Act Locally, Th/Link Translocally

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Media Education Publication 10

Heikki Kynäslahti

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An Ethnographic View of the Kilpisjärvi Project

Academic Dissertation to be publicly examined, by due permission of the Faculty of Education at the University of Helsinki, in lecture room 1 at the Department of Teacher Education, on the 24th of August, 2001, at 12 o'clock.

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Abstract

This research is about a small village school participating in an inter-institutional electronic network of schools using information and communication technologies in the context of the Kilpisjärvi project 1994 to 1997. The project concerned the establishment of the lower secondary school in the Kilpisjärvi village. The school was linked with a network which also included the Teacher Training school, both the primary school and the lower secondary school, and the Ruskela primary school. The perspective in this ethnographic research is that of the people in Kilpisjärvi.

The background is based on the media educational view according to which people are active actants both in the environments which information and communication technologies create and in the nexus of local and non-local items. Education is, partly, regarded as a deterritorialised phenomenon that has transcended terrafirma. The concept of 'eduscape' is used in this context. The virtual classroom concept is elaborated in the terms of virtuality. Virtuality, in turn, is understood as a phenomenon which includes the aspect of 'as-if-real' and that of possible worlds. The classroom of the Kilpisjärvi project in which two physically separate groups of pupils and a teacher are linked together, is investigated as a virtual classroom. The investigation of the inter-institutional network of schools is based on the general definitions of network, and the notion of Post-Fordism is discussed in this occasion. The ethnographic approach is elaborated to better suit translocal phenomena.

The educational activities which occurred in the inter-institutional network are called distance education in this research. Distance education impacted the relationship between the Kilpisjärvi school and the community, mainly the parents. Distance education fundamentally helped the school to fulfil the two the needs of the community: to establish the lower secondary school and to connect the pupils with other young people of their age who live in a different kind of environment. The school network provided the parents with an opportunity to compare the educational activities of the local school with those of another school. Distance education also guaranteed the quality of education. Further, according to the Kilpisjärvi people, the participation in the school network prepared pupils to the challenges of the information society.

Distance education was characterised by teachers' competency. It was problematic to take into account the local Kilpisjärvi context in the distance education but, on the other hand, it was not even expected by the Kilpisjärvi pupils and the parents. The local education had the total responsibility for education. Although distance education was characterised by competency, local education was not underestimated in this context, but the local teachers had to develop themselves towards the competency level of distance education. Local education was a kind of infrastructure on which distance education was based. Intensive networking outside transformed the Kilpisjärvi school towards horizontal integration and vertical fragmentation.

The virtual classroom was mainly based on mutual educational interests which both the Kilpisjärvi and Helsinki pupils shared, namely competent teaching. Virtual classroom was

treated as a learning community, a communication system and a place. Teaching and (distance) teacher were uniting elements in establishment of a common virtual classroom. The virtual classroom dealt with the translocal view of ethnographic research. The character of school transformed towards a symbiosis of the physical and the virtual. The cyborg metaphor is also mentioned in this context.

Keywords: school, distance education, network of schools, information and communication technologies, virtual classroom, ethnography, translocal field

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(Toimi paikallisesti, ajattele ja linkity ylipaikallisesti: Etnografinen näkökulma Kilpisjärvi-projektiin)

Tiivistelmä

Tämä on tutkimus pienen maaseutukoulun osallistumisesta koulujen keskinäiseen verkkoon tieto- ja viestintätekniikkaa käyttäen nk. Kilpisjärvi-projektin puitteissa vv. 1994–1997. Tässä projektissa Kilpisjärven kylään perustettiin yläaste (paikallisen ala-asteen jatkoksi) ja se liitettiin Helsingin toisen normaalikoulun yläasteen ja ala-asteen sekä Ruskelan koulun muodostamaan verkkoon. Tutkittavaa ilmiötä tarkastellaan kilpisjärveläisten oppilaiden, opettajien ja vanhempien näkökulmasta. Tutkimusote on etnografinen.

Taustalla on mediakasvatuksellinen näkemys ihmisistä aktiivisina toimijoina niin tieto- ja viestintätekniikan luomissa ympäristöissä kuin myös paikallisuuden ja ei-paikallisen ulottuvuuden vuoropuhelussa. Koulutusta pohditaan fyysisestä todellisuudesta irrottautuvana deterritorialisoituvana ilmiönä, jota ilmentämään lainataan ja edelleen kehitetään transnationaalitutkimuksesta ’eduscape’-käsite. Kahdesta, fyysisesti toisista erillään olevista oppilasryhmistä ja opettajasta videonneuvottelun avulla koostuvaa luokkaa pohditaan virtuaaliluokkana. Tätä edeltää virtuaaliluokkaa koskevan teorian kehittely virtuaalisuuden pohjalta. Virtuaalisuus nähdään toisaalta reaalimaailmaan ja toisaalta mahdollisiin maailmoihin viittaavana ilmiönä. Koulujen keskinäisen verkon tarkastelu pohjautuu verkon määritelmiin, missä yhteydessä pohditaan myös etäopetuksen teoriasta ammentuvaa post-fordistista näkemystä. Etnografista otetta kehitetään tieto- ja viestintätekniikkaympäristöihin paremmin soveltuvaksi ylipaikalliseksi lähestymisnäkökulmaksi.

Koulujen keskinäisessä verkossa tapahtuvaa koulutuksellista toimintaa kutsutaan tässä tutkimuksessa etäopetukseksi. Etäopetus vaikutti Kilpisjärven koulun ja ympäröivän yhteisön (lähinnä vanhempien) suhteeseen. Pitkälti etäopetuksen tukemana koulu saattoi toteuttaa yhteisön toiveet yhtäältä yläasteen saamiseksi kylään ja toisaalta oppilaiden tutustuttamiseksi samanikäisiin, erilaisessa ympäristössä eläviin nuoriin. Koulujen verkko antoi vanhemmille mahdollisuuden verrata paikallisen koulun toimintaa toisen koulun toimintaan, ja etäopetus toimi takuuna opetuksen riittävästä laadullisesta tasosta. Kilpisjärviläiset katsoivat myös, että osallistumalla koulujen keskinäiseen verkkoon oppilaat tulevat valmistautuneeksi tietoyhteiskunnan haasteisiin.

Etäopetusta luonnehti opettajien pätevyys ja kilpisjärveläisten luottamus opettajien osaamiseen. Paikallisen kontekstin huomioiminen oli etäopetuksessa ongelmallista, mutta toisaalta oppilaat ja vanhemmat eivät sitä etäopetukselta odottaneetkaan. Oppilaantuntemus ja kokonaisvastuun kantaminen koulutuksesta jäivät paikallisen opetuksen vastuulle. Vaikka etäopetus näyttäytyikin asiantuntijaopetuksena, ei paikallinen opetus tässä asetelmassa jäänyt heikompaan asemaan, vaan paikallisten opettajien oli kehitettävä osaamistaan etäopetuksen asiantuntemustasoa kohti, mm. tukiopetuksen mahdollistumiseksi. Paikallinen opetus oli eräänlainen infrastruktuuri, jolle etäopetus saatettiin perustaa. Intensiivinen verkottuminen ulospäin muutti koulua horisontaalisen integraation ja vertikaalin fragmentaation suuntaan.

Tutkimuksessa löytynyt virtuaaliluokka toimi pitkälti yhteisen koulutuksellisen intressin pohjalta. Tämä intressi, jonka sekä kilpisjärveläiset että helsinkiläiset oppilaat ja opettajat jakoivat, koski pätevää opetusta. Virtuaaliluokka nähdään sekä koulutuksellisena yhteisönä, viestintäympäristönä että tilana. Opetus ja opettaja tulivat keskeisiksi yhdistäviksi tekijöiksi virtuaaliluokan muodostumisessa. Tämä virtuaaliluokka heijasteli ylipaikallisen etnografian näkemyksiä tutkittavista ilmiöistä. Koulun olemus muuttui kohti fyysisen ja virtuaalin symbioosia ja tutkimuksessa väläytetään myös kyborgi-metaforan käyttökelpoisuutta tämänlaisen symbioosin tarkastelulle.

Avainsanat: koulu, etäopetus, koulujen verkko, tieto- ja viestintätekniikka, virtuaaliluokka, etnografia, ylipaikallinen kenttä

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My research is part of the Kilpisjärvi project which took place from 1994 to 1997. It was a research and development project using of information and communication technologies in education. Several parties were included, among them the University of Helsinki with its central administration, the Department of Teacher Education and the Second Teacher Training School as well as the municipality of Enontekiö.

I am grateful to my supervisors, Professor Seppo Tella, Professor Veijo Meisalo and Professor Pertti Kansanen. They all have encouraged me in my research activities and they have given me valuable advise in the challenging, emerging research in the field of media education. Seppo Tella has read and commented the present volume. I warmly thank him for his constructive views as well as for the permission to publish the research in the Media Education Publication -series.

During the research period I belonged to a group of researchers of the project, under the lead of Professor Veijo Meisalo. We had numerous discussions about the use of information and communication technologies in school and about distance education in the context of compulsory education. I thank my colleagues Anna-Kaarina Falck, Tor Kronlund and Marjo Salonen for their comments which have shed light on the issues that I have investigated. I want especially thank Jari Salminen and Jukka Husu with whom I have had long conversations which have been extremely useful, even hilarious.

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I am deeply indebted to Kari Perenius for the technical side of the publication.

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Finally, I want to express my very best thanks to the people who have been the very core of my research: the pupils and teachers in the Kilpisjärvi School and in the Second Teacher Training School of Helsinki University, and the parents in Kilpisjärvi. I always felt warmly welcomed among these people when they friendly let me in to their daily life in the form of observations and interviews.

Helsinki,
November 27th, 2000

Heikki Kynäslahti

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June 12th, 2001

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CHAPTER 1

Media Education and Some Current Trends in Education

Introduction

This research is about a small, geographically-isolated village school which was linked with the help of information and communication technology to a couple of other schools over one thousand kilometres away. It was the birth of one of the first electronic inter-institutional networks of schools in Finland. Some of the education was organised with help of these technologies in a novel way which created a new kind of environment in which pupils could study and teachers could teach.

This is an ethnography about people in a remote community who wanted to play their part in the Finnish information society and to fulfil their educational needs, benefiting on this occasion from the opportunities which information and communication technologies provide. This report begins with a look at the development of media education and at Finnish society in which the emergence of this alliance between people and technology took place. I will go on to discuss wider trends which are associated with the intensive use of information and communication technologies in education.

These two paragraphs refer to the Kilpisjärvi project, the target of my research. (Kilpisjärvi is a small village in Finnish Lapland.) The project concerned (mainly) two classes in two separate lower-secondary schools, the Kilpisjärvi School and the Teacher Training School of the Helsinki University. The classrooms were linked together predominantly through videoconferencing.

The development of media education

While concerning educational phenomena, my research belongs to the systematic study of education, also called educational sciences, although the expression ‘sciences’ may give a misleading picture of natural science -like research practice. This discipline of systematic study of education I will call

education in my research. The intensive use of information and communication in organising education is at the very core of my research. Following on from this, my own sub-discipline in the field of education is media education, a subject which has gone through fundamental changes due to the development of information and communication technologies and their use in education. I will give the professor of media education, Seppo Tella, the floor:

> "Mainstream" media education used to consist of mass media based communication and pedagogy … The major role of media education in this framework was to provide citizens with adequate media literacy (the ability to read, analyse, assess and produce communication in a variety of media forms, such as television, print, radio, computers) and to give guidelines of how to cope with the information the mass media provide to the general public. (Tella 1998, 91–92)

The direction of mass-media based communication was one-way communication. In education, the task of teachers and students was to cope with this fact, as Tella's statement indicates. What has happened in recent years has been a huge development in technology which allows for two-way and multidirectional interaction. Tella and Mononen-Aaltonen speak about the telelogic point of view. By this they refer to a development where the main interest, for example in the field of distance education and open learning, has shifted from video, TV and radio to digital media, such as e-mail, multimedia conferencing, network-based software and groupware (Tella 1998, 92; Tella-Mononen-Aaltonen 1998, 10–12).

> Telelogically emphasised media education is interested in the analysis of the tools and strategies facilitated by MICT [modern information and communication technologies] as well as in pedagogical applications of these tools and software. (Tella 1998, 92)

Alongside of advances in technology there has appeared individualisation in the use of information and communication technology. Castells (1996, 369–370) points out how people create their individual audiovisual landscapes with their walkmans, VCRs and CD players, for example. With some exaggeration we could say that video cameras make us movie directors, videoconferencing enables us to become talk-show stars, the www makes us publishers. Today's information and communication technologies provide us with opportunities to act in the media individually, as ourselves own persons, not just 'to cope with' but to be active. It follows that today's media education does not see teachers and students only as passive consumers of mass com-

munication/media. They participate in environments which information and communication technologies create. They act in media, they teach or study in media. This change is part of the paradigmatic development of today's media education. A few years ago, Hannafin et al. described a paradigmatic shift in media education with the words 'from *learning from media* to *learning with media*' (Hannafin & al. 1995, 397 emphasis original). Perhaps today we could continue their argument with the expression *learning in media*.

