience is limited to e-mail and surfing on the net. They (people from Oulu) have a very ‘sophisticated’ view of these things, are better in arguing their points, are better in using academic language etc. It seems that I have a problem of self-confidence! Anyway, it is not easy to go there and reveal one’s ignorance.”</i>[...] (Text note Sara, 3.10.2002)</p>
<p>Sara was not motivated to join in a group of Oulu-based participants. She did not find their topics very interesting. Sara was relieved that students were al-</p>	<p>[...] <i>“This whole project began in the minds of two teacher trainees who have no previous knowledge of working in Optima or any other such environment.</i></p>

lowed to create their own group in Jyväskylä, around a more interesting topic. During a face-to-face meeting, she paired up with a fellow student, Lisa, from her local group in Jyväskylä. Sara and Lisa found a common topic that was related to the other studies they have to accomplish. In her notebook Sara was writing that this experience was saving time, because they already have some previous knowledge and in this way they could process their thesis further. They were preparing for their Bachelor thesis on autobiographies in which they would focus on how people reflect their experiences.

Due to their poor knowledge on anything that is related to the Internet (all these chats, avatars, larps, ircs and virtuality), they did not quite find anything to interest them in the discussions. So, they decided to come up with a topic of their own! These two students were Lisa and Sara..." [...] (Project log, Sara, 4.11.)

[...][About the topic] "So, a point of true interest for us and also a very economical topic, since we can both use our previous knowledge on the subject and also start processing a point of view for our proseminar. So, I am happy today:" [...] (Text note, Sara, 17.10.)

"Pictures from digital camera by Sara and Lisa, 17.10.2002, time: 14–16 Situation: Creating a new folder in Optima for our group (Communicating thoughts), in the room reserved for us."



"I took this picture because this was probably the first time we came to an Optima meeting and were quite happy about that. Or at least that was the situation with me (Sara). We are just about all grouped." [...][...] "We are all getting on quite well with Optima (I suppose, all of us having

The next step to Sara and Lisa was to invite more members to join their research workshop.

Sara and Lisa had already posted a message together to the 'Communicating thoughts' discussion board. In this message they gave some information concerning their topic (the background and the reasons why they find this topic especially interesting). They also wanted to invite more people to join their group. Sara and Lisa also indicated their commitment and serious attitude towards their project by expressing that the research workshop in Optima is linked with the preparation of their thesis.

In her notebook entry Sara also expressed that she would warmly welcome Oulu students if they would like to join their research topic. A day earlier, when Sara was writing her notebook entry in the classroom during a face-to-face meeting, there was a discussion about forming a research group and especially, with whom to form it. The words ('at least mine is') might have indicated that Sara was not sharing the same feelings with some of her fellow students. In her personal note she was also pointing out that working from distance would make the use of the learning environment more meaningful and real.

During the discussions in the phase of forming their research group Sara and Lisa got some support from Rita (a uni-

our topics just about decided), and that is great!" [...] (Visual note, Sara, 17.10.)

"Hello everyone! This is Sara and Lisa from Jyväskylä. We are going to start a discussion here:) Actually, we are doing our proseminar (teacher training) on autobiographies, or more exactly on how people reflect their experiences about language learning. So, this is our starting point for this new topic." [...] [...] "Join us, all you people interested in this kind of a project!" [...] [...] "And, we really are serious on this." [...] [...] "Kind of feeling not-so-academic already. We'll get back to you soon." [...] (Key Concepts discussion board, Sara and Lisa, 16.10.)

[...] "And topics that are (at least mine is) completely open for the Oulu people to join if they are interested. So, no need for "them" to try to be interested in our topics and no need for us to be interested in LARP, IRC and the other letters." [...]. [...] "It would be very nice to have some Oulu people (I have to stop using this negative term, but it is so descriptive... Maybe I should start considering it as a positive one?) in our group, because they are using the personal logs in Optima, and also they might have a little bit different views since they seem more 'technological'. And, it would make the virtual learning environment -learning more authentic for us. [...] (Text note, Sara, 17.10.)

[...] "Actually we did not claim that we might not be serious with this whole Optima-thing. It was just that our letter to all

versity teacher). Rita was also commenting the 'serious-on-this' discussion. Obviously, Sara and Lisa felt that there was a certain 'need' to explain the meaning of 'being serious', so they replied to Rita's message. Their messages in Optima gave an impression that they were afraid of nobody willing to join their workshop, for the reason of their 'non-academic' previous messages. Their message indicated that their earlier messages were bothering them.

During that same day, when Sara and Lisa were still approving their commitment, Tina from the Oulu group sent a message to ask (kindly), if she could join to their research group.

Sara was pleased, when an active member, Tina, from the Oulu group, wanted to join their project. In her notebook entry she shows that she had been following the other participants activities in Optima – who is active and who is not...

She also expressed her positive feelings to Tina straightforward in the discussion forum messages.

The grouping seemed to be inspiring and also later on Sara was thinking over how this all did happen. She was wondering how they 'found' each other, because 'Net Meeting' was the only situation comparable to face-to-face conditions. During the Net Meeting Sara noticed that they are so alike; for example they share similar ideas and they have the same sense of humour. She was wondering how they sensed all these aspects in online environment. The answer might be found from the very be-

you others was not very 'academic' because of the rather long day... So, we are serious with this project (been that all autumn long), but we are also serious with our topic and would really like you all to join us (well, not all of you, but those who are interested...)! So, see you in research workshop!" [...]

(*'Key Concepts'* discussion board, Sara and Lisa, 17.10.)

"Hi there, Sara and Lisa, I would like to join your group, if it's OK =) Tina" [...]('Key Concepts'* discussion board, Tina, 17.10.)*

"So... I am thrilled! We have a very active Oulu-person (Tina) in our group. So, no we get a real experience of virtual learning. I've been keeping contact with her via Optima, and we are really getting on with this. She seems really active. I hope everything goes well!" [...] (Text note, Sara, 24.10.)

[...] "OK. So the netmeeting is over. I was a bit excited about it, but it went just great. I think that even though the grouping was done in such an artificial way, we, Lisa, Tina and me, have similar thoughts about things and are "similar people" in some ways — laugh at same things, consider similar things important etc. Is it coincidence or did our thoughts transfer somehow through the Optima, I do not know." [...] (Text note, Sara, 08.11.)

<p>ginning of the web work (Phase 1), when all the participants were introducing themselves in the 'Who's who' discussion forum. During this preliminary phase Sara and Tina had a long discussion in which they both were revealing intimate details from their family life. In these non-formal and out-of-the-topic discussions they might have found 'soul mates' in each other.</p>	
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3.5.3 The second step: A polyvocal representation

Next, to illustrate the second phase of the analysis, an example from the communicational plot is displayed (see Example 6). The plot was drafted according to the CT group's activities in the group formation phase that the researcher found essential. The representation, as a sort of 'abstraction' of the interaction, aims to somehow bring together the researcher's story of 'listening to' and 'telling the story' of the members of the CT group. Also, it is an attempt to transport the reader to an episode of the research workshop.

The plot includes voices of the three research participants of the CT group (Sara, Lisa and Tina) and the voices of the co-researcher Kati and Johanna (the author). The researchers' voices of listening to and following the respondents during data collection are embedded in the text. For the representation, in order to represent the core of the abundant, often simultaneous interaction that occurred in both online and in real-life surroundings, the author was looking for excerpts that would, on the one hand, pinpoint to the process of group formation from different points of view (individual-pair-group-levels of perspectives), and on the other hand take advantage of different types of data to strengthen the interpretation of the collective activities over the course. Even though the plot was read and verified by the co-researcher, an obvious limitation here is that both the individual and polyvocal representations were, still, only the researcher's way of seeing the crux of the whole complexity of communications over the course – it was not negotiated with the central actors themselves. It should be noted that because of the instrumental role of the communicational plot for further analysis (see Study 2, Part 2), the data excerpts displayed in this section may also appear elsewhere in this study.

Example 6. *Communicational plot of the activities of CT group (in the group formation phase)*

An email to Johanna 17.10.

Kati: Hi, I noticed you were also online, did you follow the chat, there was quite a discussion going on...I am enclosing the chat logs.

I am really looking forward hearing what they are mailing to you!

A chat between Lisa and Sara in Optima 16.10 (a short quotation):

Lisa: So how about taking the same topic [for the project] as we have for the proseminar?

*Sara: About the autobiographies or ?
But what is has to do with this course?
How about something like a diary or?
I am thinking about reflecting.
For example reflecting your own learning experiences in the web; like what we do for that Johanna.*

Lisa: But, I was just thinking how it would work out then...?

Sara: Well, for example that we would think how our own experiences could be reflected here, and our own thoughts.

'Key concepts' discussion board 16.10.

Lisa and Sara: Hello everyone! This is Sara and Lisa from Jyväskylä. We are going to start a discussion here :) Actually, we are doing our proseminar (teacher training) on autobiographies, or more exactly on how people reflect their experiences about language learning. So, this is our starting point for this new topic. Join us, all you people interested in this kind of a project!

A text note to Johanna 17.10.

Sara: We coupled up with Lisa yesterday to talk about how people communicate their thoughts in these kinds of environments. We did not get too far with the topic, so Lisa might disagree a bit. But that would be my viewpoint.

So, a point of true interest for us and also a very economical topic, since we can both use our previous knowledge on the subject and also start processing a point of view for our proseminar. So, I am happy today:)

It would be very nice to have some Oulu people in our group also.

They might have a little bit different views since they seem more 'technological'. And, it would make the virtual learning environment - learning more authentic for us. Though it is not a problem for us.

We even used the chat to discuss our topic yesterday, even though we were sitting practically back to back.

Reply to Sara 17.10.

Johanna: Sara, good to hear that the problems are solved so far and you have found topics that really interest you.

Good luck with the meeting today.

An email to Johanna 18.10

Kati: Something about yesterday's meeting.

The students have formed the groups now, Sara and Lisa are working together, their topic is called "Communicating thoughts"

The students started to work together with their pairs or group members, you may find some output in Optima environment. It feels somehow now as if the project work has really started. However, I just hope that some of the Oulu participants would join the Jyväskylä groups so that the students could utilize the advantages of web-based learning.

I have here for you the chat logs from yesterday as an attachment. PS: Did you already receive mail this week from all the participants?

Reply to Kati 18.10.

Johanna: Thank you for your mail again!

Good to hear that the students have grouped- I noticed that Tina from Oulu had sent a message to Sara and Lisa if she could

join their group. I wonder whether there would arise some cooperation, let's hope so... By now I have received diary entries from ten participants.

Reply to Johanna 18.10.

Kati: I noticed the same. Nice that the Oulu participants are contacting the students in Jyväskylä. I wish they would utilize and use the possibility to work together in groups.

A text note to Johanna 21.10.

Sara: We got an introduction about our project to our new folder, so this was a good meeting.

Anyway, we are in Optima now with Lisa via our introduction to the topic. It would be really nice if we got some Oulu-people to work with us.

Reply to Sara 21.10.

Johanna: Yes, it would be nice and interesting if you could form a group together with Oulu- I noticed that Tina was interested in your topic as well...

'Key concepts' discussion board, 17.10.

Tina: Hi there, Sara and Lisa, I would like to join your group, if it's OK =) Tina

Reply to Tina 22.10.

Sara: It would be great to have others interested in these kinds of things in our group. And even more, it would be great to try learning virtually in authentic context (that is, Lisa and me might get just a little bit bored chatting to each other while sitting back to back). So, I'd say you are more than welcome --- we'd love it! --- and I am quite sure Lisa is of the same opinion, too, even though she isn't here right now.

Reply to Tina 23.10.

Lisa: Greetings and welcome to our group! I am sorry, but it seems that at this point of time I am not having enough time to have

more than one Optima experience per week. I expect this to change when we really start to work, though.

Reply to Sara, 22.10.

Tina: =) I'd be glad to participate in this "experiment". So, you're working on a proseminar on this topic, right? Thank you for the welcome!! :-) What would you like to do first? and when?

A text note to Johanna, 24.10.

Sara: So... I am thrilled! We have a very active Oulu-person (Tina) in our group. So, no we get a real experience of virtual learning. I've been keeping contact with her via Optima, and we are really getting on with this. She seems really active. I hope everything goes well!

Reply to Sara 24.10.

Johanna: It is interesting to follow how your online collaborative work will go on- now you will have the opportunity to see how this Optima really works when you don't share the same 'physical' place. I had a look at your research folder and it seems to be very interesting topic.

3.5.4 The third step: Identifying thematic categories of hybrid 'Place'

The third step in the analysis of Data set 2 involved capturing a static image of community by means of qualitative content analysis (Part 1 of Study 2). More specifically, the aim was to search for the experienced 'territorial' reference point(s) of participants' unity, namely those of the key informant Group 3 'Communicating thoughts'. As was already mentioned, in ethnographic research in general, data collection is integrally connected and overlapping with data analysis (see e.g. Hammersley & Atkinson, 1995). According to Pink (2000), for example, a traditional fieldwork narrative whereby the researcher goes to the 'field,' collects the data and returns 'home' to analyse them, is not always suitable or even possible. Research and analysis might be, thus, conducted in the same or different locations and at the same or different points of time. Likewise, the

researcher may develop insights into the relationship between research experiences, theoretical concepts, or comparative examples at any point in the process of 'doing' ethnography (see Pink, 2000). The researcher should, then, pay particular attention to the interlinking patterns of these different elements in any single research project. In this study, in search of the experienced territorial reference point(s) of participants' collective unity, the aforementioned elements of a research process were largely intermingled phases.

First, broad thematic categories were identified concerning participants' experiences of how on- and offline learning environments were coming together over the course of collective activities. The identification of the broad thematic categories in this study originates from the early phases of data collection. As described earlier, (see Section 3.2), in the Orientation phase of the research workshop, first 'Sara' and after her soon the whole 'Communicating thoughts' (CT) group became the key informants for the researcher. Accordingly, when following their collective activities over the research workshop, three different relational patterns of on- and offline learning environments were identified, constituting three broad thematic categories of participants' experiences of their 'Learning Place'. The broad thematic categories of Place experiences were as follows: 1) the category of offline experiences, 2) the category of distributed experiences, and 3) the category of online experiences.

Second, a further check of the categories was inspired by the concept of hybrid Place experience (Blum, 2000) and its relational assemblies (Graham, 1998; Powell, 2004) (see Theoretical vantage point II, Section 1.3.1). The aforementioned three broad thematic categories were then refined, resulting in the following categories of hybrid experiences of Place. The refined categories were as follows:

1) Participants' experiences of the ways in which communication technologies affected and altered their local, offline (i.e. 'real-life') experiences of Place (Category of offline experiences).

2) Participants' experiences of the ways in which communication technologies provided overlaps between online and real-life experiences of Place (Category of distributed experiences).

3) Participants' experiences of the ways in which communications created another position or Place online (Category of online experiences).