In recent years Tella has elaborated the theoretical framework of media education. He points to the need to work with the theory of teaching and learning.

> We make good use of media and of the technical properties of equipment, but no comprehensive theory of teaching and learning that fully incorporates the possibilities that technology provides has yet been developed. It might be appropriate, instead, to speak about a theory of living, about enhancing the quality of life, which the integration of technology, culture, communication, and the teaching-studying-learning process may facilitate. (Tella 1999, 207; my translation)

According to Tella, we should to pay attention to what he calls virtual or cyber pedagogy. Thus, he promotes the broadening of education as a discipline in a direction which, in the words of Agres et al. (Agres, Edberg & Igbaria 1998, 72), he refers to as new cultures based on logical rather than physical. One way to outline the theoretical framework is to take a look at related disciplines. This is also what Tella (Tella 1999, 206) does. He seeks the theoretical origins of media education from diverse academic fields. It is like an answer to the call of Hannafin et al. (1995), who emphasised the fact that the research and theory in the field of instructional technology (as they call it) need to connect to allied disciplines, since technology is becoming all the more sophisticated, which in turn makes research more complex and demanding. Varis, another Finnish professor in the field of media education, takes a similar position in his approach to the strategy of research concerning the Finnish information society. He comments that new information and communication technologies pave the way for phenomena such as networking which necessitate a new kind of research. This new field of research is located at the intersection of several disciplines: communication science, information science, computer science and telecommunications (Varis 1995, 121–125).

If we think of media education as an emerging new perspective on pedagogy, this kind of multi- or inter-disciplinary approach is justifiable. As far as

my own research is concerned, it would seem more appropriate to consider the features which are characteristic of these 'new cultures'. I will let Tella continue. He further discusses the relationship between people's communication and technology by analysing dimensions of communication from the point of view of dialogism (on dialogism, see Tella & Mononen-Aaltonen 1998; see also Tella 1999). He pays attention to five elements. First, he claims that communication is increasingly mediated rather than direct, and that this is true especially of the phenomenon on which media education concentrates. Secondly, there is the question of addressivity. Primary addressivity refers to traditional human communication which takes place face-to-face in real time. Tella and Mononen-Aaltonen (1998, 71–72) treat theatre as an example of secondary addressivity. Here, the audience has the possibility to interact with the actors, but basically it is bound to certain choices of expressions. Tertiary addressivity concerns new media which enable mediated communication between human beings. The writers propose that advances in user-friendliness of information and communication technology mean that primary and tertiary addressivities are approaching each other. (Indeed, videoconferencing is often [a big] face to [another big] face, real-time communication.) Thirdly, there is directionality, pointing to one-way or two-way communication, and further to multidirectional communication. The two first, obviously, do not require any further explanation here, but it is worth taking a closer look at the third one: "Multidirectionality, …, consists of decentralised communication that goes in many directions. Not all directions need to be activated at the same time, but they are virtually present and can be generated at any single time' (Tella & Mononen-Aaltonen 1998, 75). This is what a network basically means. Fourthly, we might consider how many persons are allowed to express themselves, under the dimension of the dominance of voices. Again the writers describe three stages. Monophony means that only one person speaks, and monologue is an example. Stereophony consists of two voices, as with a dialogue. Polyphony, then, reflects situations in which several voices express themselves in the same communication situation. Fifthly, there is the question of synchrony and asynchrony, i.e. communication simultaneously or with a delay.

It is possible to track certain trends in the development of information and communication technologies and human communication from the previous analyses. As stated earlier, two-way media communication has increased, but concepts such as multidirectionality, tertiary addressivity and polyphony further enrich our picture of mediated communication. There is a multitude of voices addressing their communication in a plurality of directions, synchronic

or asynchronic. The analyses look at the emerging theory of media education through the lens of communication. This provides an interesting tool with which to analyse diverse modes of information and communication technologies. I am interested in how these technologies are used: who uses them and why. In Tella and Mononen-Aaltonen's terms, I am interested in the polyphony of voices. This calls for wider cultural and social considerations of the milieux in which media education has developed (and keeps developing) as an academic sub-discipline of education. In his article about the theory of media education, Tella (1999) widens the perspective to concern (not in any particular order) culture, education, technology, sociology, philosophy and psychology as a background for theoretical development. Accordingly, his approach resembles mine in that it involves wider considerations. I will not repeat all of his ideas here but I will begin my own assessment of today's world and how media education is related to it. As I am doing this, I am keeping in mind those people and their doings in that village in Finnish Lapland.

Two classifications of information and communication technologies

I will use the term 'information and communication technologies' frequently in my text. The term is rather general as such, which calls for a more precise analysis. I will follow two paths here. The first one deals with terminology. I will give a brief review of the kinds of terms that have been used when (information and communication) technology has been discussed in the context of education. The other path concerns the technology itself: how different kinds of technologies have been analysed from the point of view of education, especially from that of distance education and open learning.

The term has its origins in *information technology* and *communication technology*, and in the integration of these two. Tella describes the situation in the Finnish education starting from the beginning of the 1980s. Information technology concerned computer-assisted instruction and learning, with a shift towards office-application software which included text processing, drawing applications, and spreadsheets. The aspect of communication was not emphasised. On the other hand, new features emerged in communication technology. Electronic mail was one of them. Developments in these two fields of technology brought information technology and communication

closer together at the end of the decade. The terminology mirrored this trend. *Tieto- ja viestintätekniikka* was born in Finnish, communication and information technology, in turn, in English. The latter changed later in the 1990s to information and communication technology. *Computer-mediated communication* came to the use of the computer as a mediating tool, which also includes the special character of *computer-mediated human communication*. Alongside *information and communication technology*, *modern information and communication technology* has also been used. The latter focuses attention on the latest technical innovations and their applications. [http://www.helsinki.fi/~tella/aikuiskasvatus 97.html]

What do we actually mean today when we use the expression 'information and communication technologies'? It may be useful to take a look at how educationalists treat this term and how they analyse it. In the context of the Kilpisjärvi project Salminen (1996) used Garrison's (1989) analysis of technology in distance education. The main components of this analysis are time and place: the same time versus a different time and the same place versus a different place. The further question is of one-way systems (of communication) versus interactive systems (of communication). Thus we get the categories: 1) interactive technologies which enable synchronous communication from different places (e.g. the video conference), and 2) interactive technologies which enable asynchronous communication from different places (e.g. e-mail). This kind of analysis may be regarded as a basis for the classification of information and communication technologies. It deals with fundamental elements such time and place. More elaborated views have been presented as well.

Tella (1997) further developed the categorisation of LeBaron and Bragg (1993) concerning the use of information and communication technologies in higher education. The main idea behind their analysis is that there is a 'basic level' of use of technology in education. In their view, this basic level, in 1993, meant conventional television and conventional audio. Tella suggested that the basic level shifted between 1993 and 1997 because of the rapid progress in technology which produced new applications. In 1997, according to Tella, this basic level included the use of computer conferencing, mail lists, list servers, newsgroups and e-mail. The current view of the situation in 2000 is given in the following table:

Table 1. A categorisation of technological levels of media education. (Tella & Mononen-Aaltonen (2000, 25–26; Based on LeBaron & Bragg 1993).

Traditional site-based instruction			Basic - 6
Site-based instruction using educational technology			Basic - 5
Conventional television	Conventional audio		Basic - 4
Educational video			Basic - 3
Fax, audio conferencing (audiographics)			Basic - 2
Computer conferencing	IRC, Computer file exchange (Gophers)	Mailing lists, list servers, newsgroups	Basic - 1
Multimedia, hypermedia, CD-ROM, CD-I	Internet, WWW, (HTML -> VRML)	E-mail + attachments (8-bit compatible)	**BASIC**
Micro-worlds, MUDs, MOOs, MUSEs, VEEs	Videoconferencing	Intranet + smart extranet	Basic + 1
Applications of human language technology (Grammar checkers, summarising, cognitive tools)			
Compact videoconferencing (netmeeting)	Desktop videoconferencing, RealAudio, NetPhone		Basic + 2
Mobile telephony / WAP / Videophony + Digital nomadism, Personal communicators (Integrated E-mail, fax, Internet, smart messaging services, electronic calendar, converters, notebook, calculators, clokcs)			Basic + 3
Network-based education (groupware, IDLEs, online courses, shared white boards, application programs, authoring tools, streaming video & audio)			Basic + 4
Satellites, global -> ubiquitous computing, virtual reality, pan technology			Basic + 5

Classifications like this are, of course, vulnerable to criticism. For example, the use of minus and plus is heavily associated with the normative approach. 'Traditional site-based instruction' with its -6 sign may appear to the reader as something very negative. On the other hand, videoconferencing, a representative of the basic +1 level, could be regarded as a new form of traditional site-based instruction. What I mean by this is that the use of videoconferencing in education does not necessarily change instruction very significantly. I will illuminate this argument further when I report the results of my research

in Chapters 7 to 9. As Tella (1997, 25) remarks, the classification is also chronological in character. Technological advancement has followed the course from the top down. Videoconferencing has advanced in leaps and bounds through projects such as the Kilpisjärvi project. It has been directly introduced to, with the terminology of the categorisation, traditional site-based instruction. Accordingly, I would like to question the obvious gap in Tella's categorisation between traditional site-based instruction with its –6 and videoconferencing with its +1. Further, from the Finnish point of view, it seems that groupware is becoming popular in educational use. This could apparently be characterised more as a basic-level features than a basic-plus feature. As I mentioned before, this kind of criticism could be levelled against Tella's classification. However, despite this weakness, the main idea of the LeBaron-Bragg-Tella (co-authored by Mononen-Aaltonen) approach is still interesting. We could consider whether there is a basic level of technology use on the grounds of which we are able to make judgements. Thus, in my research I will deal with information technologies which can be characterised as some kind of combination of the basic +1 and basic –6 levels.

Accordingly, when we speak about information and communication technologies, even if we are focusing on education, we may refer to rather different kinds of application. This is also partly true of my research. In Chapters 1 to 4 I will look at information and communication technologies from a wide perspective and according to a variety of applications. The focus narrows in Chapters 5 to 9. I will concentrate on ISDN-based videoconferencing, but I will also discuss audioconferencing, audiographics and the use of computers in education in general. These were the technologies referred to in the Kilpisjärvi project.

Some aspects of the educational milieu in Finland in the 1990s: The development of the information society

The concept of the information society is strikingly present in the Finnish educational policy. Governmental programmes include views according to which the future educational system is associated with the development of the Finnish information society. This policy has been apparent throughout the 1990s. 'The National Strategy; Finland's Way to the Information Society' was published by the Ministry of Finance in 1994 as the first national strategy. Several other documents followed: 'Information Society Strategy'

(1995) for transport and communication, 'Tietoyhteiskunta olemme me', and two strategies for education and research which I will discuss later. According to Tapper (1998, 18), the reasons for this enthusiasm towards an information society in the official policy of the country, include economic depression at the beginning of the decade and the integration policy of the European Union. She suggests that the information society strategy was regarded as a way to enhance the economy and to promote national self-esteem in the middle of national economic difficulties. Tapper (1998, 19) further claims that developments during the last ten years have been so rapid partly because of the national strategy of spreading information and communication technologies to schools and the public sector, and because of the education strategy promoting the generation of knowledge in the field. Pilot projects, the Kilpisjärvi project being one of them, are often mentioned in this context (Viteli 1998; Huovinen 1998).

The Ministry of Education has released two strategies for education and research: Koulutuksen ja tutkimuksen tietostrategia 1995–1999 (Education, Training, and Research in the Information Society: A National Strategy for 1995–1999) (Ministry of Education, 1995), and Koulutuksen ja tutkimuksen tietostrategia 2000–2004 (Education, Training, and Research in the Information Society: A National Strategy for 2000–2004) (Ministry of Education 1999; http://www.minedu.fi/julkaisut/information/ englishU/index.html). In both of them the *information society* has been taken for granted. The educational system will be developed under the assumption that the Finnish society is an information society. According to the ministry, Finland developed well as an information society well during 1995 to 1999 in comparison to the international level (Ministry of Education 1999, 13). These strategies launched a national vision of education according to which 'The growing competence requirements of the information society will be met by …' (1999, 31) and 'Information society skills for all' (1999, 30). These two examples serve to indicate the characteristics of the current Finnish educational policy.

Varis analyses the Finnish way of developing its information society. He concludes that the Finnish strategy has worked on several levels, including infrastructure, education and communication. On this occasion he calls attention to new educational thinking and advocates the life-long learning and proactive approaches. According to Varis, the latter deals with activities and ways of thought which create change and are also able to control this change. Education thus prepares people for the environments of the future. The main message in his analysis appears to concern the needs and interests of citizens. It is essential to chart the needs and interests of Finnish citizens in order to

develop this information society (Varis 1995). With regard to my research, Varis' emphasis is welcome. The needs of people in the Finnish Lapland have been a crucial element in the project in which I have been involved.