These 'relational assemblies' of hybrid Place, however, were not seen effacing one another but were regarded as overlapping and interlinked scenes of activities (Powell, 2004). Moreover, these 'relational assemblies' and participants' subjective positions were not abstracted from participants' ordinary practices of life (de Certeau, 1984) but were primarily treated as contextualised experiences, produced within a particular social and cultural frame of reference (Mitchell, 1997).

Finally, in more practical terms, to prepare the data sample for the analysis, from the whole data set generated by the CT group, participants' commentaries on these themes were first allocated in the three broad categories and second, within each category, organised according to the variations of these categories for closer analysis. Also to be noted here, since only one single case formed the subject of this study, compiling numerical statistics of the categories was not considered meaningful. By breaking the image of participants' unity in smaller parts, the aim was simply to describe its diversity and multiple forms in this specific context of technology-rich higher education.

3.5.5 The fourth step: A running analysis of the communicational plot

In the fourth step of the analysis (Study 2, Part 2), the relatively cumbersome data section (the communicational plot, see Section 4.5.1) was broken down with a running analysis. The communicational plot was first divided into smaller sections according to the different phases of the workshop (Orientation, Research, and Evaluation). In this phase, the researchers' voices were excluded from the polyvocal representation, because the actual phase of the analysis was focused on the communications in CT-group only (see Section 4.5 for discussion on the researcher's position in the representation of the data in general).

Consequently, to better understand the collective process of the CT group and the different constituent episodes, the concept of presence as a social construction was seen promising (see theoretical vantage point II, Section 1.3.2). In this perspective, collective activity is considered as an organising criterion of presence (see e.g. Gambernini & Mantovani, 2003; Mantovani & Riva, 1999). The idea of presence as a social construction provided a perspective to study the continuum of episodes taking place over the research workshop and the elements that converged on it – be they of a social or material origin. The aim of this final phase of the analysis was to make explicit the process in which the relational assemblies of on- and offline learning environments were pro-

duced: how participants jointly constructed the experience of their 'Learning Place' from the social and material resources that were available to them over the research workshop.

The descriptive account was thus focused on visualising the process and its different episodes over the collective research project undertaken by the CT group in this specific context of a technology-rich university course. The three different phases of the research workshop were presented as separate episodes so as to better show these phases of different kinds and to highlight how the use of communicational technologies enriched, complemented, or limited collective activities over the eight-week research workshop. In other words, the aim was to display the various forms of participants' collective encounters in their natural context of activities and according to the phase of the research workshop they actually occurred.

3.6 The results (Study 2)

3.6.1 Part 1: Hybrid Place in university setting

In the third step of the analysis for Data set 2, from the data generated by the 'Communicating thoughts' (CT) group, three thematic categories of experiences of hybrid Place were first identified. Table 11 summarises the thematic categories of hybrid Place experiences.

Table 11. *The thematic categories of hybrid Place experiences.*

Thematic category of hybrid Place experience	Description of the hybrid experience
Offline experiences	Participants' experiences of the ways in which communication technologies affected and altered their local, offline (i.e. 'real-life') experiences of Place.
Distributed experiences	Participants' experiences of the ways in which communication technologies provided overlaps between online and real-life experiences of Place.
Online experiences	Participants' experiences of the ways in which communications created another 'position' or Place online.

Next, the thematic categories of hybrid Place experiences are discussed and illustrated with examples of the relational assemblies of on- and offline learning environments experienced over the research workshop, either as individual or as collective experiences, originating from formal and informal learning situations. However, the boundaries between the different categories were often permeable and the themes were sometimes overlapping. The notions that are situated within each category, however, do emphasise certain aspects contrary to the others.

3.6.1.1 *Category of offline experiences*

The notions allocated in the category of offline experiences were mostly originating from informal experiences of the ways in which communication technologies affected and altered their local, offline (i.e. 'real-life') experiences of Place (at the campus or studying at home, for example). A common feature in the excerpts here is the strong presence of the online milieu of Optima also in the students' real-life activities – even when cycling between home and the university (see Excerpt 3).

On the one hand, the excerpts here describe how the participants of the CT group were reflecting and also sharing their experiences concerning their joint project and online activities in Optima in general, and also with people outside the CT group (see Excerpts 1 and 2).

Excerpt 1:

[...] *"We [Sara and Lisa] went to have a 'quick' cup of coffee before we go and search books for our proseminar, but it turned out to be a really refreshing discussion about proseminars and Optima, too. I really felt good after that."* [...] (Personal note, Sara, 31.10.)

Excerpt 2:

[...] *"My Optima learning experience this week happened on 7th October while we were on our way to a teacher training lecture. There were 6 of us from JKL [Jyväskylä] Optima group and we were discussing about the importance of Optima environment related to our current studies."* [...] (Personal note, Lisa, 9.10.)

Excerpt 3:

[...] *"I realised that I think about our project (or the two projects) or something that is happening here in Optima almost always I'm on my way to the campus or back*

*home, especially after I've been actively doing something here (read: spent time reading and/or writing). So — I think I want to find a picture of me on my bike and include it in our presentation =) as *the* context of thinking!" [...]* (Project log, Tina, 13.11.)

On the other hand, Excerpts 4, 5 and 6 highlight participants' offline experiences as regards accomplishing individual tasks pertaining to their shared project in Optima, e.g. reading and searching for new materials or looking for advice and tips for literature from the outside.

Excerpt 4:

[...] "I just wanted to inform that I got the book we were yesterday talking about and I'll try to start reading it this weekend. It didn't look very appealing but it discusses about the ideas we are dealing here, so it might turn out to be very useful, in any case." [...] ('Discussion on theories' [discussion board], Lisa, 7.11.)

Excerpt 5:

[...] "I suppose we are all feeling guilty about not being too active in Optima this week. I think there's no need for that, since we all have been working on our project 'in real life' — i.e. reading at home!" [...] (Project log, Sara, 15.11.)

Excerpt 6:

[...] "... By coincidence, I (almost literally) ran into [a professor and university lecturer in Oulu] this morning and asked about new, good references for narrative research or teacher narrative research... So here's something they recommended for everyone interested (I haven't read these, but here's what Oula gives)" [...] ('Thought forum' [discussion board], Tina, 29.10.)

3.6.1.2 Category of distributed experiences

The notions allocated in the category of distributed experiences of hybrid Place highlighted experiences originating of the ways in which communication technologies provided overlaps between online and real-life experiences of Place (e.g. in formal classroom situations in computer labs or in informal situations at home or at the campus). Excerpt 7 and 8 refer to experiences derived from a weekly face-to-face meeting pertaining to the research workshop in a computer lab at the Jyväskylä campus. The excerpts describe how the students' experiences of the computer lab as a physical, 'real-life' en-

vironment integrate with their experiences of the online environment of Optima, thus contributing to their distributed experience of Place. Like Powell (2004) witnessed in her study of Internet cafés, also here the workstations in the computer lab as physical artefacts (screen and keyboard) somehow symbolised the online environment within the offline environment: On the other hand, the setting enabled face-to-face communication on the basis of shared representation of the activities in Optima visible on the screen, but, on the other hand, also individual experiences online via the computer – consciously ‘ignoring’ the other participant who is basically sitting next to the user at the time (Excerpt 8). In addition, sometimes the participants’ use of communication technologies can be seen as an extension of face-to-face communications as a pair: for example, when Sara and Lisa were chatting with each other via the Optima environment, sitting almost back-to-back in the computer lab (Excerpt 9).

Excerpt 7:

[...] *“Today we spent most of Optima-time [pointing to a session in a computer lab in Jyväskylä campus] writing explanations to our digi-pictures. Lisa wrote something to Tina in Optima, but my computer decided to go crazy so I could not read it, and Lisa just said it was not important. I read the message later, and maybe it was not important, but it is interesting to get a grab of what is going on in Optima — basically I have to read the messages every time I see that something is going on in our CT-folder (as Tina has named it). Anyway, we are learning how to work asynchronously and in writing. Not very easy at times, and definitely takes time. But it is interesting, anyway. We made a suggestion to Tina that she will start working on our front page and then we’ll complete it, let her comment it and then put it into the CT-folder - - let’s see how much this will take time!!”* [...] (Personal note, Sara, 30.10.)

Excerpt 8:



[...] "Sara is obviously in the middle of something very interesting...concerning Optima, I guess. Maybe the first time we are both really doing something worthwhile at the same time (usually just playing around)." [...] (Visual note Lisa, 17.10)

Excerpt 9:

[...] "We coupled up with Lisa yesterday to talk about how people communicate their thoughts in these kinds of environments. We did not get too far with the topic, so Lisa might disagree a bit. But that would be my viewpoint. So, a point of true interest for us and also a very economical topic, since we can both use our previous knowledge on the subject and also start processing a point of view for our proseminar. So, I am happy today:) It would be very nice to have some Oulu people in our group also. They might have a little bit different views since they seem more 'technological'. And, it would make the virtual learning environment -learning more authentic for us. Though it is not a problem for us. We even used the chat to discuss our topic yesterday, even though we were sitting practically back to back". [...] (Personal note, Sara, 17.10.)

Excerpt 10 describes how the online environment and the real-life environments are experienced as overlapped in informal situations when working at home, for example. This example nicely illustrates how the participant's practices of ordinary activities (de Carteau, 1984) (making pea soup; knitting a sock, and thinking of writing in Optima) are literally overlapped and intimately connected in moulding Tina's experience of 'Learning Place' here. She seems to be able to flexibly move between her daily household tasks and the 'academic' responsibilities she has for the project in Optima.

Excerpt 10:

[...] "I woke up at 9 am, started making some pea soup. (Thinking about how I should start working in Optima)." [...] "I got the soup ready to stew at 10 o'clock, and finally started reading what you two have been writing here. I sat down knitting a sock and reading Optima... (you can see a picture of the almost finished sock in the Test folder) ... and thinking but did not get much written... but I was *thinking* all the time" [...] "So, what's the point of this little story? It's related to the fact that sometimes I don't count the invisible work (i.e. thinking or talking) as work... but I should do so. Seen from that point of view, I have been working on this topic (though, I have to admit, in a somewhat fragmented way) all the day, except for a few pauses. This is an interesting point of view to look at things and it helps me to feel a bit better about my contributions here." [...] (Project log, Tina, 17.11.)

3.6.1.3 Category of online experiences

The notions allocated in the category of online experiences highlighted participants' experiences originating of the ways in which communications created another 'position' or Place online. These experiences here originate e.g. from the individual's sometimes negatively coloured encounters in the online learning environment due to a lack of common ground in the web-based discussions (Mäkitalo, Pöysä, Järvelä & Häkkinen, 2005; Mäkitalo, 2006), or from lingering on the sidelines due to the lack of online skills and, primarily, confidence in comparison to the remotely located co-participants in Oulu (see Excerpt 11).

Excerpt 11:

[...] *"On Monday morning I went to see the answers to my question (now refined to relate especially to teaching younger kids in e-environments). DISAPPOINTMENT! All I got out of the Oulu-people was that look for hints in Opettaja ["Teacher"]- or Tempus-magazines, there are these kinds of environments for free in the net etc. That is not what I meant! I wanted to discuss the type of interaction there is in this kind of a situation. Have I used so ambiguous language that they do not understand my question? Or do they see me (us, the Jyväskylä-people?) only as a teacher-to-be looking for practical hints? I really wanted to raise a discussion about interactional problems (or even benefits) from the teaching point of view. Did not succeed there, did I? So now I just decided that I am going to reply to other discussions if I have something to say. Which is not much, since I just do not know anything about the interests of Oulu-people. It would be interesting to know what they think about us..."* [...] (Text note, Sara, 7.10.)

Also, participants' experiences allocated in this category were originating from (collective and individual) experiences of 'Place making' in the online learning environment, for example, in terms of establishing a shared textual reference point in Optima (i.e. 'Project log'). Project log as a technologically rather plain site was serving as a sort of 'symbolic in-between meeting point' (Mitchell, 1997) for all the remotely located members of the CT group, so as to get together 'There' (see Excerpts 12 and 13). It should be noted, however, that this Project log in Optima, as a crystallisation of the CT group's collective work online, although seemingly existing beyond space and time, was not only an arbitrary mobile point, but through its situated practices was strongly linked to the group's origins and shared 'histories' via its 'practitioners' in Oulu and in Jyväskylä.

Excerpt 12:

[...] *"It is definitely a benefit of Optima that the group, every member of it, can see all the previous documents, too. That way everyone can always go back to what has been said and done. That way the ideas stay "deposited" forever. I suppose, if we went on with this project that we could go to our ideas and start elaborating them. In any other environment at least some, probably many, of the (possibly good) ideas would be lost because they would not be written down. This makes making notes to some kind of a file very important during the F2F meetings."* [...] (Project log, Sara, 22.11.)

Excerpt 13:

[...] *"I think our project log or adventure log is helping me to keep the sense of continuity: if this document was not here, some parts of our work would seem to be fragmented and not part of a whole. Now I can go back and read the whole adventure from beginning to end several times and see if I have anything new to add."* [...] (Project log, Tina, 13.11.)

If the previous excerpts, 12 and 13, provided rather abstract examples of making Place online, the next three excerpts demonstrate more concrete experiences of the ways in which communication technologies contributed to the students' online 'Place making'. In these excerpts, in order to enhance the decision-making processes and negotiation of shared goals in the course of their collective project, the CT group made use of online communication systems with qualities resembling oral conversation (e.g. chat and Net Meeting) (see e.g. Harnad, 1991; Langham, 1994).

Excerpt 14:

[...] *"Ok, so now we used the chat-thing in Optima with Tina. She scared me by inviting me in, and we had a nice long chat about our project (our chat can be found in the CT-folder)." [...]* [folder of the sub-group] (Personal note, Sara, 4.11.)

Excerpt 15:

[...] *"In any case we are now in good phase. We have a group of three (Tina is from Oulu-group) and yesterday we had a netmeeting with video-connection. Scary but also a good chance to find out how to use the latest technology and how it helps us!" [...]* (Personal note, Lisa, 7.10.)

Excerpt 16:

[...] "... just think how quickly we reached a decision in NetMeeting! —Then there is this problem of finding a place and a time slot for working here, even if it is only for one person. I really don't think that virtual learning is free of limitations of time and space; these aspects can actually be more complex than in 'traditional' forms of learning." [...] (Project log, Tina, 13.11.)

3.6.2 Synthesis

As has been stated above, Study 2 included two parts and had a twofold aim. Part 1, described in this section, explored what formed the reference points of the participants' unity – specifically those of the key informant Group 3 'Communicating thoughts' – over a technology-enhanced higher education course: how research participants (student teachers) experienced the on- and offline learning environments to come together over the study (i.e. experiences of hybrid 'Place'). Part 1, thus, involved capturing a static image of community by means of qualitative content analysis. The notions of hybrid Place (e.g. Blum, 2002) and its relational assemblies (e.g. Powell, 2004) guided the actual analysis of the data. The analysis resulted in three broad thematic categories: 1) the category of offline experiences, 2) the category of distributed experiences, and 3) the category of online experiences. Table 12 summarises the varied examples of participants' experiences of hybrid Place and its relational assemblies. Since the categories had to do with the experiences of hybrid Place and hybridity implies both online and offline environments as ingredients of experiences, these sometimes porous-like categories are thus primarily linked to the particular situations they are experienced in.