Nevalainen (1999) provides us with a compact analysis of the development of the Finnish information society. As a member of several committees and working groups and as manager of different projects it has been possible for him to get a holistic picture of Finland's way toward an information society. Nevalainen reports six periods of development. The initial phase (–1976) was characterised by bipolar discussion on the promises and threats of technology. Advocates of technological determinism as well as naysayers trumpeted their own ideas of the progress of the society. Nevalainen comments that information society was not yet a political term. The pioneer phase (1976–1983) focused on visioning the possible social development that the technological progress impacts. Questions of working life and labour market, like the threat of mass unemployment, were highlighted. Discussion on winners and losers of the information society, A citizens and B citizens, started. The acceleration phase (1983–1992), regardless of its name, was a time of steady development. Nevalainen emphasises two aspects of this period: information networks and the role of a citizen regarding to these networks. Network services, like bank services and timetable services, were produced to be used widely. The role of a citizen, according to the general view of this phase, was mainly that of the consumer of those services. The use of information networks was regarded as an essential part of people's lives in the future. The following phase, the phase of normalisation (1992–1998), Nevalainen characterises with the shift toward the network era and network economy. The preliminary work of the acceleration phase had introduced citizens with the use of network services and the level of their use was high compared to other countries. This was also true for mobile phone services. The impression of Finland as a leading example of information society emerged. Nevalainen gives weight to the importance of the national strategic work in the field of education. Thanks to this work educational institutions and libraries were provided with resources to develop their performance according to the needs of information society. Finally, there is the phase of globalisation and the new wave (1998–). Being published in 1999, Nevalainen is not able to analyse this phase extensively in his report. An interesting notion is that educational institutions, organisations of citizens and individual citizens are mentioned for the first time as active participants in the development of the information society. (Nevalainen 1999)

According to Nevalainen's analysis, the Kilpisjärvi project emerged in the era of networks. It was also the period of normalisation. Accordingly, the use of information and communication technologies and networks became all more common in people's everyday life. From the perspective of the Kilpisjärvi project, Nevalainen's view of this phase seems to be reasonable. It was a network that was taken in use in the project (although not exactly, perhaps, in the same sense as Nevalainen uses the word) and the use technology became a normal part of schooldays. The active participation of schools and citizens, in turn, may have been somewhat advanced for this phase.

There had been some research and development projects concerning the use of information technologies at the school level in the 1980s. One of them and, perhaps, the most well known was the KONTI project in Eastern Finland. In this project a special attention was paid to the possible unequal development of the main centres of the country, in the first hand, and sparsely populated areas, on the other hand. The use of technology in school education was regarded as an opportunity for rural schools to enhance the quality of education and to develop the living conditions of rural areas (Enkenberg & Jormalainen 1988). Accordingly, there were same kinds of ideas in the background of the KONTI project as there were in the Kilpisjärvi project. However, this kind of projects did not exactly deal with distance education at the school level. The use of information and communication technologies for distance education purposes in general was a rather unfamiliar thing for schools. On the other hand, there were wider endeavours concerning the development of the Finnish rural communities, not only rural schools, making benefit from information and communication technologies. These included the establishment of information cottages. A public space, like a school or a library, was provided with technology to be used by local people. Again there is a link to the Kilpisjärvi project. One of the basic ideas of information cottages was that local people use information and communication technologies for their own benefit. That was also the case in the Kilpisjärvi project.

Generally speaking, the milieu in which the Kilpisjärvi project has worked has to a great extent been affected by the educational policy debate of the information society. Thus, the concept of the *information society* cannot be ignored here. However, it is somewhat problematic since it covers a wide area of cultural, social and economic development in western societies. What I will do in the following is to take a peek at the history of the concept and to discuss the theoretical background to its use. My aim is not to carry out an exhaustive analysis of the concept of information society. It is too tricky and problematic to be discussed in detail within the framework of this research.

The history of the concept of the *information society* has its roots in Japan. It was used for the first time in 1963 in an article by Tadeo Umasao concerning the development of society based on information industries. According to Castells, Masuda, with whom the concept is often associated, was one of its popularisers. He was responsible for the programme for the future information and communication technologies which was presented to the Japanese Cabinet at the beginning of the 1970s. In Europe, the premier of *information society* took place in 1978 in France in the form of a the title of a report to the French Prime Minister. The concept landed in Finland in the 1980s partly due to the work of Teknologiakomitea (The Committee for Technology) which placed great emphasis on the development of information technology in the Finnish society. Soon the thesis of the shift to an information society found its way into text books as fact, as Niiniluoto puts it. (Niiniluoto 1988, 66–72; Castells1998, 236–237)

Obviously, *information society* has got different meanings in all of these contexts. The question is, was it correct to translate the original Japanese version *Johoka Shakai* as information society in English? When we think about the Finnish language, the issue is even more confusing. Problems with '*tieto*yhteiskunta' and '*informaatio*yhteiskunta' are well known and have been criticised by Finnish scholars (a brilliant example: Niiniluoto 1988). Varis takes note of both of these aspects when he defines *tietoyhteiskunta*:

> The information society is a form of society in which economics and many other activities are all more networked and global, and in which information and knowledge are an all-important resource. In practice, it means the form of society which follows the industrial society, in which services and entrepreneurship have a more central position than before. (Varis 1995, 7; my translation)

Moving away from the etymology, I will take a brief look at the theoretical background. I will use Webster (1995) as a source here. He presents an analysis of information society theories which, according to some researchers (Tapper 1998, 11), is the most useful summary in this field. Webster (1995, 6–26) distinguishes five aspects in his definitions of the information society: 1) technological, 2) economic, 3) occupational, 4) spatial, and 5) cultural.

1) The first aspect, technological, refers to the 'hereness' of new information and communication technology. As a result of spectacular technological innovation, technology penetrates all corners of soci-

ety. When put in the context of education, equipping schools with computers is one indicator of this aspect of the information society.

2) The economic view emphasises the economic value of information. Webster points to Machlup's (1962) view of the information industry, categorised in five broad groups: 1) education, 2) media of communication, 3) information machines, 4) information services, and 5) other information services. He further refers to the information economy study of Porat (1977), who speaks about primary, secondary and non-information sectors of the information economy. Education, for example, belongs to the primary sector since it provides information in established markets and the economic value of this information can be readily ascribed. Both of these two aspects, the technological and the economic, seek quantification to define the information society. While the technological aspect concerns estimates of the number of computers or that of internet users, for example, economic aspect attempts to quantify the economic significance of information.
3) The third aspect presented by Webster is occupational change. The information society has arrived when teachers (and other occupations in information work) outnumber steelworkers and builders.
4) The fourth aspect, the spatial aspect, refers to information networks and the organisation of time and space. Networks connect locations in new ways and this causes dramatic changes in time-space relationships.
5) Finally, the cultural aspect refers to the amount of information in social circulation. Wesbter states that there simply is more of it about than ever before. Our lives are informationally laden and this includes our homes and our bodies. We get information about alternative lifestyles we can absorb, reject and reinterpret

As far as my research and my approach to media education is concerned, all of the above aspects are of interest. The intense presence of technology and its use is an constitutive element in my view of the development of the (virtual) school and classroom as well as of the ethnography which investigates it. The economic view is not so relevant to my study as such, and I am not interested in economic issues. On the other hand, the economic aspect is associated with features such as the flow of education and the basics of networking, such as sharing resources, which are part of my research. The third aspect, occupational change, is not at the core of my investigation either.

However, vocational opportunities of rural education are relevant as is the development of teachers' work in networked schools. Spatial aspects are of great interest to me and I will give them a lot of attention. Finally, there is the cultural aspect. Webster (1995, 21) argues that not only do the new media surround us but the informational environment is also more constitutive *of* us. Following on from this, it could be said that not only is a networked school equipped with information technologies, as Webster calls them, but the informational environment to which these technologies give access is also a constitutive part of such a school. On the other hand, networking provides rural people with opportunities to be in contact with the entire world to exchange views and opinions with people in distinct environments, and to introduce alternative lifestyles to them.

Globalisation: People get connected with each other

Webster suggested that we look at the present world from the perspective of the connections that networks establish, and from the spatial view that the use of information and communication technologies affects.

The spheres which information and communication technologies create, called electronic environments or virtual environments, for example, are to a great extent free of geographical realities. It is an interplay between the local (you in your room fingering your computer) and the non-local (those other people in their rooms somewhere else doing the same thing). Persons who meet each other in those environments do not necessarily know where their counterparts live. For example, in my experience, people seem to choose chat room nicknames which do not reveal their location. Participants may not know whether the other participants live in the same town or on the other side of the globe. The encounters in the electronic worlds of information and communication technologies may be accidental and unexpected. Surfing the web is a good example of this. Following the links of web pages you criss-cross between individuals and institutions all over the world and you notice that a link from New Zealand has eventually taken you to the page of your colleague who is sitting in the next room. The stage is transformed from the corner of your living room to the global sphere of the web, indeed, the *world wide* web. I have faced problems locating *global* in the theoretical framework of my research. It is research about networking schools mainly inside one nation state only, Finland. However, this kind of networking is typically non-local. It links a locality to the outside world. Is it a phenomenon with a global

character, then? Or, possibly, just *translocal*? I will address this kind of, to me, tricky questions in the following.

One way to approach the problem is to start with a slogan: 'the place does not matter anymore'. This does not mean, however, that the local context in which people live is no longer relevant to their lives. People live in places as they have always done, but a great part of human interaction nowadays occurs in an electronic sphere which we can describe in Castells' (1996, 413) words: it 'is not placeless, although its structural logic is'. The importance of *place*, on the other hand, appears to have increased. Nor does it mean that people's cultural and social background does not have any significance in electronic spheres. What I am arguing is that, in those spheres, expressions such as 'near' and 'faraway' or 'fellow citizen' and 'foreign people' become confused. Is this some kind of globalisation? What, actually, does globalisation mean?

Neil Brenner (1997, 137) lists notions of globalisation which he has found in the literature of this field, such as *space of flows*, *hyperspace*, *deterritorialisation*, *ethnoscapes*, *the local-global interplay*, *the local-global nexus* and *glocalisation*. Indeed, several of these terms will also be found in my text. My intention is not to investigate globalisation as such because this research is not a research on globalisation. However, when information and communication technologies make it possible for people to establish connections free of geographical bounds on the grounds of educational and other interests, and this is even rather easy to realise in a technical sense, it is reasonable to be conscious of the possible globalisation of education. Mason (1998) speaks about 'globalising education'. She foresees essential changes in the organisational, pedagogical and technical delivery of education, and she argues that many of these changes are caused by the growth of global education. Her research mainly concerns higher education but she remarks that there are also various global initiatives also at the level of primary and secondary education. Her message is that even community or regional organisations should acknowledge the tendencies towards the global scale in the development of education, both in order to survive and in order to be able to benefit from this development. When I look at the Kilpisjärvi project, both the survival aspect and the benefit aspect are evident. Varis (1995, 65–66) also predicts future global tendencies in education. He remarks that there will be a need for a way of reproducing global elements at the local level. According to Varis, this calls for the readiness for change and renewed learning. In the field of open learning, the globalising character of education appears already to be present (Salmon 1998).

For Bartlett and his colleagues, who have discussed the globalisation of education: ‘‘Globalisation’ can be spoken about only when the interconnections/relationships among sites/locales are systematic and distributed across the globe.’ [http://www.ed.cqu.edu.au/~bigumc/papers/global.politics.by.html] They refer to Thompson (1995, 150), who states that globalisation arises only when activities:

a) take place in an arena which is global or nearly so,
b) are organised, planned or co-ordinated on a global scale, and
c) involve some degree of reciprocity and interdependence, such that localised activities situated in different parts of the world are always shaped by one other. (Thompson 1995, 150)

If we use criteria like these, then what follows is not about globalisation. I understand very well their point: we cannot speak of globalisation if the things we talk about are not global in scale. Mason (1998, 11) remarks that according to her criteria there is not a single institution in the world which could truly be said to be offering global education. My argument is that following the logic of ‘place does not matter anymore’, what we get is that the distance between sites is not the main point in the whole thing. Thus, globalisation could be regarded as a situation in which the degree of distance between places loses its significance. This, in turn, means that a short distance does not differ significantly from a long distance. I agree, however, with Thompson’s notion that globalisation means that activities take place in a *global arena*. Later in this chapter I speculate on the issue of eduscape. This ‘scape’ is global in character, it provides a global arena for flows of education. As far as globalisation is concerned, it is not important if the participants who interact in this space are physically situated near to or far from each other.