In sum, even a limited overview of the participants' notions on their collective activities over the research workshop highlighted participants' 'Learning Place' not as something existing solely in an online learning environment or solely in the physical environment at the campus or at home, but rather as reflecting a confluence of these 'opposite' milieus, as a combination of online, offline and distributed experiences of hybrid Place (Pöysä et al., 2005). Also the multiple and varied ways in which on- and offline learning environments were experienced to come together over the research workshop, fostered the impression of the changing and subjective qualification of what 'being-in-Place' can mean to different individuals (Barth, 1991). Moreover, these relational assemblies were contextualised, though coming together in different ways in individual participants' local, everyday experiences of living. The way in which they made the use of communication technologies 'ordinary' was silent, yet, influential and

Table 12. *The thematic categories of hybrid Place and the relational assemblies experienced by the CT group (Group 3).*

Thematic category of hybrid Place experience	Description of the hybrid experience and its relational assemblies
Offline experiences	<p>Participants' experiences of the ways in which communication technologies affected and altered their local, offline (i.e. 'real-life') experiences of Place:</p> <ol style="list-style-type: none"> a) Communication technologies present when reflecting their shared research project within the CT group or, when sharing experiences of online learning e.g. in Optima also with participants outside their trio. b) Communication technologies present when accomplishing individual tasks pertaining to the research project, sharing these experiences within the CT group.
Distributed experiences	<p>Participants' experiences of the ways in which communication technologies provided overlaps between online and real-life experiences of Place:</p> <ol style="list-style-type: none"> a) Experiences of the overlap of online and real-life learning environments in a context of computer lab (formal situation), e.g. 1) sharing experiences via shared representation on the computer screen, 2) individual experiences, consciously 'ignoring' the pair in the same physical environments or 3) experiences of an extension of face-to-face communications to online environments (e.g. using chat for communication, while sharing the same physical space in a computer lab). b) Experiences of the overlap of online and real-life experiences e.g. at home (informal situation): ordinary activities overlapped and connected with the work for the Optima project.
Online experiences	<p>Participants' experiences of the ways in which communications created another 'position' or Place online:</p> <ol style="list-style-type: none"> a) Individual participants' experiences e.g. as feelings of dissimilarity to and estrangement from the other (often remote) participants (e.g. due to a lack of common ground over the web-based discussions or lack of online skills and 'confidence') b) Shared experiences of 'Place making' in online environments e.g. <ul style="list-style-type: none"> • Establishing a shared, textual reference point in Optima ('Symbolic' meeting point) and, • Making contacts via chat or Net Meeting ('Concrete' meetings points of the group)

creative (Powell, 2004). Thus, as was witnessed in this study, the significance of the novel technologies might not be that of improving learning in a linear sense but the significance lies in the ways in which technologies transform learning practices – the ways in which people communicate knowledge and skills and how information is organised, for example (Säljö, 2003). In this study, the technology-rich research workshop was experienced to produce multiple and simultaneous practices, involving various people and intentions. In this sense, technology-enhanced learning settings are not to be seen as substituting traditional higher education practices but, instead, as potentially enriching them. This viewpoint is in line with the socio-cultural perspective of seeing technological tools as part of the environment and, avoiding the separation of humans from tools (Bannon & Kaptelin, 2000).

Finally, these varied, parallel, and to some extent overlapping experiences may, however, only hint at the whole complexity – and the richness – of students' (individual and collective) activities occurred during the workshop. As Casey (1996) writes, Places are mould through the efforts and activities of those people who actually practice that Place (see also Lefebvre, 1991). Thus, in order to understand how the sense of Place is created it is essential to assess the authentic experiences of the people involved in them (Buttimer, 1980). By the same token, when seeking for a better understanding of the participants' Learning Place in technology-enhanced settings and how they engage and experience the mediating technologies as 'full participants' in these practices (Bannon, 2005), the perspective should not be limited to studying the technological, online environment only but it might be more useful to look at the everyday, local level of activities and the technologies as unified whole, with the focus on individual participants.

3.6.3 Part 2: Learning Place as a joint construction

Part 2 of Study 2, in turn, explored the unity of the 'Communicating thoughts' group, looking at the forms the unity got as their collective activities progressed and changed over the technology-enhanced course. In more specific terms, the aim of Part 2 was to visualise the process in which the relational assemblies of on- and offline learning environments were produced: how participants jointly constructed the experience of their 'Learning Place' from the social and material resources that were available to them over the eight-week, technology-enhanced research workshop.

Next, the process through which the participants jointly constructed their shared experience of presence – their unique Learning Place – is visualised through a descrip-

tive, polyvocal research account. The second phase of Study 2 was, thus, focused on highlighting the process and the different episodes pertaining to it with regard to the shared task (a collective research project) undertaken by the members of the CT group, intermingled with their ordinary everyday activities.

First, to give the reader a general overview and to help him/her follow the smaller episodes displayed in the following section, Figure 8 below presents the main activities of the CT group in relation to the point of time they actually occurred over the eight-week research workshop.

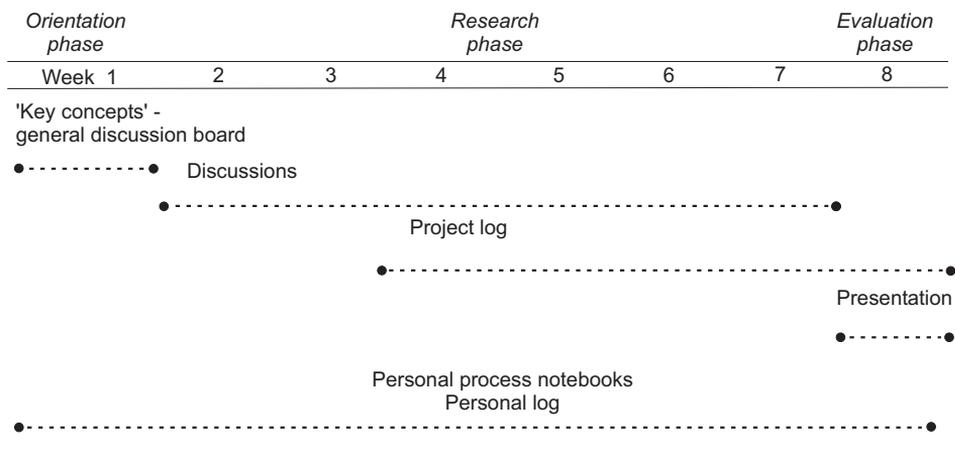


Figure 8. *The CT groups' main activities in relation to the point of time over the eight-week research workshop.*

3.6.3.1 *The process of group formation (Orientation phase)*

Alongside having discussions on the key concepts as a whole group of participants in the Optima environment, the aim of the Orientation phase (week 1) was to convene into self-selecting sub-groups of students. In the case of the CT group reported here, the grouping took place in two steps.

The opening step was taken at the Jyväskylä campus during a face-to-face meeting pertaining to the research workshop. During the meeting in a computer lab Sara and her fellow student, Lisa, formed a pair for the research workshop. For them it seemed to offer an 'economical' possibility to combine efforts for both the workshop and for

their ongoing process of writing the Bachelor thesis together. The topic for the research workshop would be, then, also 'a point of true interest', as Sara writes in her personal note (Excerpt 2).

In Excerpt 1, allocated in the category of distributed experiences, the on- and offline communications come together as an immediate activity in a formal situation in a computer lab at the campus. Accordingly, online and physical surroundings are, here, co-existing contexts. Even though Sara and Lisa are basically sitting back-to-back in the computer lab, their pairing up for the research workshop is accomplished using the chat function in the Optima environment. However, the reason for this form of communication here was attributed to trying out and getting familiar with the new technology rather than arising from actual needs. In this light, online communications were primarily enriching face-to-face interactions.

Excerpt 1:

A chat between Lisa and Sara in Optima
16.10 (a quotation):

Lisa: *So how about taking the same topic [for the project] as we have for the proseminar [Bachelor thesis]?*

Sara: *About the autobiographies or ?
But what is has to do with this course?
How about something like a diary or?
I am thinking about reflecting.
For example reflecting your own learning
experiences in the web; like what we do
for that Johanna.*

Lisa: *But, I was just thinking how it
would work out then...?*

Sara: *Well, for example that we would think
how our own experiences could be reflected
here, and our own thoughts.*

In Excerpt 2, the key informant Sara considers this matter of grouping in her personal note. She also depicts how she and Lisa, after the chat session, pursued their joint learning agenda further. During the tutorial in the computer lab, they posted a message to a general discussion board 'Key concepts' in the Optima environment (see Excerpt 3). The purpose of their discussion board message was to invite other workshop participants to join their sub-group. In the entry Sara writes that she would warmly welcome

participants from the University of Oulu, as well. This would, then, make the use of the web-based learning environment more authentic for them. Also, in her impression the Oulu participants seem to be more comfortable with the use of technology, or more technologically-oriented, and could thereby bring in different perspectives. Excerpt 2 and 3 were allocated in the category of distributed experiences.

Excerpt 2:

Personal note 17.10.

Sara: *We coupled up with Lisa yesterday to talk about how people communicate their thoughts in these kinds of environments.*

We did not get too far with the topic, so Lisa might disagree a bit. But that would be my viewpoint.

So, a point of true interest for us and also a very economical topic, since we can both use our previous knowledge on the subject and also start processing a point of view for our proseminar. So, I am happy today:)

It would be very nice to have some Oulu people in our group also.

They might have a little bit different views since they seem more 'technological'. And, it would make the virtual learning environment -learning more authentic for us. Though it is not a problem for us. We even used the chat to discuss our topic yesterday, even though we were sitting practically back to back.

Excerpt 3:

'Key concepts'-discussion board 16.10.

Lisa and Sara: *Hello everyone! This is Sara and Lisa from Jyväskylä. We are going to start a discussion here :) Actually, we are doing our proseminar [Bachelor thesis] (teacher training) on autobiographies, or more exactly on how people reflect their experiences about language learning. So, this is our starting point for this new topic. Join us, all you people interested in this kind of a project!*

The second step of the group formation took place in the online learning environment, mainly in communicating via the 'Key concepts' discussion board in Optima. The following day, Tina, a student from the University of Oulu, replies to the message of Sara and Lisa. In her posting she expresses her willingness to join the group.

At this point, Tina was sitting in a computer lab at the Oulu campus, in turn, for their local tutorial of the research workshop, and reflecting her thoughts in an online document – 'Personal log' – placed in the Optima environment (Excerpt 4). She describes the group formation over the web as 'frustrating'. Yet, she also expresses dissatisfaction with the degree of her own input into the process of grouping at this phase

(mainly, dissatisfaction with being passive). Excerpt 4 was allocated in the category of online experiences.

Excerpt 4:

Personal log, 17.10.

Tina: Well...let's see what happens. I just wrote a message to Sara and Lisa to let them know that I'd like to work with them (and others?) in that group.

This aspect of web-work---group forming---is frustrating; though I must admit that I haven't done very much myself in this phase of work. I keep waiting and waiting, and as the video camera just recorded, I hesitate to take the initiative.

But what should I do now? Surf the 'net?

In Excerpt 5 this exchange between Tina, Sara and Lisa is illustrated. Notably, this episode of grouping via the discussion board takes relatively long time: there is six days in between the posting of Tina and the final response to it (by Lisa). Lisa explains in her message that she has simply been too busy over that period and therefore her reply comes with a delay. Elsewhere she also writes several times having troubles to visit Optima on a regular basis since she – unlike Sara and Tina – does not have an Internet access at home. Here, the inevitable and somehow unavoidable and integral elements of the day-to-day activities offline, such as limitations of the (material) resources and (unequal) access to them mould and affect the shared activity online. Excerpt 5 was allocated in the category of online experiences.

Excerpt 5:

'Key concepts'-discussion board 17.10.

Tina: Hi there, Sara and Lisa, I would like to join your group, if it's OK =) Tina

Reply to Tina 22.10.

Sara: It would be great to have others interested in these kinds of things in our group. And even more, it would be great to try learning virtually in authentic context (that is, Lisa and me might get just a little bit bored chatting to each other while sitting back to back). So, I'd say you are more than welcome – we'd love it! – and I am quite sure Lisa is of the same opinion, too, even though she isn't here right now.

Reply to Sara, 22.10.

Tina: =) *I'd be glad to participate in this "experiment". So, you're working on a proseminar on this topic, right? Thank you for the welcome!! ☺ What would you like to do first? And when?*

Reply to Tina 23.10.

Lisa: *Greetings and welcome to our group! I am sorry, but it seems that at this point of time I am not having enough time to have more than one Optima experience per week. I expect this to change when we really start to work, though.*

In Excerpt 6, in her personal note, Sara reports the outcomes of the group formation process and the current situation in highly positive terms; pointing out, in particular, the active role Tina has taken in the group. Apparently, since the new group member is located in Oulu, she is delighted that the specific scene for their collective activities will thereby be mainly the inline environment – allowing for authentic experiences of learning enabled by communication technologies, just as she wished in the first place. This experience by Sara (Excerpt 6) was allocated in the category of online experiences.

Excerpt 6:

Personal note, 24.10.

Sara: *So... I am thrilled! We have a very active Oulu-person (Tina) in our group. So, now we get a real experience of virtual learning. I've been keeping contact with her via Optima, and we are really getting on with this. She seems really active. I hope everything goes well!*

3.6.3.2 *The process of conducting the collective research project in a confluence of on- and offline learning environments (Research phase)*

The aim of the Research phase, (weeks 2–7) was to work together in sub-groups on the topic of their own choice. The final mode of the collaborative project was left open. The CT group chose a research topic that had to do with the ways people articulate their thoughts and reflect on their experiences in the context of language learning.

In the beginning of this phase, the group shares their preliminary ideas and various lines of thoughts mainly via discussion boards in the Optima environment. After some

brainstorming and general discussions in a trio, Sara takes a decisive step. At this phase, she assumes a leading role in the group. She brings their ideas together and comes up with a concrete and definite proposal on how to organise their work more efficiently and, accordingly, specifies tasks and deadlines for both Lisa and Tina and also herself to fulfil. Lisa's response comes the same day (see Excerpt 8). She builds on the idea of a shared forum made by Sara and makes a more detailed suggestion on how to organise their work in Optima via a group log that would serve as an arena where they could share and develop ideas and inspirations as previously on discussion boards, and also to have a place for simply managing the practical issues concerning their shared work (e.g. what to do and when). Excerpts 7 and 8 are allocated in the category of online experiences.

Excerpt 7:

'Communicating thoughts' discussion board, 28.10.

Sara: *We need to come up with some kind of a forum to keep track of what we are doing -- maybe so that we have a forum for our findings (theories, researches etc -- you guys know what I mean) and discussion about that, and another for the practical "keeping in touch", to know what everyone's doing and what they'll be doing. Tina, any good suggestions? Then, after we have refined our research question, we could leave this Thought Forum behind as a record of how we started the project?*

Let me know if you have any further ideas on how we could work... Lisa, can you get some of your thoughts (maybe for example what you think is interesting in Tina's thoughts) to this CT folder on Wednesday? I'll try to do so. And Tina, as soon as you see our comments, please comment back! Let's try to have a question and a further agenda by Friday?

Excerpt 8:

'Communicating thoughts' discussion board, 28.10.

Lisa: *Suggestion: we could make a group log page in Optima – with dates, whats and ifnots... this doesn't make any sense, does it? I was wondering if we could use this discussion list as a forum for talking (like now) and the page as a way to inform all of us what to do and when. I'll come back to this later tonight (if Optima works, it'll be unavailable for a moment tonight)... The page could have these kinds of headlines "research", "theory", "work in progress" and below them we could write whatever we're doing... and when*

Further, at this phase, the shared experience of being 'There' seemed to be derived solely from communicating asynchronously, through a set of shared textual platforms in

Optima (i.e. discussion boards and shared online documents). Particularly Sara and Tina established an active exchange online, sharing also issues other than pertaining to the workshop as such. Sara and Tina were evenly active online over the eight-week period of the research workshop, whilst with Lisa there was a sort of ebb and flow of participation online over the same period and particularly in the beginning of the course, she was rather inactive in Optima. It seemed as if she was only marginally involved in the group exchanges there. However, Lisa's and Sara's contacts were intermingled with other activities offline (see Excerpt 9), for example, or they used other channels of communication outside Optima. Often, it was as if Lisa was experiencing the online events through the experiences of Sara. Also, Sara was often taking on the voice of Lisa, as well, when communicating about their jointly constructed ideas to Tina (Like: 'I and Lisa have discussed...').

As mentioned above, Sara and Lisa met occasionally face-to-face at the campus in addition to the weekly formal course activities. In Excerpt 9, the online environment and their shared tasks are strongly present during a face-to-face discussion in the university library café in Jyväskylä. In the picture, they have in front of them a print of the initial plan for their Optima research project. Sara depicts in her visual note that over this meeting they also shared personal feelings associated with the research project in general and also discussed, the ways in which they would actually like to proceed with the project. Excerpt 9 was allocated in the category of offline experiences.

Excerpt 9:

Visual note 30.10.



Sara: *We were both [pointing here to herself and Lisa] going to the library from Norssi [Normal School] and went to get a quick cup of coffee. We talked about our*

proseminars [bachelor thesis], about teacher training, about all things... and finally Optima, too! It was a nice brainstorming session (the quick cup of turned out to be about an hour and a half) about things (not only Optima), and we got some clarity to this whole Optima-thing again. Talked about Tina's enthusiasm our own feelings, and what we want to do and how.

However, whilst the main scene for the collective encounters was Optima, making the final decision for the topic and the specific mode of their shared research project, for example, seemed to require synchronous participation and interaction with qualities of normal conversation. Participants expressed that sometimes managing their research project via Optima only was rather slow and time consuming. Thus, as their work progressed, the group soon broadened their scene of operation to also include synchronous communication (see Excerpts 10 and 11). It was Lisa as the remotely located member of the CT group who first used the chat tool in Optima. She noticed that Sara was simultaneously logged on Optima and invited her to discuss the rationale for their project in more detail. She had made some suggestions for their project in Optima and was thus eager to hear Sara's opinion about her ideas. Excerpt 10 and 11 were allocated in the category of online experiences.

Excerpt 10:

Personal note 4.11.

Sara: Ok, so now we used the chat-thing in Optima with Tina. She scared me by inviting me in, and we had a nice long chat about our project (our chat can be found in the CT-folder) [group folder]. Rita [a teacher in Oulu] "barged in" on our conversation and suggested a NetMeeting for our group, so we set the date for next Wednesday. I am really excited!

Excerpt 11:

Chat 4.11. [A short quotation]

Tina: I noticed you had checked the Group info [an online document of the CT-group]; how do you find the plans?

Sara: Did I? I think not yet this week.

Tina: How much time you have now?

Sara: *Until four o'clock.*

Tina: *Would you mind checking the diary-page now- I find it a bit messy today...*

Sara: *I had the same feeling on Friday ;)*

Tina: *Do you know if Lisa has visited Optima?*

Sara: *Not maybe this week yet*

Tina: *Sara, will you see Lisa today or tomorrow- I think I could have time for a chatting tomorrow afternoon, so this negotiation could go a bit faster than via discussion board?*

Sara: *Tina, both me and Lisa are not free tomorrow between 14 – 16, we are at the Normal school; I still need go to another place after that*

Tina: *Sara, I will quickly go and take my calendar, I'll be back in a minute*

Tina: *Hi Rita!*

Rita: *Tina and Sara how would a Net Meeting sound like?*

Sara: *Scary!*

Tina: *Would you be present here, Rita, if I would need some help*

Tina: *Sara, do you think you could reach Lisa and ask her too about Net Meeting?*

Sara: *I can always call her or something*

Tina: *How about 16h00 or do you have to be present in the local tutorial of the research workshop?*

Sara: *No we don't; it is actually reserved for these kind of things, so a good timing*

Sara: *So it will be Wed. at 16h00 if fine with all of us? I will then inform Lisa too be there at 16h00.*

Tina: *16h00 is fine with me. Then we could make plans a bit faster (maybe ☺)*

Tina : *Would be nice if Lisa could come too*

Sara: *I try to catch her too*

During the chat session, a teacher in Oulu (Rita) makes a suggestion to organise a Net Meeting for the whole CT group (Excerpt 12). The aim of the meeting would be to sort out what they have done by then, and to specify the actual form for their research project. Besides, they were to set the exact deadlines for their later workshop activities as well.

During the chat, Tina and Sara agreed to have the Net Meeting during the local weekly tutorial of Jyväskylä participants. Sara would phone Lisa and ask her to come along in the computer lab, whereas Tina could use Rita's workstation at the Oulu campus. Next, a short quotation of the Net meeting is displayed. Excerpt 12 was allocated in the category of online experiences.

Excerpt 12:

NetMeeting 6.11. (a short quotation)

Sara: *So, your idea for our project...? So, we don't do any research but we are kind of reporting...?*

Tina: *Yes*

Lisa: *And the realisation...?*

Sara: *Put it another way:
it would like we have
discussed earlier- like an
experimental project?*

Tina: *So maybe we make the
report in the project log?*

Sara: *Yes, exactly so!*

From the start of their research project Sara and Lisa had come to know Tina solely through textual communication. Thus, to see and hear each other simultaneously seemed to be an important turning point for them all (see Excerpts 13 and 14). For them, the use of a telephone/video connection was welcomed as a site for richer and more sustained interchange than communications merely through texts had been. They recognised the meeting to be an opportunity to ask questions they previously had failed or hesitated to ask. Also, this experience, based on verbal and visual aspects, was reported to somehow bring the group closer together. Earlier, Sara and Lisa had repeatedly communicated how active and full of enthusiasm Tina was and how they felt less confident and skilled than her with regard to the use of technology, for example (see e.g. Excerpt 9). However, after the Net Meeting, Sara writes being more sure of herself now and describes that the partnership with Lisa became more equal and reciprocal. Excerpts 13 and 14 were allocated in the category of online experiences.

Excerpt 13:

Personal note 8.11.

Sara: *OK. So the NetMeeting is over. I was a bit excited about it, but it went just great. I think that even though the grouping was done in such an artificial way, we, Lisa, Tina and me, have similar thoughts about things and are "similar people" in some ways -- laugh at same things, consider similar things important etc. Is it coincidence or did our thoughts transfer somehow through the Optima, I do not know. Anyway, NetMeeting was definitely good for our project, because now we all know what we'll be doing and that everybody really thinks that it is OK. Besides, Tina became more of "a real person" to me when I hear her talking. Sometimes, judging by her writing, she has seemed to have so much more knowledge than I do. Maybe (I'd say probably) she does, but she still needs my humble ideas, too -- that's what I realized during the meeting.*

Likewise, in Excerpt 14, Lisa briefly summarises their joint efforts so far. She apologises for being inactive herself in terms of writing, but makes reference to Sara's regular postings concerning their joint endeavours.

Excerpt 14:

Personal note 7.11.

Lisa: Sorry, I seem to have been totally lost my touch in sending you messages about our Optima-work. But I think that Sara is keeping you posted. In any case we are now in good phase. We have a group of three (Tina is from Oulu-group) and yesterday we had a netmeeting with video-connection. Scary but also a good chance to find out how to use the latest technology and how it helps us!

3.6.3.3 Finishing up the collective project (Evaluation phase)

Finally, in the Evaluation phase (week 8) all sub-groups in Oulu and Jyväskylä were finishing up and also presenting their joint products in a videoconference meeting. The products of the sub-groups were largely varied: from mental maps concerning the jointly created topic to carefully documented descriptions of the collective 'journey' over the workshop.

In Excerpt 15, Sara and Lisa are recalling the initial history of their shared project. Lisa's voice somehow encapsulates the evolution of their shared experience of being 'There' together with the others: as an expansion from local face-to-face gatherings towards experiences distributed over physical and online surroundings or experiences taking place online; enabled by written, verbal and visual communications and, grounded in everyday experiences of individual participants. Excerpt 15 was allocated to the category of online experiences.

Excerpt 15:

Videoconference 28.11. between Oulu and Jyväskylä (a short quotation)

Sara: Our project also started from the pro seminar work, but I think what came out is not very close to the original idea- our project started to evolve there in the Internet. Tina was so active in so many forums and me and Lisa have just tried to find out what is going on here...

Lisa: Well, the first three weeks we basically talked face-to-face with Sara and we were wondering what we should actually do but then when we got Tina to our group we started to discuss there in

Optima and used chat and even Net Meeting. Well we have already told you about the outcome of our work.

3.6.4 Synthesis

The aim of this case study was to visualise the process in which the student teachers (the research subjects) were jointly constructing their shared experience of presence – their unique 'Learning Place', as we came to understand it – from the social and material elements available to them in the course of their eight-week, technology-enhanced research workshop. In this study, the understanding of the shared experience of being 'There' (together with the others) was expected to be achieved through acknowledging the complexity of this experience – the many elements, persons and multiple contexts it may involve, and how these different aspects were reinforcing, extending, or limiting these experiences, for example (see e.g. Mantovani & Riva, 1999; Ganberini & Spagnoli, 2003).

In the main the data illustrated how the technology-enriched communications seemed to give rise to varied forms of mediation that were often multi-faceted and included many levels of interaction; in multiple and interlinked settings. Sometimes the online learning environment was experienced to occupy the physical learning environment, while in other times the online learning environment served as an 'area' of its own for shared encounters. To be at the heart of the shared activities, the members of partly collocated, partly remotely located groups had to cope with varied circumstances and use varied procedures to achieve their jointly agreed goals and objectives. Also, their shared experience of being 'There' was not that much a visual creation based on advanced technology, but more imaginary by nature, yet with quite concrete connotations with respect to the co-participants' commitments and actual contributions towards the jointly agreed objectives and aims of their collective work (Kolb, 2000).

Part 1 of Study 2, showed that, the way in which they made the use of communication technologies an 'ordinary' practice was silent, yet effective (Powell, 2004). In addition, in Part 2 of Study 2, it became clear that the students were mostly relying on such social resources and technological tools that were most relevant and focal to the individual and collective activities at that particular point in time over the research workshop. In spite of few 'experiments' with technology available for them (such as using chat function when basically sitting back-to-back in a computer lab), participants were

very 'economical' in the ways in which they accomplished their shared tasks. Gradually, it became clear that the technologies were not seen to determine participants' activities in exclusive ways but they were seemingly integrating technologies into their ordinary activities and shared practices over the process of study.

Further, the design of the workshop was left rather open and no specific instructions were given as to how to utilise the technologies available. Within this case study, the participants developed dynamic and diverse practices that were often situated in unexpected and invisible sites of study. In retrospect, the most relevant scene of the collective activities was therefore difficult to define beforehand. In contemporary higher education, new challenges have emerged, instigated by the introduction of new (educational) technologies as part of the everyday educational practice (see e.g. Kirschner et al., 2003; Nata, 2005). The case described here was evidently an example of a successful shared enterprise carried out during the workshop under study. However, in contrast, a substantial proportion of the whole group of students did not prioritise certain aspects pertaining to the workshop (e.g. personal notebook) or were not actively present in the online learning environment either. Yet, this seems to be a common issue in the research of online learning and would therefore deserve a closer examination, as Brett (2004) suggests. She points out the meaning of both on- and offline attributes in creating online engagement. In this case, tracking down the reasons behind the differences in online learning processes and learning outcomes between different sub-groups of students would need a closer investigation. Thus, generally speaking, to only focus on how people use specific tools for specific purposes, but to acquire more holistic understanding of how people live in their world – populated with artefacts – might be essential (Bannon, 2005). This implies a certain shift from attempts to gain a better understanding of the *use* of artefacts to understanding their *presence* in our ordinary everyday activities of living (Hallnäs & Redström, 2002).

CHAPTER 4

Main findings and general discussion

In sum, the general aims of the present thesis were first, to search for the conceptual origin of (learning) community and its reference points in a context of technology-rich higher education milieu. The second aim was to develop appropriate methodological tools so as to study, analyse, and represent participants' perspectives in collective activities taking place in a confluence of online and physical learning environments. Lastly the aim was to explore what might create conditions for successful higher education practices to emerge; based on the values of community and collective learning, and thereby come up with contributions to educational design in technology-enhanced higher education settings. Due to the explorative and descriptive nature of this thesis, the emphasis was laid on the first two aims set for this work. Next, the findings of this thesis are discussed according to the three main research questions defined for this work.

In the research literature, the term 'community' has been used as a variably defined and broad concept (e.g. Bruhn, 2005; van den Besselaar et al., 2005). 'Community' is seen, for example, to offer ideal guiding principles for human relationships (see e.g. Hyypä, 2002; 2005; McMillan & Chavis, 1986; Sarason, 1974), or it is associated with an emotional attachment to Place (see e.g. Buttimer, 1980; Casey, 1996; Relph, 1976;

1985; Seamon, 1982; 1983; 1993; Tuan, 1977). While the definitions of the term 'community' have largely varied, on the other hand the term also seems to be protected as if it were a 'totem' (Bruhn, 2005). However, where and when people have experienced community has influenced its conceptualisation. Bruhn (2005) argues that communities, today, are not the same as they were in the past and therefore, communities should not be valued by one essential set of criteria only. As Brint (2001) puts it, the quest for better interpretation of contemporary communities would require adopting a view on collective activities that retains some of the qualities of a 'traditional' community but eliminates some of its 'myths'. To encapsulate the concept of community here, symbolic dimensions and spatial metaphors were seen to offer fundamental grounds and diverse perspectives to explore this complex and multi-dimensional phenomenon further.