It has often been stated that globalisation is not a recent phenomenon, and that it goes back several centuries. However, the term is rather young. In academic circles it was given attention only in the 1980s (Robertson 1992, 8). Waters points out how the term is relatively rare compared to the number of publications which have *global* in their title (Waters 1995, 2). One of the problems with the term is its broadness. It refers to economic, social, cultural, political, geographical, and other issues, dealing with a great variety of megatrends. The perspective from which I am investigating the processes of globalisation is based on individuals and on people in their local contexts. The usual focus of discussion is on the tension between nation states and the

world as a whole. In other words, globalisation concerns the developments which have made national boarders more permeable than before. Education, of course, is deeply intertwined with nation states. In countries like Finland or the other Nordic countries, the educational systems are tightly tied to the State. Education is often thought to be a public good at a national level: 'Indeed, education is frequently seen as a means of achieving a competitive advantage against other nations.' (Field 1995, 281). This is certainly also true in Finland, where the governmental policy towards an even-more elaborated information society impacts in many ways on educational decision making. Although this policy is characterised by the praising of international relations and co-operation, the main motive is the national good. Davies and Guppy (1997) report interesting developments in the English-speaking countries, how the tension between the national character of formal education and global tendencies has caused two-fold reactions in educational policy. On the one hand there has been a counter-movement towards national coherence, including emphasis on national curricula. In this way globalisation is pushing policy makers into making education a national concern. However, tendencies towards globalisation have also encouraged local voices to demand local power and decision making. As Davies and Guppy argue, this concerns as well middle-class parent movements as it does concern minorities, such as aboriginal communities of New Zealand. The voice of the local is heard alongside that of global or in other words, localisation and globalisation interplay with each other.

Trans nations and localities

What interests me here is the intentions of individuals and groups of people in their local contexts to establish educational connections regardless of geographical, cultural or other similar boarders. I am interested in situations in which people are eager to benefit from the opportunities that the information society brings about. According to Varis (1995), as mentioned earlier, this is in accordance with way that the Finnish information society should develop. Following the logic which I introduced above, I claim that it is not the main point if these connections occur inside or across national boarders. This perspective is in accordance with certain developments that are to be found in literature on globalisation. These developments may be characterised with the prefix *trans*. Instead of the term *inter*national or *multi*national, the term *trans*national has been in use. (I refer to *translocal* in Chapter four.) Although

transnational also implies dualistic tension between the nation state and global ties, the focus has somewhat shifted towards individuals and different kinds of groupings of persons. According to Hannerz (1998. 236–237), the use of the term transnational is meant to draw attention to individuals, kinship groups, ethnic groups, firms and social movements. I would like to add virtual (educational) communities to the list. As early as in 1972, Burton suggested a shift in focus from investigations of international relations towards networks and systems relationships between individuals and collectives (in terms of ethnicity, religion and communications links, for example) across state boundaries. Later, Rosanau (1980) emphasised the importance of relations between non-governmental individuals and groups which operate at the global level. Leading figures in this field, such as Robertson, also pay attention to the individual perspective in the processes of globalisation.

I sympathise with Robertson when he declares 'I insist that individuals are as much a part of the globalisation process as any other basic category of social-theoretical discourse' (Robertson 1992, 104). He disagrees with the idea that globalisation necessarily refers to very large-scale matters. In the background of his emphasis on individuals in processes of globalisation is individualism. On this occasion he refers, among other things, to education, and to the role of international organisations in promoting individualism in this field (Robertson 1992, 105). Discussions about terminology in the area of distance education are in accordance with Robertson's statements. The shift in usage from the term distance education to distance learning and open learning indicates a move from institution-centred towards student-centred thinking (Tella 1998).

Another thing of importance is the relationship between globalisation (including globalisation of education) and people in different localities all over the world, in other words, how people come to terms with globalisation. Tony Spybey argues that global influences have local relevance only if people take them into their lives. With this statement he rejects globalisation as an external influence and he promotes reflexive aspects of the relationship between the individual and the world. He speaks about both social and cultural elements: 'Towards the end of the twentieth century, more than ever before, people share cultural influences on a global scale and conduct significant parts of their lives in common. Moreover, people are active rather than passive in the reproduction of social institutions on the global scale. Aspects of global culture do not materialise of their own accord, they are reproduced around the world by people who thus in a sense form a global society.' (Spybey 1996, 5). This is an interesting point of view when we think about educa-

tion. It is question of local input here. His proposition about the realisation of global influences *if* people take them into their lives suggests, more or less, a choice made by local people. He continues: '... when people draw global influences into their lives they do so against a background of local cultural influences. There will always be interplay between global and local influences and this has great significance for the continuing process of globalization' (Spybey 1996, 6). His message to us is that the individual reproduces the global in everyday life. This is done in an active rather than a passive manner, in the context of local cultural influences. These processes may be called *localisation*, which occurs alongside globalisation. Spybey might supposedly agree with Evans and Rowan when they speak about distance education and globalisation. They argue that it is 'essential to understand globalisation in terms of its consequences at particular sites, and in relation to "localisation" processes' (Evans & Rowan 1997, 147).

Education transcending terrafirma: Eduscape

I would like to continue this discussion on world-wide encounters by shifting the focus to spatial matters. What is interesting in global relations is their character as meeting 'places', or as spheres which have been divorced from the ground, i.e. spheres which do not follow physical and geographical realities. Individuals may meet each other in the context of some institutional performance (for example distance education) or virtual community (for example newsgroups), or they may just have a mutual chat (for example IRC). It is people, individuals or groups, that constitute these global spheres. As Webster's (1995) considerations of the information society suggested, information and communication technologies play a crucial role in the changes which affect our sense of time and space and the relationship between them. The two strands which are often mentioned are time-space compression and time-space distanciation. Both of these two concepts have their origins in the theoretical considerations of the processes of globalisation. Although both of them have been widely discussed in academic literature, it is appropriate to take a brief look at the basic ideas behind them here. The aim the following paragraphs is to outline a new educational dimension. Time-space compression and time-space distanciation are useful concepts in this regard.

Time-space compression involves experiencing time in terms of diverse sites in space. Let me take an example from Waters. He states that if people in Tokyo and Helsinki experience the same thing at the same time, they in

effect live in the same place. Hence, space has been annihilated by time compression (Waters 1995, 55). The concept of time-space compression was coined by David Harvey (1989). He associates this compression and annihilation with the increasing speed at which spatial barriers are being broken down which creates a feeling that the world is collapsing inwards upon us. Harvey illustrates this compression by referring shrinking maps of the world (Harvey 1989, 241) and to the shortened time needed to travel from one place to another, which in turn annihilates space through time. He also gives an interesting comment according to which 'time horizons shorten to the point where the present is all there is' (Harvey 1989, 240). According to the time-space compression view, globalisation deals with simultaneity in global scope. Here we have a global present, as Harvey suggests.

Another theoretical approach to time and space in the processes of globalisation comes from Giddens. For Giddens (1994, 4), 'Globalization is really about the transformation of space and time. I define it as *action at distance*'. As an expression this is very close to what has been said about distance education, i.e. education *at a distance*. The outside impact is present in localities.

> Globalisation can thus be defined as the intensification of world wide social relations which link distant localities in such a way that local happenings are shaped by events occurring many miles away and vice versa. (Giddens 1990, 64)

In his discussion about time and space, Giddens speaks about time-space distanciation. He points to the process 'which tears space away from place by fostering relations between "absent" others, locationally distant from any given situation of face-to-face interaction' (Giddens 1990, 18). He also speaks about 'lifting out' of social relationships from local contexts of interaction and their restructuring across time and space (Giddens 1990, 21). In other words, time and space become more abstract and the relationship between them fades. Further, through the process of distanciation people and things become disembedded, i.e. lifted out, from concrete space and time.

According to time-space distanciation, simultaneity is divorced from place. The same things happen simultaneously in diverse locations and are they are experienced at the same time. In the logic of time-space compression, this simultaneity, I suggest, creates a new space. Waters (1995) claims, as mentioned, in his example concerning Helsinki and Tokio, that the simultaneous experience by people in these cities means that they are living in the same place. I find this conclusion a little simplistic. I would prefer to suggest that there is, indeed, a common 'place' created by time-space compressions,

but I do not consider this 'place' in geographically-bounded spatial terms. I do not see that the world is collapsing inwards, or that it is shrinking. Such metaphors, of course, may describe the feelings of the inhabitants of the Globe today, but I would like to follow a slightly different path here. The concept of deterritorialisation has been used to analyse phenomena which cross territorial boundaries. It is a question of divorce from the ground, terrafirma. It is a sort of sphere of interaction, interaction which does not occur in a smaller or larger world than before. This space transcends the world. It is of no consequence if the interaction in this space is performed by people living in diverse sides of the globe or by people who live on the same town. I do not agree with Waters that, because of the simultaneous experience, people in Helsinki and Tokio live in the same place. The inhabitants of these cities, I claim, live in two separate places as they have always done. The experiences, however, in the words of Waters, 'live in the same place', in the sphere of interaction or, as we will see later, in the space of flows.

By following the ideas behind these two concepts we come to 'a single place'. When time, which is required to transport items between separate sites, or to travel from one place to another, is reduced to the minimum we have one common environment which I will, so far, call a space. The flow of information has reached this point. Information and communication technologies have made it possible to transfer information at such a speed that we can talk about simultaneity. Although bodily travelling between diverse localities still takes time and involves the use of vehicles, the presence of a subject is not bound to these restrictions. Thus, through the use of information and communication technologies a person is able to 'travel' from one place to another in real time. In practice this means that he or she can travel simultaneously to many places, and hence, is present in several places at the same time. This being the case, it is no longer sensible to talk about places in this context. It is rather a question of a space which has transcended the ground, the *terra*, which we could call 'deterraliased'. This space can be reached from different places simultaneously or whenever a person wishes. To me, it is a condition in which simultaneous activities and immediate shared experiences are *possible*, but where asynchronic activities also take place. On the other hand we could consider this new space in the terms of Castells (1996). In his explanation of a new space (the space of flows) that information technologies (as he calls them) create, he finds two features: simultaneity and timeless time. This new space changes the logic of temporality, aiming at both instaneity and disordering the sequence of events. Accordingly, the order of events diminishes in a temporal collage 'with no be-

ginning, no end, no sequence', all made possible by the speed of mediating technology (Castells 1996, 462). All this suggests, that the question of synchronity versus asynchronity, perhaps, does not destroy my theoretical construction of a new educational sphere. As will be seen in Chapter three, this kind of temporality is characteristic of virtuality.

Phenomena seem to divorce from a place, from a territory. To put it in another way, phenomena which are not based on geographical location and/or on cultural siting, are becoming more frequent. When Castells considers the theory of the network society he claims that:

> Cultural expressions are abstracted from history and geography, and become predominantly mediated by electronic communication networks that interact with audience and audiences in a diversity of codes and values. (Castells 1996, 476)

Appadurai (1990; 1996) analyses cultural development in the contemporary world in terms of *scape*s, which penetrate nation states and which cover the whole world. These are dimensions of flows of media, ideas, technology, for example, which I will discuss in more detail later. They are *deterritorialised*. They have transcended territories. This is reminiscent of the idea of *space of flows*, coined by Castells (1996). Space of flows deals with a change of territorial hierarchies due to information flows which are facilitated by information and communication. The term *flow* is worth further consideration. Castells (1996) uses it to outline the interaction between society, space and technology. He speaks about a network society in which he finds tendencies toward a new spatial logic, the *space of flows*, instead of the space of places. Flows are 'purposeful, repetitive, programmable sequences of exchange and interaction between physically disjointed positions' (Castells 1996, 412). There is continuity between Castells space of flows and Appadurai's scapes: '... our society is constructed around flows: flows of capital, flows of information, flows of technology, flows of organizational interaction, flows of images, sounds, and symbols' (Castells 1996, 411–412). Circuits of electronic impulses form a fundamental supporting layer for the space of flows. In other words, it is a question of the use of information and communication technologies. Castells presents an interesting hierarchy of nodes and hubs.

> The space of flows is not placeless, although its structural logic is. It is based on an electronic network, but this network links up specific places, with well-defined social, cultural, physical, and functional characteristics. Some places are exchangers, communication hubs playing a role of coordinator for the smooth interaction of all the elements integrated in the network. Other places

> are the nodes of the network, that is the location of strategically important functions that build a series of locality-based activities and organizations around a key function in the network. Location in the node links up the locality with the whole network. (Castells 1996, 413)

This brings us to the *network*, which I will discuss further in Chapter two.

Deterritorialisation is a rather common concept in transnational studies (see e.g. the journal 'Public Culture'). In this context its meaning is somewhat concrete, since *territory*, indeed, refers to geographical territories and cultural areas. However, the concept has a more complicated theoretical background originating from the philosophy of Deleuze and Guattari.