4.1 Vantage point I: The 'guiding principles' of students' technology-enhanced community in higher education

As Bruhn (2005) points out: 'community can usually only be described, not defined, and experienced, not generalised' (p. 16). Consequently, to gain a better understanding of university students' community over a web-based university course, it is necessary to recognise its special attributes in this specific context. As was witnessed in this work, participants' bonds to a technology-enhanced community in higher education setting can be inherently different from those to a self-selected community of interests emerging on the Internet, for example. In the web-based university courses the bonds were distinctive in that here the participants were usually not anonymous individuals who tend to gravitate toward the community only for the reason of mutual interests or shared affinity. Instead, such a unity normally arose from an assignment and it might be therefore unrealistic to assume that the unity would have had very strong meanings to its participants (Kolb, 2000). In essence, students do not work together to *be* together but come together only to work; possibly because they have a compulsory learning task to be accomplished, for example. Particularly during Study 2, students' efforts and contributions varied hence to a great extent, depending on individuals' inspirations and personal enthusiasm. Similarly, these diverse inspirations interacted with resource limitations such as access to necessary technology and time available over the courses. Moreover, as Loewy (1993) points out, community may fall apart when the unity is no

longer central part of individuals' interests and they no longer work towards collective solutions to shared problems. This was particularly the case during Study 1: during the first assignment in sub-groups, students' unities fell apart as soon as they accomplished their shared assignments. As Cousin and Deepwell (2005) remind us, community construction involves informal activities that shape and trigger community life. Thus, purposefully designed communal activities based on task-related performances only might be counterproductive for community to flourish. Their advice to designers is, following Sharp (1997), to avoid seeing learners as 'bearers of roles and tasks rather than as subjects of creativity and desire' (Cousin & Deepwell, 2005, p.59).

During Study 1 students' engagements in shared activities and joint products were predominantly based on accomplishing a set of defined practices and commitments, which gave the participants possibilities to meet the others and openly share perspectives and personal inspirations, be they conflicting or coherent (see also Hodgson & Reynolds, 2005). Particularly in Assignment 2 of Study 1, the more open assignment design (i.e. open discussions around four provocative statements) when compared to task-related Assignment 1, allowed for opening for departing from the 'script', which is, as Kolb (2000) moulds it, actually against the idea of totally controlled learning activity. This situation provided students' opportunities to 'side conversations' in more informal ways: to voice out different personal experiences in real life issues that concerned them truly, such as the teacher education programme they were participating, and also, to have these accounts also heard. These opportunities were reported to result in true engagements in their 'professional community of teachers-to-be', as they named it during the online discussions. They seemingly pushed the rules or 'expected' ways to accomplish the assignment and tried out behaviours that did not quite fit in their earlier experiences in learning in this context (Kolb, 2000). Coming back to the definition of community, the driving force that structured collective activities in this work, and most notably during Study 1, did not reflect the realities of the traditional image of community in which symbolic meanings are often driven by values of harmony and mutuality and which, particularly, seeks for consensus as a basis for belonging (Mann, 2003). Instead, as was witnessed in this work, the structuring forces of this 'unity of loose connections' (Bruhn, 2005) were the differences in opinions, and particularly, the possibility to voice them out (see Mann, 2003; 2005). Also, as Levin (1980) says, between the two extremes of 'sense of community' – referring to experienced sense of community or the lack thereof – we might create many kinds of more temporary and 'illusionary' ties with each other. In this light, the unity students were forming here

might also be referred to as more a 'rootless' and general collection of individuals' interests (Moe & Wilkie, 1997).

4.2 Vantage point II: Students' Learning Place in a technology-rich higher education milieu

Also, as became evident during this work, too narrow a focus on the technology might prevent us from seeing what university students' actual learning environments include and consist of (see also Goodyear, 2000; Nardi & O'Day, 1999; O'Connor & Ross, 2004; Pöysä et al., 2003). Early research into online communities often abstracted the participants from their physical surroundings (see e.g. Jones, 1999; 2002). In this work, however, it was observed that students' on- and offline learning environments were not separate spheres of their individual and collective activities but were experienced essentially as *hybrid* (Blum, 2002; Mitchell, 1997; Pöysä et al., 2005; Rohde et al., 2004). Hybrid experience of Place may be best characterised as a continuum; as an experience of presence influenced by other places (be they on- or offline), different participants, and varying personal roles (Blum, 2002). Within this work, participants seemed to create vivid and rich collective practices that were situated in sometimes unpredicted and invisible sites of study. In retrospect, for the researcher – lingering on the sidelines of activities (Eichhorn, 2001) – the most relevant scene of collective activities was therefore difficult to define beforehand.

As was described above, students' technology-enhanced unity did not exist solely in some enclosed 'cyberspace', but its form resembled more of those communities in which communication technologies support and enrich communal activities at the local level (see e.g. Kavanaugh et al., 2005; Liff, 2005; Rosson & Carroll, 2005). As the identification of the relational assemblies of hybrid Place experiences as online, offline and distributed experiences of Place (Powell, 2004), for instance, during Study 2 the online learning environment was sometimes experienced to inhabit the physical learning environment, while at other times the online learning environment offered another, parallel 'area' for shared encounters (Pöysä et al., 2005). During Study 2 some of the participating students shared the same physical resources on campus while others were remotely located, studying in another university. Nevertheless, at times the actual adjacency between the collocated participants was rare and the online environment served thereby as the primary place where both the collocated and remote members got together, shared news, got help and so forth. To construct their learning Place, the partic-

participants deployed a range of technologies and most notably, the way in which they made the use of communication technologies an 'ordinary' practice was silent, yet effective (Powell, 2004). The full reality of 'Learning Place' inhabited by students was thus multi-locale – a complicated mix of interactions in online and in real-life surroundings.

In sum, to define the conceptual origin of the unity the university students were forming in this work, it might be best to address it as a communicative event composed of written, verbal and visual elements; realised as simultaneous and overlapping activities in hybrid learning environments; and originating in small, sub-communities of students or in sub-units of larger collectives (Pöysä, 2006; Pöysä et al., 2005). While acknowledging the many critiques on using the term 'community' in too broad meanings (see e.g. Fielding, 1997; Goodyear, 2000; Hodgson & Reynolds, 2005), this work, still, chose to embrace the term within the rather broad frame afforded by the two conceptual vantage points discussed in Chapter 1. As discussed earlier, the defining attributes of students' community that emerged from the empirical studies both resembled and departed from those attributes described in the research literature in general. Most notably, in this context of a technology-enhanced university course, the unity was experienced to be less individually constraining and less an 'ideal of the past'.

4.3 Contemporary ethnographies and the representation of the multi-locale field of study

New technologies have become part of everyday practices and in this sense 'virtual' ethnography reflects the world such as it seems to be (Hine, 2000). Today, research participants' daily life often encompasses environments online and informants are more broadly technologically literate so that the use of email, for example, is interwoven with other forms of everyday communications. Modern information and communication technologies therefore present a new domain that overlaps with more conventional fieldwork locales with particular questions of the realisation of fieldwork to emerge (Pink, 2000). Like in this work, the specific scope of the field kept changing, connecting different individuals and activities in various contexts of the study. As Amit (2000) argues, the methodological flexibility traditionally connected to ethnographical fieldwork is becoming even more crucial now when the context of fieldwork has changed. It is argued here, following e.g. Eichhorn (2001), that ethnography may no longer rely only on long-term intensive participant observations in face-to-face settings but should be capable of accounting for modes of interaction that draw on the many kinds of (elec-

tronic) communication available for the people involved in the studies. But, most notably, as Pink (2000) writes, instead of merely drawing on the differences between face-to-face and communications online, for ethnography it is more useful to concentrate on how the information and communication technologies work in relation to the other forms of interaction in the field.

In this work, looking at the fieldwork based on interaction blended in face-to-face and online settings might be portrayed essentially as multi-locale, a combination of activities on- and offline, as immediate and remote. Yet, the work at the site could be defined not only in terms of multi-locale but also as non-linear: it consisted of many short and temporary visits to the online environment, a flurry of emails and face-to-face meetings at the university. The term 'multi-locale', however, does not point to a simple multiplication of fieldwork locales but is maybe best depicted as an interfusion of contexts, involvements, roles and perspectives (see Pink, 2000). Following for example Clifford (1997) and Eichhorn (2001), the field cannot be examined only as a context where the fieldwork takes place but also as a methodological construction. Accordingly, as experienced in this study, researcher's field was at the same time everywhere and nowhere. The author of this work was not often 'there' but constantly available to the students. The researcher's position could, thus, be best defined as a fulcrum of various people, places and different perspectives (Amit, 2000).

Most significantly, ethnography can be, then, illustrated as 'craft work' (Norman, 2000). Thus, it is up to the researcher to establish the relationships with the research subjects and actively pursue them during the period of collecting data. Normally, in the work at the site, the researchers may not have a choice as to whom they can rely upon as key informants. Also, as experienced here, one of the difficulties peculiar to online settings are the possible limitations and boundaries in establishing social relationships and rapport with the informants (Hine, 2000). Furthermore, as Atkinson (1997) writes, it would be wrong to say that most of the scholars ever become a real part of the field or, additionally, have a true impact on the setting. Yet the fieldwork can be truly meaningful and result in good quality of data even if the researcher is not fully immersed in the research setting she or he is studying (Coffey, 1999). In this light, some peculiarities of the fieldwork discussed in this work, such as the field without a proper geographical locus, the limited number of face-to-face encounters or the short period of collecting data, may not automatically absolve the relationships between the researcher and the informants from being reciprocal or meaningful – even if the relationships with the informants are somehow forged or artificial.

Thinking of the subject-object dichotomy of the ethnographer and the people studied, here, in this study, the nature of fieldwork was apparently reciprocal. While the research involved non-localised fields, the use of the personal process notebooks, in particular, enabled more interactive and personal communication with the research subjects than communication taking place merely in the web-based environments might have allowed for. In general, communicating from distance might even diminish the possible effects of power relations between the researcher and the informants in the process of research (Eichhorn, 2001; Mann & Stewart, 2000).

Similarly, as the author witnessed in this study, the nature of communication may not allow for entirely transparent or linear representations of the work at the site (see e.g. Bochner & Ellis, 1996; Tierney, 2002). But, as Coffey (1999) writes, it is the researcher who personalises the fieldwork, makes the decisions and connections with the material collected. Eventually, a tailored form of the representation can make the researcher's results of inquiry even more explicit and open for discussion. In this way, the unique forms of representation may have the potential to reduce the distance between the researcher and the audience – especially, to engage the readers more strongly in the real worlds of the others under investigation.

The primary aim of the participant experience method utilised in this study was to identify how participants themselves experienced the overlapping and coexistent contexts of study. In brief, the method was built on a personal process notebook, realised as an email correspondence (text notes and visual notes) between the researcher and the research subjects. However, the method required a lot from the informants. In Study 1, the method resulted in more unified data, whereas in Study 2, despite the notebook was not a supplementary assignment for the students it resulted in a regular exchange of experiences with but a few participants. Obviously, not all students in Study 2 were natural diarists and apparently some of the informants were not motivated enough to find time for writing and to reflect their personal experiences, take photographs, or to respond regularly to the researcher. To put it strongly, researchers, whose personal interests and motivation stem from their professional aims, are the ones to whom the relationships with the research subjects matters more (Coffey, 1999). Therefore, the benefits for the informants may not be that easily demonstrated. In the course of collection of data positive cases were experienced too. For instance, in Study 2, Sara, the most active notebook writer, became one of the key informants for the researcher over the course. Throughout the study, the researcher came to look forward to hearing from her. Especially with Sara, the notebook turned out to be not only a notebook, as such, but

also something between a conversation and an online interview. Her regular contributions concerning the set of social relationships and overlapping contexts over the research workshop made it possible for the author to get at a participant's perspective on those practices. In this way, it also assisted the researcher in the process of 'constructing her field' of study. During the data collection period, the relationship with Sara remained at a polite but distant level, though being positive and friendly. When the fieldwork was coming to an end, Sara sent messages in which she wrote:

[...] *"I think that also this reporting to you has been a very good experience, it has made me think things I probably would not have done if there hadn't been you..."*
[...] (Text note, Sara, 27.11.)

[...] *"Sometimes I feel that when I start writing to you about some experience I have nothing to say to you, and it turns out that in fact I have learned masses of things."*
[...] (Text note, Sara, 29.11.)

Finally, the strength of the method was its spotlight on an individual participant. As a result, it provided a rich vein of information of how students sensed their work and personal relationships during the web-based course. Yet, what might be significant here was that it also gave access to certain aspects and small occasions outside the online learning environment that turned out to be essential in the analysis but would have otherwise been difficult to notice, for example by interviewing the participants at the end of the study. In addition, from the standpoint of the researcher, the method made it possible to come to see participating students as well-rounded individuals, and in this way, to link them to the larger social and material context of the course under study.

4.4 Contributions to educational design

On the basis of the observations over this study, it seems that an infrastructure based on the values of community might offer a relevant and innovative, yet challenging, foundation for successful collective activities to arise in a higher education milieu. The term 'infrastructure' refers here to the intertwined and overlapping social and material structures (including technological tools) that support participants' individual and collective levels of activities. (Lipponen & Lallimo, 2004). Yet, how to achieve such an infrastructure that would adequately cater for the real needs and activities of the participants, poses many challenges for educational design with regard to qualified and tailored joint

activities. That is, how to construct learning environments which may encourage participants to create their own and at the same time, communal Places for learning (Good-year, 2000). Following Kolb (2000), discussions in architecture and planning offer a rich knowledge base about place and inhabitation that might be transferable also to environments online. According to Kolb (2000):

“[I]f we want to create a sense of community, we should be able to make online educational environments more like places where someone would like to linger, with time to reflect and to shape and to be shaped by the atmosphere of the place. Such online places would need to have some amplitude, some room to wander and hang out and those internal differentiations that allow for place creation.” (p. 123).

If such a unity is seen as a fusion of individual (subjective) and shared (objective) perspectives (Garrison & Anderson, 2003) in multiple and changing sub-communities of students (Hodgson & Reynolds, 2005), both of these perspectives should be, then, included in the design agenda.

In terms of design, it could be rewarding to somehow foster the participants’ ‘critical reflection’ in the course of ‘occupying’ Places and, over the process of learning ‘There’ (Kolb, 2000). That is, to somehow deconstruct the underlying structures, interconnections and the existing values behind these activities within the unity, acknowledging both objective and subjective levels of perspectives in collective encounters. Yet, this deconstruction in terms of ‘self-critical inhabitation’ is not to be perceived as ‘un-building’ (Kolb, 2000). Instead, the sense of other people’s presence and the ongoing awareness of activities in terms of awareness of shared goals and awareness of shared working processes (e.g. Leinonen, Järvelä & Häkkinen, 2005) could allow individual participants to structure their own activity and, it may assist and sensitise the participants to become more aware and conscious of their own learning processes in regard to those of others’ (Kolb, 2000). In other words, it may assist the participants to situate their own activities within the larger scenario of the collective. On collective level, it could offer the unity a possibility to construct something unique, some new ways of understanding, through the encounters with the others. This could, in turn, help the ‘designer’ to include and to foster understanding of various underlying structures and interconnections within the unity, which might otherwise go unnoticed and, thus, unquestioned.