The Royal Melbourne Institute of Technology maintains web pages which they call 'deleuzeguattarionary'. This is a an interpretative dictionary of the philosophy of these two Frenchmen. According to the dictionary:

> To deterritorialize is to abstract from a context in such a way that new connections are formed that decode the interpretative matrix of the original context. It is to grasp the base context in such a way that flows which had been impeded within that context are freed into a line of flight. [http://cs.art.rmit.edu.au/projects/media/deleuzeguattarionary/d/pages/deterritorialize.html]

Matters may be characterised by territoriality, but they may also open up to deterritorialisation, take some autonomy and then divorce themselves from the hegemony of territory. Deterritorialisation deals with the *line of flight* from a territory, territory representing here something firm and stable. This line creates links and interfaces between diverse phenomena. (Deuleuze & Guattari 1987). A deterritorialised phenomenon becomes reterritorialised when it makes contact with a new connection, a new territory. Siivonen (1996) treats territoriality, deterritoriality, and reterritoriality as inter-relating dynamics between change and stability. Does technology cause change in territories, does it nourish deterritorialisation, or does it foster copying? He further contemplates the result of the change, in other words, how a phenomenon reterritorialises. Siivonen's thoughts give us a basis from which to investigate the educational dimensions that are created with information and communication technology, with attention being paid to their relationship to traditional educational environments (as I will do in Chapter three).

It is easy to imagine the educational environments which media education investigates as manifestations of the interplay between territoriality, deterritorialisation and reterritorialisation. Teaching and studying are not marked by territoriality here. These activities do not take place in a certain

physical place: a classroom, a school, a community, a state. They 'take place' to a great extent in a dimension which information and communication technologies create. It is a deterritorialised dimension of educational flows. We can further develop this logic of territory-deterritorialisation-reterritorialisation nexus. Deterritorialised education may become reterrorialised through educational activities, teaching and studying. Students and teachers connect this education to their educational needs, and interests, and deterritorialised education has thus come to new territory. In the terminology of globalisation, this could be called a sort of localisation.

McLellan has analysed event-based education through the Internet. This refers to arrangements in which 'educational activities are centered around an event that students participate in via real-time linkup of some kind (text, audio, video)' (McLellan 1998, 57). Videoconferencing is one way to conduct virtual events. She claims that these virtual events are a harbinger of Knoke's *Placeless Society*. This is defined as 'the awakening omnipresence that will allow everything—people, goods, resources, knowledge—to be available everywhere, often instantenously, with little regard for distance or place … Everywhere, people, money, goods, and knowledge flow so effortlesly from point to point that place becomes an irrelevant concept.' (Knoke 1996, 20–21). As we can see, Knokes's views echo those of Appadurai and Castells to some extent. The claim that place becomes totally irrelevant is open to discuss, but that is not the main point here. What is of interest is how McLellan treats educational activities on the grounds of Knoke's ideas. She claims that, in a placeless society, we no longer live in a three-dimensional world but in one of four dimension, cyberspace being the fourth one. In this kind of world 'distance is not an issue' (McLellan 1998, 59).

> But eliminating the constrains of distance is only one consideration. The key themes we face in cyberspace is community, communication, and collaboration. As we seek to take advantage of the Internet, we need to think in terms of mapping relationships, not merely destinations. … The Internet connects—and transcends—places in the world of Placeless society. … A community is a unified body of individuals—people with common interest or shared participation. The virtual communities of cyberspace extend to people with access to the Internet throughout the entire world. (McLellan 1998, 59)

The ideas of McLellan bring together several points which are under discussion in this chapter. We might imagine a dimension of educational activities which transcends place, and people with access to this dimension would build up (virtual) communities with shared educational interests and participation. I

would rather speak about interaction between participants than participation. For McLellan, the Internet seems to be an incarnation of this fourth dimension. However networks may use other environments of information and communication technologies as well, like ISDN-based videoconferencing.

The idea of global scapes provides a fruitful perspective from which to investigate a variety of phenomena which connect people from different localities, cultures and nations. I have already referred to Appadurai. He argues that global cultural flow could be explored by looking at five dimensions: ethnoscapes, mediascapes, technoscapes, finanscapes and ideascapes. He sees these scapes as 'deeply perspectival constructs' of different kinds of actors: 'nation-states, multinationals, diasporic communities, as well as sub-national groupings and movements (whether religious, political or economic), and even intimate face-to-face groups, such as villages, neighbourhoods and families' (Appadurai 1990, 296). Ethnoscapes concern the changing group identity of moving people, including immigrants, guestworkers, refugees and exiles. They are landscapes of group identity belonging to groups which are deterritorialised, i.e. transcended regarding specific territorial boundaries and identities. Ethnoscapes could be substituted for earlier 'wholes' such as villages, communities and localities. Mediascapes deal with the distribution of information which information and communication technologies enable, and with the images of the world that these media create. Ideoscapes are "composed of elements of the Enlightenment world-view, which consists of a concenation of ideas, terms and images, including 'freedom', 'welfare', 'rights' ... and master-term 'democracy'" (Appadurai 1990, 299). Why not also 'education'? Technoscapes and finanscapes refer to both economic interests across national boundaries and to the flow of money and technology at the global level. (Appadurai 1990; 1991). I am presenting the idea of this kind of 'scape' concept here as a background for the discussions upon the (global) flow of education. I propose that we can imagine a horizontal integrative landscape in the field of education which resembles the idea of 'scapes' coined by Appadurai. Accordingly, I am talking about a possible *eduscape* (Kynäslahti 1999). We can imagine flows of education, enabled by information and communication technology, streaming in a deterritorialised dimension waiting to be taken into use through reterritorialisation.

The idea of global dynamics of flows and the idea of space in which these flows occur, are interesting with respect to my research. It is also worth mentioning the stand Castell takes on the micro-macro nexus: 'I propose a hypothesis that the space of flows is made up of personal micro-networks that project their interests in functional macro-networks throughout the global set

of interactions in the space of flows.' (Castells 1996, 416). This is in accordance with the perspective of globalisation which I have emphasised in this article: the micro perspective of individuals and groups interacting with the macro perspective of the processes which are free of geographical restrictions.

People meet in the context of education

Benedict Anderson's *Imagined Communities* (1991) is often quoted nowadays on various occasions, and his ideas may also help me here to describe how we could understand the character of eduscape. Anderson's example comes from the world of Islam (I will come back to the following quotation in the Chapter three.):

> The Berber encountering the Malay before the Kaaba must, as it were, ask himself: 'Why is this man doing what I am doing, uttering the same words that I am uttering, even though we can not talk to one another?' There is only one answer, once one has learnt it: 'Because *we*...are Muslims.' (Anderson 1991, 54)

Here, people who share something in common (Islam) meet each other. Although their ethnic and cultural backgrounds vary to a great extent and they speak different languages they still perform the same rituals due to (more or less) the common cultural traditions of the Islamic world. Parallel examples are to be found in education. Distance education involves people who live in otherwise unrelated localities meeting each other. They mostly share the same educational tradition and perform common rituals. All of them have been at a school, in a classroom, sitting at a desk. They all know what it means to be a student, what terms such as 'teacher', 'lecture', 'lesson' mean. Further, they are used to behaving in certain ways in educational situations: sitting quiet, raising their hands, and so on. What I am trying to say with this is that education is some kind of subculture with its values, rituals and roles. This culture has developed within the great narrative of education, so to say. People with diverse backgrounds from separate locations and different parts of the world meet in the context of education and notice that 'this man [is] doing what I am doing, uttering the same words that I am uttering'.

The flow of education in the eduscape evidently creates interdependent relationships between persons and institutions, as is the case in the networks of schools which I illustrate in Chapter two. However, beside the issue of dependency is the aspect of randomness mentioned above. Persons who share

common educational interests, but perhaps nothing else, face each other and become participants in an educational function, which might be organised by an educational institution, an institution which otherwise has nothing to do with them. Different kinds of educational institutions also collaborate with each other in the spheres of the eduscape. What I stated about individuals also applies to them: collaboration partners might be very distinct in character (Tella & Kynäslahti 1997) and partnerships are established between partners who, again, might otherwise be unknown to and distant from each other. Accordingly, individuals and institutions meet each other, just like the two Muslims before the Kaaba in the above quotation from Anderson. Here, it is not question of mutual dependence, but of the absence of such dependence. Encounters in the global eduscape are often haphazard, and not outcomes of interdependence. Eduscape penetrates the whole world. It brings one person or an institution from here into contact with another person or institution from there. McLellan (1998, 57–58) notes how, for example, videoconferencing can provide a bridge to connect diverse participants in educational activities. A person at home with a computer, a modem and a digital camera can be linked with specially-equipped expensive studios. The uniting factor, which causes the bringing together of these individuals and institutions, is a mutual educational interest. These persons perform their 'pluralistic' ritual, strangers beside strangers, and return home without ever getting to know anything about their fellow pilgrims. In Etzioni and Etzioni's words, computer-mediated communities are 'aggregates of people who hardly know each other' (Etzioni & Etzioni 1999, 241). They are people who, referring to Jones' (1997, 17) remark about virtual communities, are 'headed in the same direction, for a time'. This was also true of the Kilpisjärvi project when two groups of pupils, one in a small rural school in Finnish Lapland and the other in Helsinki, joined common videoconference lessons during three years of their lower secondary school, without ever getting to know each other very well. They were going in the same direction, driven by educational interests, for a time. They performed the same rituals of schooling, stranger beside stranger, and after they had completed their lower-secondary education, they separated without much mutual affection.

Open and distance education and world wide encounters

In the field of education, those trends which I have described here so far concern, naturally, distance education in particular. Thus, it is worth looking at the theoretical discussions of open and distance educators, and how they see current developments in education. The debate, which has been maintained mostly by Australian and British discussants, includes at least three mainstream strands: 1) questions concerning time in relation to place; 2) the global-local nexus; 3) consumer culture. The last of these, being less essential to my research interests, will be given minimal attention in my text. What lies behind all these three aspects is the role of advanced information and communication technologies, which facilitates the connections over great distances. Thus, it is clear that the positions distance educators have taken in the debate on globalisation follows, to great extent, the lines that are defined in more general discussion.

Distance education is one aspect of the process of globalisation, and thus a part of the global flows which have an impact on people's lives in localities all over the world. Distance education nowadays creates an environment in which people with distinct backgrounds and in different walks of life meet and interact with each other, as theoretical considerations of media education suggest. 'The point here is that in principle, inherited boundaries such as those of the nation state are increasingly permeable to all forms of communication, distance open learning being one of them.' (Field 1995, 273).

The role of information and communication technologies, which are used in distance education, is often emphasised. A general view among discussants of the distance education—globalisation issue is that there is a connection between information and communication technologies, distance education and globalisation. Terry Evans, one of the leading figures in the field, writes:

> ... we can see that print, audio and video materials, computer communications and telecommunications, or satellite television are all means whereby educational experiences are contributing to, and drawing on, the processes of globalisation. As these technologies come to the fore, open and distance education—along with schooling and other forms of education—are rapidly endeavouring to inscribe them into their practices. The new computer mediated communications and telecommunications technologies are the ones to which distance education is most attracted. For example, computer and telecommunications technologies have immense appeal for abilities to provide synchronous and asynchronous communications between teachers, administrators, counsel-

> lors and students. It would be a rare distance education organisation today which has not embraced some of these technologies and incorporated starry-eyed statements about them into its strategic plans and publicity. (Evans 1995b, 259).

The significance of these technologies for the development of distance education that is becoming global in scope and leading towards a changed understanding of place is obvious. Distance educators themselves speak about globalisation. 'It is the compression of space-time through the use and speed of new forms of communications which enhances distance education's contribution to globalisation,' Edwards (1994, 15) informs us. John Fields puts it in the following way: 'distance open learning is increasingly intertwined with the challenges of new communications technologies, themselves often regarded as primary agents of globalisation' (Field 1995, 273).

A good starting point here for further discussion was formulated by Edwards (1994) when, echoing Mason (1998), he commented that no one has a global knowledge of distance education. This certainly is true. The position that Edwards takes on the relationship between distance education and globalisation appears to be rather 'Harveyan'. He sees the processes of globalisation in distance education through the lens of global compression. Distance education enables people to stay where they are and attain education from their home (or from their local school, I would like to add to this). This increases the geographical dispersal of participants in educational programmes and thus connects a variety of separate places together. In the words of Tella and Mononen-Aaltonen (1998), it is a polyphony of the voices of a variety of participants. It is the capability of distance education, through information and communication technologies, to let people stay where they are that realises and indicates the potential of distance education in globalisation 'as learners and educators no longer need to be in the same place or nation state, but are available on a global scale to each other.' (Edwards 1994, 15). For Edwards, then, distance education means the compression of space in the sense that it brings places together. This kind of argument could be said to be more or less geographically-bound. We are approaching the idea of deterritorialisation again. Indeed, some signs of the use of this concept have emerged in discussions among open and distance educators have emerged (e.g. Bartlett & al. [www.ed.cu.edu.au/~bigumc/papers/global.politics.by/ html]). Edwards (1994, 15) continues: 'the very distance education covers brings places together and compresses space.' In the transnational context he states that, due to the capabilities of the technologies used, distance education is not re-

stricted to following the boarder lines of nation states, but it brings learners and educators together on a global scale across great distances.

The link between time-space compression and information and communication technologies, which are used in distance education, become very interesting in terms of some of the basic characteristics of distance education. By this I mean issues such as learner autonomy and independence and openness of learning environments. Let us go back to Edwards' considerations: 'The compression of time is dependent on the media through which the learning is made available. Thus, the sending of printed materials through the post brings about a specific temporal relationship, one which is transformed through, for instance, the use of computer networking. Thus, there is a need for a history/geography of distance education which situates it within the different phases of globalisation and compression.' (Edwards 1994, 15). With these words Edwards is calling for the kind of chronological overview on temporal-historical lines of the developments in globalisation with which Harvey (1989, 201–323) and Robertson (1992, 57–60) and some others provide us. To put it in a simple way, the more quickly the media reacts, the more compressed is the world. I see the connections of time, place and media in the context of distance education as being much more complicated. I made some remarks about this earlier in this chapter, but I will make some further comments here. If I understand Edward's suggestion of a history/geography analysis correctly, it seems to me that posted materials represent a less time-compressed version of distance education than computer-mediated material. On the other hand, the idea of computer-mediated distance learning often involves the learner's ability to study following his or her own schedule.

On the other hand, we could consider the nature of education and the nature of studying in relation to time. Tella (1998, viii) makes a good point when he argues that (media) education is about things that take time. To learn, to study in order to learn, to teach in order to help learners in their studying, all of these issues are things that take a certain amount of time. The synchronic mode of distance education realised with the help of information and communication technologies does not necessarily support this notion of education. For example, online lessons through videoconferencing may be rather demanding and hectic events with the risk that students drop out during them.

This issue lies at the very core of distance education. In his concept of *independent study* Wedemeyer speaks about learning 'that results from activities carried on by learners in space and time', which has connections to the diminution of barriers in time and space, from the invention of writing to

the application of telecommunication in distance education and programmed-learning theory (Wedemeyer 1973, 73–75; sited in Keegan 1990). *Independent study* largely emphasises the temporal and spatial separation of the teaching-studying-learning situation, mirroring Wedemeyer's liberal educational theory and egalitarian social philosophy. Swedish theorists have emphasised the aspect of two-way communication in theories of distance education. Both Bååth and Holmberg were interested in the omnipotence of two-way communication in learning materials. Holmberg emphasises the importance of *guided didactic interaction* between a learner and a distance education institution. This could take place, for example, through course material which has been prepared in a didactic style, or through conversation in real time using the telephone. The use of synchronic media in distance education, however, does not undermine the importance of learner independence in Holmberg's theory, and the individual and independent learner is at the heart of his considerations studying that is free of time and space. Distance education, Holmberg (1995, 165) writes, is 'adaptable to students' conditions in that they can learn anywhere and at any time. ... In principle it leaves the student in entirely command'. Moore presents his theory of transactional distance. This is a fascinating framework when associated with distance education in relation to globalisation. According to Moore and Kearsley, distance is a pedagogical phenomenon. 'This distance is a distance of understandings and perceptions caused by the geographical distance, that have to be overcome by teachers, learners, and educational organizations if effective, deliberate, planned learning is to occur.' (Moore & Kearsley 1996, 200). The ways of overcoming this distance are pedagogical, and in that way it is a question of a pedagogical phenomenon. The transaction refers to interplay between teachers and learners, each operating in their own environment separately from each other. 'It is the physical distance that leads to a communication gap, a psychological space of potential misunderstandings between the behaviours of instructors and those of the learners, and this is the transactional distance.' (Moore & Kearsley 1996, 200). When speaking about learner autonomy, Moore and Kearsley (1996, 204–206) state that the greater the transactional distance, the more learner autonomy is required. I would like to argue that the theory of transactional distance provides a fruitful framework in which to develop theories of distance education towards the kind of cultural and social approach that is fostered by Evans and other participants in the globalisation—distance education debate. In other words, I am referring to theoretical considerations of, as Moore puts it, 'gaps', or why not knots as

well, between educational institutions, educators and learners each living in their own social, cultural and geographical context.

Another theme in discussions about present trends in open and distance education deals with social and cultural problems in the global-local nexus. Here, it is a question of how people face the global flows of education (which occur in the eduscape, I would like to add) in their local context. In the writings of Edwards, Evans, Nation, Rowan and others, concern of position of local people in relation the hegemony of non-local distant infiltration is obvious. These discussions are somewhat regional, mainly concerning the South Pacific. Issues such as identity or access versus invasion have been raised. As Edwards puts it:

> '.. there is the potential global reach of distance education. To what extent does this result in the universalising and homogenising of the curricula? To sit in South East Asia studying materials produced in the U.K. is certainly a feat of access and enterprise, but we need to examine the extent to which such globalising trends bring into the curricula alternative voices, information and perspectives, or further exclude and marginalise less powerful alternatives.' (Edwards 1994, 16)

Terry Evans gives an example of the interchange of global and local education in Australia and the South Pacific. He speaks about the distance education that is delivered by the Deakin University. He speculates about the opening of

> educational provision to people from nations, such as those of our South Pacific neighbours, who either may not provide such courses, or may not provide them in an off-campus form. The access of this sort of provision can seen to have considerable educational (and possibly, social and economic) benefits to a developing nation. However, as an invasion, it can been seen weaken national initiatives to develop local educational provision which might be better suited to local needs. (Evans 1995a, 314)

Hence, there is an opportunity for access to education, but the very access, simultaneously, might invade its users. As a result, the emancipation that access to education offers might turn into domination.

Indeed, distance education is affected here by twin pressures: first, it must be globally competitive, and secondly, it should be sensitive to the local context (Evans & Rowan 1997). Further, in the globalising world learners' needs often go beyond locally relevant substance in education. In other words, education should also address the globally-orientated interests of stu-

dents. '..., an accessible and locally relevant curriculum may be of no use to a particular group of students if it does not also engage with considerations of the kinds of 'global' processes ... that have very real consequences for individuals at local sites.' (Evans & Rowan 1997, 148). According to this point of view distance education should be located in both local and global contexts. Further, attention should be paid to the diversity of learners as the expression 'a particular group of students' indicates. There is not 'one localness', but local people are different from each other as people usually are, despite the fact that they live in the same place. This is the kind of dilemma that Robertson (1992) has debated. He argues that the relationship between the universal and the particular is conceptual for globalisation processes. He makes an effort to bring the issues of particularity and particularism, difference, locality and community into alignment with universalism, an 'attempt to preserve direct attention *both* to particularity and difference *and* to universality and homogeneity' (Robertson 1992, 100; emphasis in the original).

> Rather than simply viewing the theme of universalism as having to do with principles which can and should be applied to all, and that of particularism as referring to what which can and should be applied only 'locally', I suggest that the two have become tied together as part of a globewide nexus. (Robertson 1992, 102)

In the globalisation context it is a question of the interplay between the particular and the universal. The above quotations from these two Australian authors give us one kind of view on this interplay.

I have discussed this topic at length here because this kind of dualistic interest was recognised in rural education a long time ago (Kalaoja 1988, 63–69; Kynäslahti 1996). Education in rural areas should answer both the local and non-local needs of rural people. (The practice of distance education through information and communication technologies has somewhat fulfilled these dual needs, as I will show later in this volume.) Thus, rural schools must 'non-localise' or 'globalise' their education. Interestingly enough, this is also what, according to Evans and Rowan (1997) again, small distance education units in Australia have also done. Institutions which have a rather local character have tried to make their delivery of education attractive to students outside their traditional regions. Compulsory schooling may face a similar situation when networking between schools may have similar effects. Networks provide a market where schools, among other institutions, can sell their expertise. The needs and interests of clients naturally has an impact on what the schools endeavour to supply.

The previous statement leads us to the third theme concerning the development of distance education: the increasing commodification of education, especially in the field of distance education. Koul (1995, 31) argues that '...education has already become a commodity for global transaction'. The position which has been taken among distance educators emphasises the learner as an active consumer. This can be regarded as one way to consider the learner as an autonomous actant. Thus, we can say that the consumer view is closely related to the theoretical considerations of independent study in distance education and to the principles of learner autonomy. From this point of view, the supply of education and the global flow of distance education are considered from the perspective of the learner as a consumer 'within real, often highly localised yet still complex social, cultural and economical contexts' (Field 1995, 282).

Although this theme is not the main interest in my research, I would like to follow it up briefly. The adoption of information and communication technologies by educational institutions including schools, is a new challenge for educators. For example, videoconferencing is increasingly used to educate individuals or groups at separate sites. As Tella's (1999) and Tella and Mononen-Aaltonen's (1998) theoretical considerations suggest, the field of media education is characterised by increasingly multidirectional activities and increasingly heterogeneous polyphony among distinct participants. When I spoke about the global scope of education earlier in this chapter I paid attention to small parties: individuals and groups. I could add small educational units to this list: an individual school, a department of a university, and, indeed, a single teacher or a group of teachers. As Robertson emphasised, this kind of micro-level activity will increasingly be at the core of globalisation, even in the field of education. On the other hand, if people take outside education as a part of their local life, the globalisation process has taken a concrete form, as Spybey hinted. People in diverse places on the Globe seek education which would answer their needs, and they judge the educational supply on the grounds of their interest in the local reality.

Conclusion

The Finnish systematic study of education has reached the point at which new aspects of theory and investigative interests are emerging alongside traditional education. Educationalists now live in a society which has been characterised as the information society. One consequence of this development

has been the call for new theoretical considerations of education, which have partly become realised in the mode of media education. I have outlined the main elements of media education from the perspective of my research in the previous pages.

In this chapter I have attempted to point out that people, with their educational needs, live in a world which can be described in terms of concepts such as globalisation, changed meaning of place and time, and flows of education. Rather than seeing citizens as passive particles in streams of worldwide megatrends, I have made an effort to consider them as initiating actants with educational interests and needs which they want to fulfil, benefiting from the potential that the information society provides.

Another aim of this chapter was to identify new kinds of educational environments which information and communication technologies create. This aspect prepares the ground for Chapter three in which I will discuss the virtual classroom and virtuality in general. My argument was that, as in several other fields of human activities, we can imagine a dimension of education which is divorced from physical and geographical realities and geographically-marked cultural areas, and which the term 'flow' could appropriately describe. Educational reality, as the theory of media education suggests, even more frequently includes mediated communication. It is an educational world based on the logical rather than the physical. In giving a name to this dimension we could benefit by relating to the theoretical framework of transcultural studies. Thus, I came to the eduscape. These entities are of a global character even if their real stage is less wide in the geographical sense of where the participants live. I was interested in looking at individuals and groups as initiating actants with their educational needs and interests in diverse locations in this world. Deterritorialised educational dimensions, in my terminology the eduscape, link these people transnationally and translocally together in various ways, and these links may be rather unexpected. This may create a polyphony of voices, as media education puts it, through which diverse parties may express themselves. Increasing interactivity by means of information and communication technologies enhances this development. The level of addressivity is raised. Directions of communication move towards a multidirectional level and a decentralised state. In the context of education, I now refer to flows of education, whirling in the eduscape.

Finally, my aim was to combine these developments in education with similar trends in distance education where discussions about globalisation and the nexus of the local and the global have been going on for years.

The topics which I have discussed in this chapter deal with wide trends, as I have repeatedly stated. However, they have significance for people in the remote community and for the local school, which I mentioned at the beginning of the chapter. I will continue to develop this micro-macro nexus in my research in the following chapters

CHAPTER 2

Education and Networking

In the first chapter I discussed the shift towards an information society in Finland and, to some extent, how this development affects education in terms of media education and pioneer projects such as the Kilpisjärvi project. In this chapter I will take a look at networking in relation to school.

The rise of the network society

> With little exaggeration, we may call the twenty-first century the age of networks. Networks will be the nervous system of our future society, and we can expect this infrastructure to have more influence on our entire social and personal lives than did the construction for transportation of goods and people in the past. (van Dijk 1999, 2)

These enthusiastic words come from van Dijk's 'The Network Society'. If we are to believe to him, the network is or will be a crucial element of our society and culture. The same kind of vision was described earlier by the Club of Rome (Meadows & al. 1993). Mattila and Uusikylä (1999, 7) looked for roots of the current emerge of networks. Globalisation, the disintegration of organisational structures and decentralisation, the blurring borders between the public and the private, and especially the rapid development of information and communication technology are the features which they mention as catalysts of the network society. These are also topics which I discuss in my research, with the exception of the public-private border issue.

Van Dijk continues:

> However, the basic elements of the *network society* are not so much networks themselves but individuals, households, groups and organizations *linked by these networks*. (van Dijk 1999, 24; emphasis original)

Van Dijk's view is in accordance with the ideas presented in the previous chapter. It is individual persons, groups and single organisations, such as schools, which are aiming at non-local educational flows and at establishing outside connections. In this chapter these connections are treated as networks.