Finally, there is, however, certainly a demand for finding a balance between, on the one hand, overly ‘learner-optimistic’ approaches (Lowyck, Elen & Clarebout, 2004) and

on the other hand, over-scripting natural and rich joint learning (Dillenbourg, 2002). Thus, instead of trying to strictly 'manage' the learning community, better results might be achieved by minimal structuring of collective activities (Dillenbourg, 2002; Dillenbourg & Jermann, in press), accomplished within an open and flexible learning infrastructure that supports the freedom of action of individuals and also allows questioning the form and purpose of the activities (see e.g. Cole, 1996). This could revitalise communal values in favour of successful joint and individual-level activities (Kolb, 2000).

Another essential question might be how to make the use of educational technology relevant and meaningful in terms of the needs of participants. In the context of higher education, like in this study, the obstacle to such a development might not be the technology but rather the underlying pedagogical expectations and designs of learning activities (Lehtinen, 2003). Also, these designs often opt for the values of traditional, static image of community (Mann, 2005). As was witnessed over this study, the use of educational technology should be justified and well grounded, as an adjunct to collective activities offline. Technologies can offer different constellations of communicational, spatial and temporal possibilities in forms of changeable, simultaneous and multi-layered interaction and thereby offer access and intimacy not always possible in conventional learning environments (Kolb, 2000). In this work the web-based learning environment was experienced to enhance participants' joint interaction e.g. in terms of making it more efficient and professional-like. For example, the shared platform flexibly enabled students to go back, re-read and qualify their points over time. Likewise, it was experienced to give an 'equal opportunity to voice' (Mann, 2005) – also to those students with less online skills or confidence. But above all, the web-based learning environment enabled the students to meet – overcoming the many difficulties and barriers that physical learning environments for a large, heterogeneous and remotely located group of students often pose. It is argued here that the technology-enhanced communities of students should not be seen as substitutes for the traditional educational practices in higher education settings, but rather as complementary and potential enrichment to them (O'Connor & Ross, 2004).

To conceptualise the notions of this study further, recent studies in the field on human-centred interaction design approaches (see e.g. Bannon, 2005) provide fresh perspectives in designing activities enabled by ICT. They have shifted their perspectives from the *use* of technologies to their *presence* in our everyday of living (Winograd, 1997; Hallnäs & Redström, 2002). Within this approach they use terms such as 'affective design' (Aboulafia, 2004) and 'experience design' (Bannon, 2005), for example. What is

common here, in general, is the way of seeing human activity 'in the world', not as something isolated, and likewise, seeing communication technologies as integrated, mediating humans' activities. Even though these concepts are developed in parallel with the recent technologies such as ubiquitous computing, these innovative perspectives could expand our understanding of the human engagement and experience with technology also when looking at technology-rich educational practices as experienced over this work. In terms of technology-enhanced learning, the transition from *blended* learning (e.g. Rohde et al, 2004), as combination of face-to-face and computer-mediated learning activities, towards *integrated* learning, in which the rapid transition between learning activities, be they on- or offline, is facilitated e.g. by mobile technology or lighter hardware (Dillenbourg & Jermann, in press) might be the next step towards making the use of technology more 'ordinary' in terms of the 'users'. In this perspective, technological tools are thus no longer simply functional items for accomplishing tasks, but one part of the environment (Bannon, 2005).

Further, in view of changing communicative practices, what we call 'learning' might be somewhat different (Säljö, 1999). Antonacopoulou (2002) criticises that within the socio-cultural stream even those studies that have been context-sensitive and focused on the learning processes (Lave & Wenger, 1991; Wenger, 1998), the mechanism and the diversity of these processes are not conceptualised or explored further. Instead of assuming learning to be primarily an 'end result' or an 'outcome', Antonacopoulou (2002) suggests to examine where and when learning actually takes place in collectives. She does not point to the chronological order nor to the location but on interactions that may create conditions for learning to emerge. Also, as Engeström (1999) suggests, in order to better understand practice as an analytical unit, it might be useful to focus on the actual value and significance the participants add to the collective activities and to the tools that mediate these activities (see e.g. Sinha, 1999). Likewise, it could be essential to consider the context of collective activities primarily as negotiated and socially construed – not as something given (see e.g. Muller & Perret-Clermont, 1999).

Finally, as the educational practices are undergoing a change in higher education (e.g. in terms of collaborative pedagogies, intertwined with collaborative technologies; see e.g. Kirschner et al, 2003), this, in turn, will have an impact on the forms of the students' learning outcomes. In this study, particularly in Study 2, it was witnessed that the resources the individual students brought into the shared encounters were largely varied, but equally valuable in regard to the shared objectives. Moreover, not all of their

contributions were visible, stable or carefully documented on the shared learning platform, either. In this context of collective learning, situated in a hybrid scenario of face-to-face and online activities, composed of an amalgam of individual and shared encounters, learning may be of such nature that it is hard or even impossible to measure afterwards. Instead, here, the scope could be more on the processes and, particularly, on the processes of co-construction of knowledge (Arvaja, 2005). Even though the scope in this work was not on learning, initially, this study provided a view on the ways in which technology-enhanced collective activities were organised from the perspective of the learners. Basically, this refers to the multi-sited scene of activities, often appearing where they were least expected and least visible.

4.5 Evaluation of this work and future prospects for research

The holistic research scope for this work chosen aimed to acknowledge the diversity of social and material conditions surrounding collective activities – as observed and as experienced. Attempts to define the limits, key actors, and essential elements of these contexts from the outside only were considered to result in partial interpretations of the activities under study (e.g. Shumar & Renninger, 2002). Thus, it was the contention of this work that a better understanding of the true acts of collaborations in technology-enhanced learning environments could be gained through honouring the experiences and memories of the participants involved in these practices. Adopting this broad and descriptive perspective brought along many quandaries and confusing aspects, but was personally rewarding as well.

The data were collected through two empirical studies: a three-week study (Study 1) in Belgian and an eight-week study (Study 2) in Finnish higher education settings. Yet, in regard to the rather ambitious aims set for this thesis – to search for the conceptual origin of students' community and its development in technology-rich higher education milieus – the major limitation of this work, in retrospect, was definitely the short terms of data collection. Likewise, the small number of research subjects was seen as another limitation here. These both aspects made it more difficult to draw any general inferences from the results. However, the key themes that emerged from both of the studies were alike and supported each other. Furthermore, it should be noted that the image of community depicted here is first and foremost from the early phases of the unity development – from the phase when the ideas of community and collective learn-

ing were just entering the shared practices. Thus, in order to examine university students' engagement with educational technologies and students' willingness and interests to participate in such collective practices as communities, particularly in the context of higher education, there is an evident need for a research design that involves studies with more long-term perspectives. Also, it would be particularly useful for the further investigations to employ more sophisticated research methods and tools that – instead of focusing only on the ongoing process and the near future – would also cover participants' personal histories as well as underlying values and expectations in regard of the use of educational technologies and collaborative practices, for example.

Further, a most valuable point in this work arises from the authentic research settings of higher education. This perspective made it possible to situate the participants' activities in a broader milieu of technology-rich learning environment and, similarly, to connect participants' informal learning activities – that were often emerging in unexpected and invisible sites of study- with the activities in the formal learning settings, on- and offline. However, the authentic research setting together with the minimal pre-structuring of course activities (Dillenbourg & Jermann, in press) brought along the risks of failure of participants' collective activities as was witnessed particularly in Study 2. Even though the initial aim of this thesis was not to evaluate the processes or outcomes of sub-groups in terms of learning but rather to explore the conditions of communal learning to flourish, the collective processes and the outcomes of the different sub-groups were found largely varied. This, in turn, shaped the data collection processes, reduced the amount of uniform data available, and also limited the scope of the analysis. However, as it seemed unfeasible to go for the procedures of more refined and structured design experiments (Brown, 1992; Collins, 1992; De Corte, 2000) with regard to the broad, ill-defined and complex concept of community, because it would not have been possible to define beforehand what exactly was to be measured, the choice was made for explorative (case) studies instead.

Furthermore, in the course of constructing the fields of Studies 1 and 2, the role the author took resembled too much that of a 'tourist' – lingering on the sidelines and being a bit unsure how to participate in the collective practices of the students (see Eichhorn, 2001). Hine (2000) argues that the ethnographer inhabits a kind of 'in-between world', being simultaneously a native and a stranger; seeking for a balance between being an involved co-participant and an independent researcher. However, the researcher's relationship with the participants affects the collection of data and the memories are present in the reconstruction of the field experiences and likewise, the process

of shaping the field documents into the research descriptions by looking for various patterns, narrative threads and themes of the texts is depended upon and created by the writer's experiences during the interaction in the fieldwork (Coffey, 1999; 2000). The author of this work chose for a minimal participation and interaction with the research participants, though. When thinking back of the process of research, instead of continuously explaining her presence and motivation to be 'there' (Eichhorn, 2001), at this point, a more participative and visible role of the researcher would have been certainly chosen for. The shift from focusing on analysing the 'passive discourse' to becoming a more active participant in its creation might have allowed for a more profound sense of understanding of the processes under study (see Hammersley & Atkinson, 1995). Also, in terms of moulding the representations of the research accounts (i.e. the communicational plot in Study 2) questions could have been asked and emerging concepts refined also together with the research participants. Moreover, in this study, poly-vocal research accounts assisted the researcher to 'observe herself observing' – and thus to elaborate her own work at the site and to reveal her connections to the others involved in the study. The role of the researcher as more participative and visible would, however, require more intensive reflection and elaboration of its various aspects and different steps over the course of study (Clandinin & Connelly, 1998). Also, its representations and reconstructions of the field experience into research accounts should be carefully documented and highlighted (Coffey, 2000).

Finally, the processes of collection of data, particularly in Study 2, resulted in a large set of different types of data in verbal, written, and visual forms. Gathering a large amount of data as multiple modes was expected to increase the reliability of the study by providing multiple perspectives and also to make the researcher's interpretations of the data more transparent and open for the audience to whom the findings are presented. As has been described above, at the centre of this research were participants' experiences in collective activities. Therefore, the analysis was deliberately focussed only on a minor part of the whole body of the data collected in the studies. However, in terms of the data available, many different angles could still be discussed. For example, the peripheral focus of this thesis was the large amount of (web-based) discussions in sub-groups and as whole groups of participants in both Studies 1 and 2. For the analyses of this work, however, these discussion board data were screened through mainly with the eye of the personal notebook data. For example, if communication is the heart of the community (Fernback, 1999), analysing communication processes over time in terms of the concept of 'genre' could afford with a more comprehensive and detailed

view on, firstly, how the unity establishes its communicative practices and, secondly, how it organises its shared activities (Dandi & Muzzi, 2005; Orlikowski & Yates, 1994; Yates & Orlikowski, 1992).

Yhteenveto

Pöysä, J. 2007

Oppijayhteisön syntyprosessi ja erityispiirteet teknologiatuetussa korkeakoulukontekstissa

Etnografinen lähestymistapa yhteisöllisen toiminnan jäljittämiseen
verkossa ja kasvokkain tapahtuvan toiminnan rajapinnoilla

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Johdanto ja tutkimuksen tarkoitus

Nykypäivän koulutuksen kontekstissa korkea-asteen opetusta toteutetaan yhä laajemmassa määrin yhteisöllisen toiminnan ja oppimisen käytänteille suunnitelluissa verkoperustaisissa oppimisympäristöissä (mm. Kirschner ym., 2003). Ihmiset ovat kautta aikojen kuuluneet erilaisiin paikallisyhteisöihin, joiden koossapitävänä voimana ovat toimineet läheiset ja henkilökohtaiset siteet kanssatoimijoihin, perustuen usein esimerkiksi samankaltaisuuteen, yhteisiin arvoihin sekä jaettuihin päämääriin (mm. Hyypä, 2002; 2005). Tänä päivänä ihmiset saattavat paikallisyhteisöjen lisäksi kuulua samanaikaisesti useisiin, paikasta riippumattomiin (teknologiaperustaisiin) yhteisöihin (Bruhn, 2005; van den Besselaar ym., 2005), vaihdellen esimerkiksi ns. Internet-yhteisöistä teknologiatuettuihin paikallisyhteisöihin. Yhteisöjä käsittelevästä kirjalli-

suudesta onkin vaikea löytää vain yhtä yleispätevää yhteisön muotoa tai yhteisön määritelmää. Tässä tutkimuksessa teknologiatuettuja oppijayhteisöjä on lähestytty kahdesta rinnakkaisesta teoreettisesta näkökulmasta, jotka tuntuvat toistuvan yhteisöä tarkastelevassa kirjallisuudessa. Yhtäältä, oppijayhteisöä tarkasteltiin sen symbolisten tekijöiden kautta, jolloin yhteisö juuri erityislaatuisena sosiaalisena rakenteena koetaan toiminnan koossapitävänä voimana (mm. Loewy, 1993; McMillan & Chavis, 1986; Mercer, 2000; Sarason, 1974). Toisaalta, yhteisöä tarkasteltiin paikan käsitteen kautta (mm. Buttimer, 1980; Casey, 1996; Relf, 1976; 1985; Seamon, 1982; 1983; 1993; Tuan, 1977). Yhteisön ominaispiirteitä teknologiaperustaisissa oppimisympäristöissä tarkasteltiin erityisesti hybridisen paikkakokemuksen avulla (mm. Blum, 2002; Mitchell, 1997; Powell, 2004). Yhteisön rakentumisprosessia tarkasteltiin vuorostaan paikan sosiaalisen rakentumisen ja jaetun läsnäolon tunteen rakentumisen kautta (mm. Mantovani & Riva, 1999; Ganberini & Mantovani, 2003).

Usein oletetaan, että yhteisöllisen oppimisen perusajatuksukset yhdistettynä tieto- ja viestintäteknologian sovelluksiin jo itsessään takaavat onnistuneen yhteisöllisen toiminnan ja oppimisen synnyn (Lehtinen, 2003). Nämä oletukset perustuvat useimpien tutkimuksiin, joissa yhteisöllisen toiminnan ja oppimisen käytänteitä on tutkittu tarkasti rajattujen ja kontrolloitujen oppimisympäristöjen osatekijöiden tai vain tiettyjen toimijoiden näkökulmasta käsin. Tässä tutkimuksessa teknologiatuettuja yhteisöllisen toiminnan käytänteitä on pyritty tarkastelemaan laajemmin, niin koettuna kuin havainnoituna toimintana. Tutkimuksessa yhteisöllisen toiminnan kenttää, sen peruselementtejä sekä avaintoimijoita on pyritty hahmottamaan erityisesti toimijoiden omien kokemusten kautta. Lähtökohtana tutkimuksen näkökulman valinnalle on ollut perusoletus toimijoiden oman asiantuntijuuden ja henkilökohtaisen kokemuksen ensisijaisesta merkityksestä lähdettäessä määrittelemään merkityksellistä yhteisöllistä toimintaa ja oppimista (Shumar & Renninger, 2002).