In the organisational context, the networks of interest here are inter-institutional electronic networks of school, if we use Steven's term (Kynäslahti & Stevens 1996).

The network society is a form of society in which relationships are increasingly organised through media networks. This development complements or replaces the social networks of face-to-face communication. We can compress van Dijk's (1999, 220) definition of the network society in these two sentences. According to him, it is question of the transition from a mass society to a network society. Boundaries between macro-, meso-, and micro-levels are fading away. Individual persons, groups and organisations use a multiplicity of interpersonal(/organisational) media to establish connections and relations (nurturing the emergence of virtual communities) in as well as mass media. (van Dijk 1999)

Castells provides a slight different perspective on networks. He, like van Dijk, speaks about the network society. For Castells networks seem to be an even more fundamental social feature than they are for van Dijk. He devoted the first part of his 'Information Age' trilogy (Castells 1996; 1997; 1998) to the rise of the network society.

> It is characterized by the globalization of strategically decisive economic activities. By the networking form of organization. By the flexibility and instatibility of work, and the individualization of labour. By a culture of real virtuality constructed by pervasive, interconnected, and diversified media system. And by the transformation of material foundations of life, space and time, through the construction of space of flows and of timeless time, as expressions of dominant activities and controlling elites. (Castells 1997, 1)

Castells continues by referring to the dynamics of such a society.

> The main dominant processes in our society are articulated in networks that link up different places and assign to each one of them a role and a weight in hierarchy of wealth generation, information processing, and power making that ultimately conditions the fate of each locale. (Castells 1996, 415)

An essential element in the theory of the network society is the concept of the space of flows which I discussed in Chapter one. The understanding of place and network are integrated:

> The spatial articulation of dominant functions does take place in our societies in the network of interactions made possible by information technology devices. In this network, no place exists by itself, since the positions are defined by flows. (Castells 1996, 412)

The dynamics of the network consist of connecting points of different characteristics and divergent importance.

> The space of flows is not placeless, although its structural logic is. It is based on an electronic network, but this network links up specific place with well-defined social, cultural, physical and functional characteristics. … Some places are exchangers, communication hubs playing a role of coordination for the smooth interaction of all elements integrated into the network. Other places are the nodes of the network, that is the location of strategically important functions that build a series of locality-based activities and organizations around a key function in the network. (Castells 1996, 413)

Castells emphasises the essentiality of networks and the position of locales in them, and the space of flows which works in relation to networks. Although Castell's text deals with enterprises, it could be regarded as a more general definition of networks. He speaks about inter-firm networking. He pays attention to the shift from vertical bureaucracies to the horizontal corporation, a network enterprise that is enabled by information and communication technology. Sotarauta clarifies this idea further: The network society is characterised by decentralisation and networking in organisations both internally and in relation to other organisations (Sotarauta 1999).

Vertical disintegration goes hand in hand with horizontal integration combined with the use of information and communication technologies to establish inter-institutional networks. Similarities to networks of schools are, I hope, obvious. For example, my analysis of the integration and fragmentation of schools, which I will present later in this chapter parallels Castells' notions. School mirrors the wider development of the surrounding society. Finnish schools have traditionally followed comprehensive curricula which have been virtually identical for every school at the primary and lower-secondary levels. The school system has been rather strictly regulated, in that central administration, including the National Board of Education, has had ultimate power to direct education in schools. This state of affairs changed during the late 1980s and 1990s. As in some other countries, the disintegration of centralised decision making has been an elementary social feature in Finland in recent years. Decentralisation involves shifting power and responsibility from a centre to multiple smaller units, including territorial and specialised functional bodies (Crook & al. 1992, 97). Municipalities (and schools themselves) are able to create local and school-based curricula on the basis of the national framework. Schools have also discovered the potential that information and communication technologies provide to establish orga-

nised collaboration between separate schools or other participants, including other educational institutions such as universities, companies and individual persons with particular expertise.

Small rural schools, as well as teacher-training schools have been among the pioneers of networking in Finland. I will give some examples later to support my argument. There is a long tradition of this kind of co-operation in rural education. The clusters of schools is a well-known way to organise education in rural areas. However, the potential of the current technologies has opened up new possibilities for collaboration between rural schools and other partners: networks. Before I continue with this theme it is appropriate to discuss the concept of networks in education in general.

Definitions of network in educational literature

Discussion about networks associated with information and communication technology arose in Finnish educational literature in the 1990s. Helakorpi and Suonperä (1995) published their model of networked learning environments in Kasvatus (The Finnish Journal of Education). They proposed that networking in educational institutions could be described in terms of three levels: 1) intranet (teamwork, collaboration processes), 2) local networks (local neighbourhood), and 3) distant networks (national and international networks). The model is hierarchical with the institution itself as a starting point. The next level concerns geographical locality. Finally comes the level of relationships in a wider geographical sense: the national and international levels. The dynamics of the model follow the schema: from near to far. The model is clearly applicable to the networking of several educational institutions in Finland, but as a general model it is questionable. This kind of near-far thinking does not suit the world of networks very well.

Aikuiskasvatus (The Finnish Journal of Adult Education) published several articles about networking in a special edition with the title 'Networks and Society' in 1994. Although the authors do not provide a single theory of network in educational contexts, they present some theoretical aspects which are of interest here. Mäkelä (1994) speaks about network schools claiming that the school, in the broad sense of the word, of the future would be there where people are. Studying will take place in the home, at work, and in general in real world contexts. School as a place devoted to teaching and learning will thus lose its position as the heart of educational activities. The future of educational networks will be based on the development of a networked economy,

according to Kauppi (1994). Strictly hierarchical structures will be replaced by autonomous units. Educational organisations will build networks of collaboration with working life. Networks will consist of partnerships between educational institutions, between those institutions and employers, and between the institutions and different kinds of experts. The role of information and communication technologies in this collaboration is crucial. Anderson (1994) regards networks as clusters of knowledge and expertise. She bases her theoretical considerations on economics, in which collaboration between different sectors is emphasised as a key to competitiveness. Successful education requires interaction between partners with knowledge and expertise, and networks are the channel of this interaction.

Tella (1994a) approaches networks from the perspective of *télématique*, with the emphasis on human-to-human interaction which is mediated with computers. His theoretical basis differs from those described above. As was the case with Helakorpi and Suonperä's model of networks, Tella also presents different levels of networking. Firstly, he speaks about the physical network (wires, hardware and software) which provides an infrastructure for social networks of people (in educational settings, students and teachers). Secondly, there is the structural level of educational institutions. Here networking deals with changes of schools as an educational organisation and changes in educational systems in general. The final level in Tella's considerations concern global networks. Here there is a certain resemblance to the work of Helakorpi and Suonperä. Networks have individual, organisational and national/global dimensions. However, Tella's theoretical framework (in addition to the perspective of telematics) emphasises the social aspect and inter-human interaction more clearly than the other authors in the special edition. Tella also speaks about the network metaphor.

> A network is like a texture that adjusts to the needs of a user. ... After all, the structure of the network, its shoots (= a physical, telematic network) are not as important as the substance that its users produce for each other (the significance of a social network). (Tella 1994a, 261; my translation)

Lehtinen (1997) claims that on the first one hand, network refers to the technical infrastructure which makes it possible to transfer data between computers. On the other hand, it fosters new relationships between knowledge, organisations and individual persons. He suggests that this latter aspect appears as the many forms of *virtual* phenomena, such as virtual school. He also mentions the new structure, a networked organisation which replaces traditional static hierarchical structures.

As an analyst of the network society, Van Dijk defines network in a strict way. For him, it is 'a connection between at least three elements, points or units' while the connection between two elements is 'a relation' (van Dijk 1999, 28). Although he presents his definition under the title 'Technology' he claims that it covers physical and social networks, as well as media networks. In the era of the Internet, this definition is obviously too simple. With a little imagination we could use van Dijk's criteria to analyse chat rooms. A chat room with three participants is an example of a network. When one discussant drops out and only two participants remain, the network becomes a relation. I do not find this a very appropriate way to look at networks. As van Dijk himself proposes the mass media and the interpersonal media are intertwined. A more sophisticated approach is put forward by Varis. He associates networks with cyberspace and gives telephone calls (as interaction between two persons) as examples of networking and cyberspace (Varis 1995, 59, 87). As if regretting his strictness of definition , van Dijk suggests that the terms 'connection' and 'element' could be interpreted in several ways (van Dijk 1999, 28).

Tammilehto (1999) complains that the theory of networks (he uses the Finnish term: *verkosto*; perhaps translated as a *set of networks* in English) is in its infancy. Mattila and Uusikylä (1999), in turn, argue that network research is characterised by metaphors. Instead of taking a strictly analytic approach, researchers use broad definitions that are metaphoric in nature. They admit that this is understandable because network is a complicated and difficult concept. (In their book [Mattila & Uusikylä 1999] they consider network analysis as a tool for social research which is, they claim, a more appropriate way to approach network research.) Tammilehto (1999) continues with the notion that the main field of theoretical consideration has so far been economics, but other disciplines are emerging with their own approaches which makes the situation complex. I have concentrated in my brief review of writings about networks mainly on education rather than economics, while not forgetting the wider theoretical perspectives which van Dijk and Castells provide. Diverse approaches to networks in education are distinguishable in these writings. 1) First, we can see how education is organised with the help of networks, for example in relation to work places. 2) Second, we can think about a network as an infrastructure for its users' educational activities. 3) Third, a network provides a way to relate knowledge to the studying process. 4) Further, we can treat it as a dimension or a space, typically, cyberspace. 5) Finally, it can be regarded just as a web of relationships between a number of participants. None of these approaches is a comprehensive, and there are fur-

ther theoretical possibilities. In any case, Tammilehto's (1999, 32–36) words about incoherence in theoretical considerations of networks also seem to hold also in the field of education.

In this context, attention should also be given to a feature that is close to the network concept. This is *networking*, in Finnish *verkottuminen* (verkostuminen, verkostoituminen). When we talk about networking we are also talking about network. I have not found a complete analysis of definitions of *networking*, neither in English nor in Finnish. This is a fast developing field and new concepts and new definitions of old concepts emerge constantly. In Finnish discussions I have noticed at least three different uses for *networking*. First, it refers to access to networks, mainly to the Internet. When people say: 'Finnish schools are networking', they mean that they are gaining access to the Internet. In other words, they are equipped with computers, modems and functional software. A second use is that which I have adapted in this chapter. Schools are establishing inter-institutional networks. A third strand is perhaps a little less obvious. Networking can also refer to a situation of disorganisation in which a solid entity breaks up into more or less autonomous units, which in turn are linked with each other (as well as, perhaps, with outside partners). I do not claim that this modest analysis is exhaustive, but it has so far met the needs of my research.

Inter-institutional electronic networks of schools

Co-operation between separate schools is nothing new, especially in rural areas where they have been collaborating with each other in order to gain mutual benefit and reduce costs. Small schools all over the world have traditionally attempted to offset the disadvantages caused by their size by forming consortiums. These are called complexes (India), nucleos (Latin America) or, most commonly, clusters (Bray 1989, 53). The reason for forming clusters include economic (sharing resources), pedagogical (staff development and curriculum improvement), administrative and political (for example stimulating local involvement and reducing inequalities by reducing the disparities in performance among schools) (Wheeler & al. 1992, 200). The current opportunities that developments in communication and information technologies provide have given increased potential to the networks. Clusters have been an almost non-existent phenomenon in Finland, while electronic school networks seem increasingly to interest schools, educational authorities and

decision makers at the local level. The potential of new technologies has evidently opened up new possibilities for organising the delivery of education.

I favour the concept *inter-insitutional electronic network of schools* (Kynäslahti & Stevens 1996). These words express the main thoughts behind a how *network of schools* is understood in my research. Schools, other educational institutions, other organisations, possibly companies, and individual experts are linked together through of information and communication technologies. The raison d'être of networks of schools is to enhance possibilities of quality education. A network supports the organising of education through the sharing of resources and enhances its quality by mediating competent teaching and expert knowledge. The body of a network of schools may be flexible including a varying number of participants for different purposes at different times. Accordingly, a network may sometimes consist of only two participants, while each of them may at some other moment collaborate with a third partner. Referring back to van Dijk's definition about connection between at least three elements, *connection* is interpreted in a broad sense here.