Tämän tutkimuksen tarkoituksena oli jäljittää yhteisöllistä toimintaa ja yhteisöllisen toiminnan erityispiirteitä teknologiaperustaisessa korkeakoulutuksen kontekstissa. Tässä tutkimuksessa oppijayhteisö nähdään oppimisympäristön perustalle rakentuvana avoimena oppimisen infrastruktuurina sisältäen niin materiaaliset kuin sosiaaliset resurssit sekä yksilö- ja ryhmätason erilaiset tarpeet, tavoitteet ja motiivit yhteisön toiminnalle (Goodyear, 2000). Tutkimuksessa koulutusteknologiaa ei myöskään tarkastella erillisenä välineenä vaan teknologia nähdään ensisijaisesti yhtenä osana tätä laajempaa (yhteisöllisen) toiminnan ja oppimisen infrastruktuuria (Säljö, 1999; 2003). Tutkimuksen tavoitteena oli myös metodologisten välineiden kehittäminen aineiston-

keruuseen, aineiston analysointiin ja tulosten kuvaamiseen erityisesti teknologiaperustaisen ja kasvokkain tapahtuvan toiminnan rajapinnoilla. Lisäksi, koulutussuunnittelun näkökulmasta, työn tavoitteena oli myös lisätä käsitteellistä tietoa teknologiatutelijan oppijayhteisöjen suunnittelusta korkeakoulukontekstissa.

Metodit

Yksi työn päätavoitteista oli siis metodologisten välineiden kehittäminen aineistonkeruuseen, aineiston analysointiin ja tulosten kuvaamiseen erityisesti teknologiaperustaisen ja kasvokkain tapahtuvan toiminnan rajapinnoilla. Tutkimuksen menetelmällinen lähestymistapa pohjautui etnografiseen tutkimusotteeseen, kuitenkin teknologiaperustaisille tutkimuskentille sovellettuna. Perinteisesti etnografiseen kenttätyöhön on liittynyt mielikuva kaukaisesta ja eksoottisesta tutkimuskohteesta ja kenttätyössä onkin nähty selkeästi erotettavissa olevia vaiheita, kuten kentälle jalkautumisen, havainnointi kentällä sekä kotiinpaluu (mm. Gupta & Ferguson, 1997). Nykyetnografeille tutkimuskenttänä on kuitenkin useimmiten tutkijoiden oma arkiympäristö, jolloin kentälle jalkautuminen tarkoittaa pikemminkin kokemuksellista kuin fyysistä siirtymää (Amit, 2000; Eichorn, 2001). Tässä yhteydessä kenttätyö siis viittaa myös tutkijalle itselleen tuttuihin aihealueisiin ja kokemuksiin, jotka ovat usein myös osa tutkijan omaa arkipäivää ja sen käytänteitä (Pink, 2000). Lisäksi myös tieto- ja viestintäteknologian mahdollistama välitteinen vuorovaikutus on tullut osaksi nykyetnografian tutkimuskenttää ja näin osaltaan muuttanut ja laajentanut kenttätyön käytänteitä, mahdollistaen muun muassa niin ajasta kuin paikastakin riippumattoman aineistonkeruun (Gatson & Sweerink, 2004).

Tieto- ja viestintäteknologian mahdollistama ajasta ja paikasta riippumaton kenttätyö tai vaihtoehtoisesti teknologiaympäristöissä toteutettava ns. "virtuaali-etnografia" ovat tuoneet mukanaan uudenlaisten mahdollisuuksien lisäksi myös erityisiä haasteita koskien esimerkiksi tutkijan tulkintaa tutkittavasta ilmiöstä sekä tutkijan ja tutkittavien välisen vuorovaikutuksen kehittymistä ja sen laatua (Mann & Steward, 2000). Lisäksi, useammasta paikasta – niin fyysisestä kuin virtuaalisestakin – muodostuva tutkimuksen kenttä tarvitsee tuekseen sellaisia metodologisia ratkaisuja, jotka mahdollistavat paremmin esimerkiksi samanaikaisten tapahtumien jäljittämisen ja tulkinnan (Shumar & Renninger, 2002). Tässä työssä haasteellista oli esimerkiksi juuri samanaikaisen toiminnan jäljittäminen ja sen kuvaaminen tutkimuksen moninaisilla kentillä sekä lisäksi todellisen vuorovaikutuksen mahdollistaminen tutkijan ja tutkittavien välille

tässä kontekstissa. Lisäksi erityisesti osallistujan näkökulman tavoittaminen osana yhteisöllistä toimintaa koettiin haastavana. Osallistujan näkökulman tavoittamiseksi käytettiin menetelmää, joka rakentui pääosiltaan osallistujien prosessinaikaisille kokemusmuistiinpanoille (Pöysä ym., 2003; 2004). Ensimmäisessä tutkimuksessa kokemusmuistiinpanot muodostuivat tekstimuistiinpanoista, joita toisessa osatutkimuksessa täydennettiin myös visuaalisten muistiinpanojen avulla. Tekstimuistiinpanoja opiskelijat lähettivät prosessin kuluessa sähköpostina suoraan tutkijalle, kun taas valokuva-muistiinpanot koottiin opiskelijoilta pääosin aineistonkeruun päätyttyä. Kokemusmuistiinpanoja täydennettiin lisäksi havainnoimalla opiskelijoiden toimintaa verkko-ympäristössä sekä kurssiin liittyvissä tapaamisissa kampusalueella.

Tutkimuksen aineisto kerättiin kahdessa erillisessä osatutkimuksessa. Tutkimuksista ensimmäinen toteutettiin belgialaisessa ja toinen tutkimus suomalaisessa opettajakoulutuksen kontekstissa. Ensimmäisen tutkimuksen tavoitteena oli etsiä tekijöitä, jotka ovat yhteydessä yhteisön ja yhteisöllisyyden tuntemusten syntymiseen teknologia-perustaisessa opettajakoulutuksen kontekstissa. Tutkimuksen tavoitteena oli tarkastella yhteisön syntyprosessia ja oppijayhteisöjen erityispiirteitä erityisesti yksilön kokemusten kautta. Ensimmäisen tutkimuksen aineisto kerättiin Leuvenin yliopiston germaanisten kielten koulutusohjelman nk. "akateemiseen opettajakoulutukseen" kuuluvan seminaarin aikana, joka tätä tutkimusta varten toteutettiin verkko-ympäristössä (Blackboard). Osallistuminen tähän nk. "virtuaaliseminaariin" perustui vapaaehtoisuuteen. Kokonaisuudessaan kolme viikkoa kestänyt virtuaaliseminaari rakentui yksin työskentelyn jaksosta (ensimmäinen viikko) ja kahdesta ryhmätehtävästä verkko-ympäristössä. Ensimmäinen ryhmänä toteutettava tehtävä toteutettiin 3–4 hengen pienryhmissä (toinen viikko) rakentuen yksin työskentelyjen tehtävien pohjalle. Pienryhmätyöskentelyn aikana työskentely- ja keskustelualueet verkko-ympäristössä oli suojattu vain pienryhmien yksityiseen käyttöön. Toinen tehtävä (kolmas viikko) toteutettiin koko 24 opiskelijan ryhmän kesken, jolloin työskentely- ja keskustelualueet oppimisympäristössä olivat avoinna kaikille osallistujille. Virtuaaliseminaarin aikana osallistujia rohkaistiin käyttämään myös muuta tieto- ja viestintäteknologiaa, mikäli se koettiin tarpeelliseksi. Tutkijan rooli seminaarin aikana oli toimia lähinnä tehtävien toteuttamiseen sekä teknologiaan liittyvien kysymysten asiantuntijana. Lisäksi tutkija oli sähköpostina toteutettujen kokemusmuistiinpanojen vuoksi koko prosessin ajan yhteydessä osallistujiin. Tutkija pyrki heti saman vuorokauden kuluessa vastaamaan lyhyesti jokaiseen vastaanottamaansa kokemusmuistiinpanoon, mikä antoi tutkijalle mahdollisuuden kysyä tarkentavia kysymyksiä viestiä koskien sekä antoi myös osallistujalle

tunteen siitä, että hänen kokemuksiaan kuunneltiin ja muistiinpanoja arvostettiin tuotoksina. Ensimmäisen tutkimuksen aineistossa avainasemassa olivatkin juuri osallistujien tuottamat kokemusmuistiinpanot (tekstimuistiinpanot), joita täydennettiin havainnoimalla vuorovaikutusta teknologiaympäristössä. Havaintoaineistoa lähestyttiin ensisijaisesti osallistujien kokemusten kautta.

Toisen, suomalaisessa opettajakoulutuksen kontekstissa toteutetussa osatutkimuksen tavoite oli kaksiosainen. Yhtäältä, tavoitteena oli hahmottaa osallistujien kokemusten kautta toimijoiden todellinen oppimisympäristö ja sen osatekijät ja kiinnekohdat teknologiatuetun yhteisöllisen oppimisen kontekstissa. Toisaalta, tutkimuksen tavoitteena oli taas kuvata tämä prosessi, jossa toimijat yhdessä rakensivat kokemustaan hybridisestä paikasta ja ryhmän läsnäolosta tarjolla olevia sosiaalisia ja materiaalisia resurssejaan hyödyntäen. Tutkimuksen aineisto kerättiin autenttisen, opettajankoulutukseen kuuluvan verkkokurssin aikana ja tutkija ei näin itse osallistunut kurssin varsinaiseen suunnitteluun. Yhden lukukauden mittainen kurssi tai ”tutkimustyöpaja”, kuten kurssi oli nimetty, toteutettiin Oulun ja Jyväskylän yliopistojen välisenä yhteistyönä Discendum Optima- oppimisympäristössä. Kurssi rakentui kolmesta eri työskentelyvaiheesta, käsittäen Johdanto-, Tutkimus- ja Arviointi-vaiheet. Tutkimukseen osallistui yhteensä 22 opiskelijaa, joista tässä tutkimuksessa yhtä kolmen hengen pienryhmää tutkittiin intensiivisesti. Tutkimuksen aineisto rakentui henkilökohtaisista kokemusmuistiinpanoista (teksti- ja kuvamuistiinpanot), verkkokeskusteluista, opiskelijoiden yhdessä tuottamista dokumenteista, kuten projektilokit sekä nauhoitetuista tai tallennetuista chatlokeista, Net Meeting- keskusteluista sekä videokonferenssista. Lisäksi kurssiin kuuluvat viikkotapaamiset Jyväskylän kampuksella videoitiin. Kuten ensimmäisessä tutkimuksessa, myös toisen empiirisen tutkimuksen aineistossa avainasemassa olivat osallistujien tuottamat kokemusmuistiinpanot, joita täydennettiin havainnoimalla vuorovaikutusta teknologiaympäristössä sekä kasvokkain tapahtuvissa tapaamisissa kampusalueella. Havaintoaineistoa lähestyttiin siis myös tässä osatutkimuksessa juuri osallistujien kokemusten kautta.

Tutkimusaineistojen analysointia voitaisiin tässä työssä luonnehtia teoriasidonnaiseksi (mm. Eskola, 1998; 2001; Eskola & Suoranta, 1998). Yhteisöjen tutkimuksen teoreettisen kentän moninaisuus ohjasi tarkastelemaan yhteisöllisen toiminnan syntyprosesseja ja niiden erityispiirteiden tarkastelua erilaisten teoreettisten näkökulmien kautta, jotka yhdessä muodostivat työn tulkintakehyksen, eräänlaiset ”analyttiset silmälasit” (Eskola, 2001, 38). Kuten aiemmin on jo mainittu, ensimmäinen tutkimuksen teoreettisista näkökulmista tarkasteli oppijayhteisöä sen symbolisten merkitysten

kautta (Loewy, 1993; Mercer, 2000). Toinen näkökulmista taas lähestyi oppijayhteisöä paikan käsitteen kautta (mm. Buttimer, 1980; Casey, 1996; Relph, 1976; 1985; Seamon, 1982; 1983; 1993; Tuan, 1977). Yhteisön ominaispiirteitä teknologiaperustaisissa oppimisympäristöissä tarkasteltiin erityisesti hybridisen paikkakokemuksen avulla (mm. Blum, 2002; Mitchell, 1997; Powell, 2004), kun taas yhteisön rakentumisprosessia tarkasteltiin vuorostaan paikan sosiaalisen rakentumisen ja jaetun läsnäolon tunteen rakentumisen kautta (mm. Mantovani & Riva, 1999; Ganbernini & Mantovani, 2003).

Aineistojen analysointi sisälsi useita vaiheita. Ensimmäisessä osatutkimuksessa, joka nojautui teoreettiseen näkökulmaan yhteisöjen symbolisesta merkityksestä, aineiston analyysi sisälsi kaksi osavaihetta. Analyysi alkoi rakentamalla lineaarinen narratio, eräänlainen tutkijan "muistio" ("Textual memo") tutkittavasti ilmiöstä, joka perustui havainnoille yhteisöllisen toiminnan syntyproesseista ja toiminnan "elin-kaarista" kahdessa erityyppisessä ryhmätehtävässä virtuaaliseminaarin aikana. Muistiossa tutkijan havainnot ja tutkittavien kokemukset tekstimuistiinpanojen muodossa tukivat toisiaan. Tämä toimi eräänlaisena esianalyysinä muodostaen "työkalun" toimijoiden työskentelyprosessin hahmottamisen tueksi. Varsinainen analyysivaihe piti sisällään laadullisen sisällönanalyysin yhteisön symbolisista merkityksistä. Analyysissä osallistujien tekstimuistiinpanot sijoitettiin neljään Mercerin (2000) kuvaamaan luokkaan yhteisön symbolisista merkityksistä: (jaettu) historia, vastavuoroiset velvoitteet, kollektiivinen identiteetti sekä diskurssi. Analyysin pääasiallinen tarkoitus ei ollut hakea numeerista tietoa näistä kategorioista vaan sen sijaan tarjota eräänlainen läpileikkaus yhteisöstä ja sen osatekijöistä tässä kontekstissa.

Toisessa osatutkimuksessa, jota ohjasi paikan käsite sekä käsitys paikan sosiaalisesta rakentumisesta, analyysi sisälsi neljä eri osavaihetta. Ensimmäiseksi rakennettiin jaettu tulkinta ("Split-text narrative") toimintaprosessista yksilötasolla sisältäen tutkijan ja tutkittavan (avaintoimija) tulkinnan tarkastellusta toiminnasta. Tutkittavan ääni muodostui teksti- ja kuvamuistiinpanoista, verkkokeskusteluaineistoista sekä projektilokista. Analyysin toisessa vaiheessa rakennettiin moniääninen tulkinta, eräänlainen ryhmän kommunikaation "juoni" ("Communicational plot") työskentelyprosessista avaintoimijaryhmässä hyödyntäen monipuolisesti kerättyä aineistoa kokonaisuutena. Analyysin tarkoituksena oli tiivistää laajaa aineistoa sisällyttäen juoneen tutkijan tulkinnan mukaisesti merkityksellisimmät osat ryhmän toimintaprosessista aineistonkeruun ajalta. Tässä vaiheessa prosessin kuvaukseen sisällytettiin myös tutkijoiden ääni, lähinnä sähköpostiviestien muodossa. Kolmas analyysivaihe taas muodostui laadullisesta sisällönanalyysistä, jossa kokemusmuistiinpanot luokiteltiin temaattisiin katego-

rioihin, perustuen hybridisen paikkakokemuksen ilmenemismuotoihin tässä kontekstissa kautta (mm. Mitchell, 1997; Powell, 2004). Analyysin tarkoituksena oli tarjota läpileikkaus avaintoimijoiden yhteisöstä. Viimeisessä analyysivaiheessa, joka pureutui työskentelyprosessiin tarkemmin, aiemmin rakennettu avaintoimijaryhmän kommunikaation juoni hajotettiin osiin ja analysoitiin vaiheittain toimijoiden työskentelyprosessin eri osavaiheiden mukaisesti. Analyysin tarkoituksena oli kuvata prosessi, jossa avainryhmän opiskelijat yhdessä rakensivat kokemustaan paikasta olemassa olevia sosiaalisia ja materiaalisia resursseja hyödyntäen, kommunikaation juoni hajotettiin osiin tutkimustyöpajan kolmen eri osavaiheen mukaisesti (Johdanto-, Tutkimus- ja Arviointi-vaiheet). Tässä viimeisessä analyysivaiheessa lähinnä tutkijan oman henkilökohtaisen tutkimusroolin pohdintaa varten lisätyt osuudet poistettiin kuvauksesta.

Tuloksia ja johtopäätöksiä

Tarkasteltaessa yhteisön symbolisia merkityksiä tässä kontekstissa, oppijayhteisöjen syntyprosessit ja niiden erityispiirteet teknologiatuetussa korkeakoulukontekstissa sekä osallistujien siteet yhteisöihin ja niiden toimintaan poikkesivat esim. Internet-yhteisöjen tutkimuksesta esiin nousevista havainnoista. Teknologiatuetut oppijayhteisöt, joita tässä tutkimuksessa tarkasteltiin, rakentuivat formaalin oppimisen konteksteissa, osana tavanomaisia yliopisto-opintoja; eivät niinkään täysin vapaaehtoisena osallistumisen tai yhteisen mielenkiinnon kautta. Tämä toiminnan alkuasetelma asettaa jo lähtökohdan sille, millaiseksi yhteisön symbolinen merkitys muotoutuu sen eri toimijoille (Kolb. 2000). Kärjistetysti ilmaistuna, tässä toiminnan kontekstissa yhteisön jäsenet eivät työskentele yhdessä voidakseen olla yhdessä, vaan ovat yhdessä vain työskennelläkseen esimerkiksi yhteisen oppimistavoitteen eteen. Tässä tutkimuksessa jäsenten panostus ja yhteiseen työskentelyyn käytetyt voimavarat vaihtelivatkin melkoisesti riippuen yksilön sitoutumisesta ja mielenkiinnosta annettuihin tehtäviin ja tavoitteisiin. Yksilön työskentely ja sitoutuminen yhteiseen toimintaan vaihtelivat myös erilaisten käytännön työskentelyyn vaikuttavien toimintaresurssien erilaisuuden tai puutteellisuuden vuoksi, vaihdellen esimerkiksi teknologian tavoitettavuuden ja toiminnan sekä käytössä olevan työskentelyajan suhteen. Lisäksi, kun yhteisöllisen toiminnan rakentuminen ja toiminnan kesto oli sidottu vain oppimistehtävien suorittamiseen ja loppuunsaattamiseen, kuten ensimmäisen tutkimuksen pienryhmäjaksolla oli tehty, tämä johti toiminnan ja ajatustenvaihdon hiipumiseen tehtävään sidonnaisen vuorovaikutuksen päätyttyä. Kuitenkin, kuten Cousin ja Deepwell (2005) huomauttavat, yhteisöl-

lisyden rakentuminen on yhteydessä informaaleihin toimintoihin, joiden syntyä tarkasti strukturoidut ja ennalta määritellyt, "odotetut" tavat toimia saattavat kuitenkin kahlita tai estää. Kun taas tehtävänanto avoimuudellaan antoi mahdollisuuden rakentaa vuorovaikutusta suuntaan, jossa sen sisällöt koskettivat osallistujien elämää ja sen todellisia käytänteitä, kuten ensimmäisen tutkimuksen toisessa osassa tapahtui, tämä koettiin merkityksellisenä ja rakentavana keskinäisen kohtaamisen areenana. Toimijoita tulisikin Sharpin (1997) mukaan kohdella aktiivisina, luovina osallistujina kuin yhteen tiettyyn toiminta- ja ajattelutapaan sidottuina suorittajina. Yhteisöllisyyteen myös usein liitetyt elementit kuten sopusointu ja keskinäinen yhteisymmärrys eivät myöskään tässä kontekstissa ole välttämättä oikeita tapoja arvioida, onko syntynyt toiminta ja vuorovaikutus laadullisesti onnistunutta ja mielekästä itse toimijoille (Mann, 2003; 2005). Sen sijaan juuri mahdollisuus erilaisten näkemysten ja kokemusten vaihtamiseen ja niiden kohtaamiseen voi juuri toimia alkusysäyksenä toimijoiden kannalta mielekkään yhteisöllisen toiminnan ja oppimisen syntymiselle.

Tarkasteltaessa yhteisöllistä toimintaa puolestaan paikkakokemuksen kautta oli ilmeistä, että liian kapea-alainen näkökulma tarkasteltaessa yhteisöjen toimintaa ja niiden erityispiirteitä sekä koulutusteknologiaan tässä kontekstissa olisi tuonut näkyväksi vain osan yhteisöllisestä toiminnasta ja toiminnan eri kentistä. Toiminta ei rajautunut yksinomaan verkkoon, vaan osallistujien kokemukset työskentelystä verkkokurssin aikana muotoutuivat ensisijaisesti hybridiksi kokemuksiksi sisältäen kasvokkain ja verkossa tapahtuvan toiminnan lisäksi näiden eri ympäristöjen rajapinnat (mm. Blum, 2002; Mitchell, 1997; Powell, 2004). Tutkimuksessa toimijat myös hyödynsivät monipuolisesti ja varsin luovasti tarjolla olevaa teknologiaa yhteisöllisen toiminnan tueksi integroiden sen näin osaksi arkipäivänsä erilaisia oppimiskäytänteitä. Osallistujien todellinen toimintaympäristö muistutti muodoltaan enemmänkin teknologiatuettuja paikallisyhteisöjä, joissa tieto- ja viestintäteknologiaa käytetään tukemaan yhteisön toimintaa nimenomaan paikallisella tasolla (mm. Rosson & Carroll, 2005).

Koulutussuunnittelun näkökulmasta katsottuna oppijayhteisöjen syntymisen tukemisessa lienee olennaista optimaalisen tasapainon löytäminen yhteisöllisen toiminnan liiallisen vaiheistamisen (Dillenbourg, 2002) ja toisaalta, avoimen ja liiaksi toimijoiden itseohjautuvuuteen luottavan suunnittelun välillä (Lowyck, Elen & Clarebout, 2004). Sen sijaan, että yrittäisimme liiaksi hallita oppijayhteisöjä ja niiden toimintaa, toiminnan vaiheistaminen tavalla, joka pitäisi sisällään mahdollisuuden joustavaan ja kriitikkille avoimeen toiminnan muotoutumiseen, niin yksilö- kuin yhteisötason tarpeet huomioiden, voisi antaa mahdollisuudet menestyksellisen yhteisöllisen toiminnan

nan ja oppimisen kasvuun (Dillenbourg & Jermann, 2006; Kolb, 2000). Yhtäläisesti koulutusteknologian käyttöä ja sen todellista merkitystä toiminnalle ja eri toimijoille tulisi pohtia tarkoin. Koulutusteknologia voi harkitusti käytettynä tarjota toimijoille mahdollisuuden henkilökohtaiseen ja merkitykselliseen kohtaamiseen ja erilaisten toimintaympäristöjen rajapintojen ylittämiseen ja niillä liikkumiseen, joita esimerkiksi suuret ryhmäkoot kasvokkain tapahtuvassa opetuksessa eivät samalla tavoin tarjoa, toimien tässä kontekstissa toiminnan täydentävänä osatekijänä (O'Connor & Ross, 2004). Tämä rooli antaa mahdollisuuden tarkastella teknologiaa kokonaisvaltaisesti, ei erillisenä toiminnan välineenä vaan erityisesti sen läsnäolon kautta luontevana osana nyky-yhteiskunnan arkipäivän oppimiskäytänteitä (Winograd, 1997; Hallnäs & Redström, 2002). Koulutusteknologian kehityksellisen suunnan näkökulmasta tämä ilmentää siirtymää hajautetusta oppimisesta ("blended learning") kohti sulautettua oppimista ("intergrated learning") (Dillenbourg & Jermann, 2006). Samalla tavoin se, mitä tarkoitamme oppimisella ja miten sitä tarkastelemme tässä teknologiatuetussa yhteisöllisessä kontekstissa, tulisi myös arvioida uudelleen. Sen sijaan, että tarkastelisivimme yksinomaan tuotosta, huomion kiinnittäminen toiminnan ja yhteisen tiedonrakentelun prosesseihin olisi tärkeää (Arvaja, 2005).

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APPENDIX A:

INSTRUCTIONS HOW TO MAKE PERSONAL NOTES (I.E. 'DIARY ENTRIES') (STUDY 1, ASSIGNMENT 1 AND 2)

Dear student,

One of tasks that will be evaluated is your diary or 'logbook' about collaboration and group work (that includes both the interactions in small groups and in the whole group).

Beginning from the 2nd of April (until 27th of April), your responsibility is to send diary entries as emails at regular intervals (that is minimum three times/week) to the following email address:

johanna.poysa@ped.kuleuven.ac.be

All the entries will be collected to your personal file and in the end they will be evaluated as a whole.

In these emails you may describe and reflect your personal experiences (thoughts, feelings) concerning collaboration and working together as groups, pairs...

In the table below is indicated a structure that may help you to create your entries:

Date and time	Description of the situation (i.e. the context, the other participant(s), the issue)	Your experiences	Media: email (individual or group mail) discussion board (small group/whole group) Phone, SMS, other? (Face-to-face)
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APPENDIX B:

**EXAMPLE OF DISCUSSION BOARDS FOR DISCUSSIONS ON SELF-REFLECTION
TASKS AND LESSON PREPARATIONS IN SUB-GROUPS**

(ASSIGNMENT 1 OF STUDY 1)

Group B:

LUCIE

In this discussion forum Geert and Peter are requested to react on the written preparation and the reflection of Lucie.

GEERT

In this discussion forum Lucie and Peter are requested to react on the written preparation and the reflection of Geert.

PETER

In this discussion forum Lucie and Geert are requested to react on the written preparation and the reflection of Peter.

APPENDIX C:

OPENING STATEMENTS OF FOUR SEPARATE DISCUSSIONS BOARDS (LARGE GROUP DISCUSSIONS)

(ASSIGNMENT 2 OF STUDY 2)

Discussion board 1:

“The major task of a teacher is to support and guide learning processes. This means that teachers should be trained as experts in learning and educational psychology, rather than as experts in discipline. ”

You are requested to discuss to which extent this statement is in line with your own subjective theories.

Your opinion has to be founded on clear arguments. However, you are also recommended to ask questions and comment on the other peoples’ points of view, share insights...

Discussion board 2:

“To be a good educator, a teacher should have daily contacts with his/her pupils. In secondary education, this means he/she should teach more than just a one subject. A different teacher for each subject is quite unacceptable.”

You are requested to discuss to which extent this statement is in line with your own subjective theories.

Your opinion has to be founded on clear arguments. However, you are also recommended to ask questions and comment on the other peoples’ points of view, share insights...

Discussion board 3:

"In the decree, emphasis is put on the co-operation and collaboration between teachers and colleagues, parents and other experts outside school. Traditionally teacher- training programs are focused more on the development of individual knowledge and competencies. So, this must be changed: in the new teacher education programs should be integrated various dimensions to prepare professionals with adequate co-operative and collaborative foundations and skills."

You are requested to discuss to which extent this statement is in line with your own subjective theories.

Your opinion has to be founded on clear arguments. However, you are also recommended to ask questions and comment on the other peoples' points of view, share insights..

Discussion board 4:

"Teacher's role is to coach new generations into the culture' ranks last in the decree. Education and learning are seen primarily as processes that take place in a participation framework. Education is defined as the same as to 'initiating members of a new generation into the existing culture'. Being an active participant in these processes is a prerequisite to be a good teacher; much more important than being trained in a specific subject or in teaching skills."

You are requested to discuss to which extent this statement is in line with your own subjective theories.

Your opinion has to be founded on clear arguments. However, you are also recommended to ask questions and comment on the other peoples' points of view, share insights...

APPENDIX D:

INSTRUCTIONS HOW TO COLLECT PERSONAL NOTEBOOKS (AS TEXT AND VISUAL NOTES)

(STUDY 2)

Dear participant,

One of your assignments during the course 'Cultures and communication in virtual environments' is to collect a personal 'NOTEBOOK' during the entire working period.

Your process 'NOTEBOOK' is a collection of TEXT and VISUAL notes in which you may describe and reflect your personal experiences (thoughts, feelings...) concerning:

- 1) collaboration and working together (as groups, pairs, study circles... both in virtual/physical setting) and
- 2) experiences how your learning environment (both virtual/physical) and its various patterns may serve as a context or a social infrastructure for collaboration.

Your task is:

1) To send:

TEXT notes as regular email entries to following address:

johanna.poysa@ped.kuleuven.ac.be

In below is indicated a structure that may help you to create your email entries:

Date and time	Description of the situation (i.e. the context, the other participant(s), the issue,)	Your experiences	Media: email (individual or group mail) discussion forum chat Phone, SMS, other? (Face-to-face)
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2) To collect:

VISUAL process notes about F-2-F situations in forms of a photo + a short narrative, which could include for example:

Date and time	The participants, the task, the place...	Why did you take this photo? Why it is important?
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You will get a disposable camera + a sketch book to write down the depiction concerning the photo you have taken.

All the email entries (+ visual notes) will be collected to your personal file (by Johanna) and they will replace the 'Personal logs' in Discendum Optima learning environment.

Good luck,

Johanna



Contemporary society requires its citizens to develop capacities to resituate their activities in collective unities and to successfully communicate their actions within these multiple local and global communities. Also in higher education, educational practices are increasingly fixed around web-based, collaborative learning environments, designed for the values of community and collective learning.

The publication presents a study that explored learning communities in technology-rich higher education milieus. The aim was to search for the conceptual origin of university students' community and its reference point in this context. In this work, methodological tools to study, to analyse, and to represent participants' perspectives in collective activities taking place in a confluence of on- and offline learning environments were developed.

By exploring appropriate instructional conditions for successful communal activities to emerge, this study contributes conceptually to educational design for learning communities in technology-rich higher education milieus.

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