The literature on education has plenty of examples of school networks which more or less meet my definition. Nor is there a lack of conference presentations which describe various ways in which schools have started to collaborate with each other, or with other kinds of educational institutions, in the mode of an electronic network. [1]

I will take a brief look at the reality of what is going on in Finland regarding networks of schools. The Kilpisjärvi project is one example of a project in which schools establish continuing relationships of co-operation between each other, realised with the use of information and communication technologies. The UTOPIA (Tella 1994b) project is another example of collaboration between schools. The special character of this project was that collaboration took place according to the teachers' interests. It was the teachers who took the initiative and who decided about the forms of collaboration. Other pioneer projects include a school network around Jyväskylä and another in the Turku archipelago. 'The Archipelago Distance Education Project' connects schools on some islands of the archipelago around Turku with the teacher-training school at Turku University. Six schools have been involved in the project [http://opal.utu.fi/projektit/telematiikka]. The special need for distance education in this district arises because of the periods of isolation in spring and autumn when difficult ice conditions hinder travel between islands and the mainland. Further, the aim of this project is to enrich the curricula of the small schools involved in the networking by providing optional subjects and courses for pupils and, to some extent, to adults as well.

Subjects which have been available in the network include foreign languages such as German and French and both domestic languages: Finnish and Swedish. There is ongoing an research and development project under the title 'Pedanet' [http://www.peda.net] in central Finland aimed at linking several educational institutions. One of the principles of this undertaking is to enhance geographical and educational equality based on the 'Diversification of Education' (Kyläkoulujen verkottuminen ja opetuksen monipuolistaminen), 'A Netschool to Enhance the Selection of Optional Subjects' (Verkostokoulu valinnaisuuden monipuolistajana), and 'The Development of Foreign Language Teaching in the Elementary School' (Ala-asteen kielenopetuksen kehittäminen) projects. The village school network covers about eight schools in four municipalities in the central Finland. The aim of networking is to enhance the quality of education in sparsely populated areas by using potentiality information and communication technologies provide, including inter-institutional networking. The netschool project have rather similar aims. The project tries to bring together resources of the often small educational institutions of Northern Central Finland by networking and co-operation, as well as to enhance co-operation between work and education. The development of foreign languages in the Pedanet includes education in German shared between two elementary schools, the Jurvansalo school and the Niinilahti school in the Viitasaari municipality. In the Kajaani region, in the middle of Finland, there has emerged a large undertaking to develop this sparsely-populated area: the KYTKE 2005 Project. One of the aims of KYTKE 2005 is to establish a network between the teacher-training school of Oulu Univerisity in Kajaani and schools around the local area. DINE consists of a network of several educational institutions in Eastern Finland near the town of Mikkeli. According to the DINE web pages [http://www.mikkelinamk.fi/~dine/laita.htm], the number of participant schools and open education units is about 150. There are also some elementary schools involved equipped with computers and video-conference technology. For example the small school of Olkkola village in Mikkelin maalaiskunta [http://www.mikkelinmlk.fi/olkkola/] has used its equipment to network with other schools, including the Parkkila school and the teacher-training school of the University of Joensuu in Savonlinna. There have been common lessons between these schools. An interesting feature of DINE is a market place with the name MoniTori. It is an electronic market place for flows of education. Schools and other educational institutions can buy, sell or exchange education on the MoniTori web pages. They can also make proposals to establish co-operation and to network with each other.

The above examples indicate that inter-institutional networking is going on in schools in rural areas of Finland. According to the vision of the Ministry of Education, this kind of networking will spread rapidly in sparsely populated areas during 2000 to 2004 (Ministry of Education 1999, 25). Networks of this kind thus seem destined to become an essential educational feature in those areas.

Foreign literature also describes the role of small schools as forerunners of networks of schools. I will give some examples. Oliver and Wilson report projects in Western Australia in which four schooling regions in rural areas have used information and communication technologies in education according to their diverse needs. In the Pilbara region the needs concerned curriculum offerings in languages other than English. Information and communication technologies were used in the Geraldton region to support curriculum delivery in mathematics, English and social studies in a cluster of schools. In the Kimberley and the Kalgoorlie regions the main targets were to increase the number of students completing 12 years of education, to make it possible for students to interact with peers from differing cultural and socio-economic backgrounds, and to lessen the educational inequality between rural and metropolitan areas. (Oliver & Wilson, 1995). These Australian projects are interesting examples of how communication and information technologies have been harnessed to meet local needs which varied in different schooling regions. The authors argue that '[I]n the local context, telematics showed itself to be an ideal application of technology in the response to an urgent educational problem' (Olivier & Wilson, 1995, p. 8). In another Australian research project, Gray and O'Grady (1993) report the TeleLearning project in rural areas of Queensland where 23 secondary schools were linked together using audioconferencing complemented with faxing, data display panels and computer software. The aim of the project was to provide expanded curriculum options for pupils in subjects ranging from Japanese Language studies to Agricultural Science. According to the authors, the project has been successful resulting in improved teaching and learning in these rural schools. Ken Stevens carried out remarkable research in the field of communication and information technologies in rural settings. He reports on networks of schools in New Zealand where small rural schools have been linked together in order to overcome the difficulties of school size, and to reduce costs (Stevens, 1994b).

One of the main ideas of school networks is the interactive sharing of expertise and resources. Obviously, this does not always occur in an interactive way, but sometimes rather involves the sharing of the expertise of one

partner among the others. Van Dijk (1999, 28–31) calls this kind of model ‘distribution network’, a point-multipoint network. My interest here concerns switching networks (van Dijk 1999, 28–31) in the mode of inter-institutional networks, in which the role of the partners is more interactive than in the ‘delivery model’. This means that each partner, or most of them, act as both providers and consumers of expertise. The competency of one partner is mediated to other counterparts to benefit from. It is typical of a network that items which are exchanged circulate. As a result, collaboration between two partners may benefit only one counterpart, while the other counterpart benefits from co-operation with a third party in the network. Lehtinen and Palonen (1997) characterise this principle with the terms contract and negotiation. In the school context, this expertise does not necessarily refer to something very special, but it deals with knowledge of subjects which are taught in school. In Finland, for example, the teaching of foreign languages is a good example of mediating expertise through a school network. This kind of organising of education may nourish specialisation in the future. Schools are able to concentrate on their special field if they can trust to the supply of a network in those areas in which their resources are poor, which is a typical feature of networks in general (Tammilehto 1999, 35).

It might be expected that when the partners are equal to each other in size, location and other features which have impact on their potential resources, the network is more interactive than in cases in which the differences are big. As far as school is considered, Stevens has voiced his concern whether big schools will manage at all to network with other schools (Stevens 1994b). The same kind of doubts have been expressed in post-Fordist discourse on education. However, on the subject of post-Fordism, Kumar argues that federations of small partners and big partners tend to be the most successful (Kumar 1995, 44–47). A network may be a composition of schools with distinct characteristics. As mentioned in the previous chapter, encounters in the flow (translocal) of education are haphazard. In this context, distinct partners may find each other and start mutual collaboration in order to serve their needs and interests, whatever those interests are and however much they vary from one partner to another. A network of schools could entail the creation of border crossings. Geographical, cultural, social and educational boundaries can be crossed. The net may involve small schools, big schools, rural schools and urban schools. Furthermore, different kinds of educational institutions, such as schools and universities, are able to collaborate with each other. The Kilpisjärvi project is one example of this. Collabo-

ration of this kind involves elements that have both integrating and fragmenting implications. This is an issue which I will discuss in the following.

Integration and fragmentation in networks of schools

Traditionally a school has been a rather solid entity. This has been the case even more with small schools. There is a school building, a school yard, a piece of land which is regarded as the school area often surrounded by a fence, and so on. Accordingly we can see with our own eyes a school as a physical unit. It also usually works in a rather coherent way. There are common goals, rules and customs. Schools are also places for social interaction creating a feeling of unity. Pupils get to know, or at least recognise, each other in a school yard. The teachers room may be a home for a community which feels togetherness both at the professional and the personal level. All in all, in a school everybody is involved in each other's business in one way or another within a restricted physical area.

Schools networking creates consortia in which collaboration leads to organisational integration where it is difficult to outline the geographical, educational and administrative boundaries (Kynäslahti & Stevens 1996). Furthermore, in networks pupils and teachers become members of several schools. It is no longer simple to define the staff of a school or to determine the number of pupils. The drawing of administrative boundaries is more complicated. A small school, for example, is no longer a small school but a composition of educational activities located physically in a building, and simultaneously it is a part, or more precisely several parts, of greater collaborative educational performance. Similarly, our perceptions of the nature of the periphery and the centre are changing. The location and size of a school do not necessarily determine its capabilities and resources for the delivery of quality education.

Integration may be *vertical* or *horizontal*. One of the ongoing processes during the last twenty or so years has been the vertical disintegration of organisational structures. Vertical disintegration can be understood as a process in which, 'instead of that producing as much as is possible within the single organisation (and hence endeavouring to be vertically integrated), there is trend towards contracting with outsiders' (Webster 1995, 148). Rumble (1995b) speaks about vertical de-integration of distance education. He refers to Moran and Mugridge (1993) who have investigated collaboration in distance education. Rumble predicted that inter-institutional collaboration

through the use of information and communication technologies would become central to distance education institutions which, in turn, inevitable leads to the fragmentation of educational organisations. This is what I call vertical fragmentation. In collaboration networks, participants have to pay attention to each others' local educational needs and interests which modifies the educational activities of the network (Rumble 1995b, 35). That part of an educational organisation which takes part in such a network becomes influenced by these outside needs and interests which cause some differentiation from the entire organisational body. Horizontal integration suggests the use of outside resources. When we speak of inter-institutional networking in schools we are speaking about horizontal integration.

Networking becomes an essential element in the everyday life of participant schools. It may regulate the curricula, planning, timetabling and evaluation, for example. From the perspective of an individual school, it affects a variety of practical matters in organising education. A school that engages in collaboration with other schools cannot neglect this even when its own interests are opposite to the interests of the network. Despite the practical questions concerning how to organise the education in the network, the collaboration between different schools also concerns pedagogical matters which may result in juxtapositioning and possible conflict between holder of different pedagogical views.

It may be inferred from the previous paragraph that the development towards integrated consortia in school networks includes certain aspects of fragmentation, which I call vertical fragmentation. This is synonymous with vertical disintegration which I mentioned above. A school may be a partner in several networks depending on its needs and interests. These needs do not necessarily concern the whole school however. On the other hand, different parts of the school, mostly different class levels, have distinct needs. This distinct diversity in interests could mean that classes in a school network with different counterparts. The actual physical school environment is common to all members of the school community, but the pupils share distinct networked educational environments with pupils and teachers in other schools, and perhaps with people in other institutions of expertise, such as universities. These pupils operate during their school days in networked environments which they share with people from different environments and walks of life. They have their own classmates and teachers in the nets. Teachers, on the other hand, find colleagues through networking with whom they might engage very intensive and useful collaboration. These networked classrooms and teacher communities develop their own culture, their own history, their own world. A

school which is involved in networks of schools becomes somehow fragmented between 'physical personnel' and 'physical pupils', and 'networked personnel' and 'networked classes of pupils'. These counterparts, perhaps, never meet each other as an entity. It is difficult to determine the number of teachers in such a school. Is it the teachers who can be found physically in the school building, or does it include those who regularly teach, in the flesh or through the net, there? The same question also arises with pupils (and parents). However, physical presence has not lost it significance. Teachers and pupils meet each other face-to-face in the course of school days creating together a shared physical community. In addition to this, the teachers and pupils who are involved in networks share another kind of school with their net colleagues and classmates. These teacher colleagues do not chatter in the coffee room with other teachers in the school, neither do these net classmates play with other pupils in the school yard.

Replacing the monolithic school is a fragmented composition in which the parts are connected to the outside world in various and different ways. Another way of saying this is that a school is present in different ways on different occasions. It still embodies the education that is located in its physical settings, but some of its performance resides in the interaction between the participants in networks of schools. Schools create new relationships with other schools or other educational institutions, and in this way they cross the traditional organisational borders of the school system. Organisational fragmentation is also visible in the organisation of every day school work. The school network lives its own life. This life cuts a slice from the salami of a school—a fragment.

Further speculation on this issue suggests a situation in which both vertical fragmentation and horizontal integration develop so far that the inter-institutional connections are superior to the intra-institutional. In this kind of vision of disorganisation we can speak about 'hyper integration' and 'hyper fragmentation'. I do not, see such a development as very probable in the context of school networks, however but it could be a logical consequence. This kind of question has been under discussion for years in the field of distance education. I will turn my attention in that direction in the following.

Networks of schools from the point of view of distance education with a post-Fordist nuance

The shift towards networked education has aroused discussion among distance educators. Although this discussion concerns distance education, it has some relevance to the context of compulsory education. This is so because: 1) inter-institutional networking among schools has not yet got wide theoretical attention and, thus, we must borrow theoretical elements from the field of distance education and 2) as several discussants claim (e.g. Garrison & Anderson 1999), distance education and traditional education are approaching each other. Some integration of their theoretical frameworks may therefore be useful. The perspective that I will take is a combination of a number of issue discussed in this volume. It concerns the use of information and communication technologies in education, flows of education, and the inter-institutional networking of educational organisations.

Garrison argues that distance education institutions reflect the world-view which is promoted by technology. In distance education:

> The dominant world-view … is that of industrial model of teaching and learning, comprising mass production and independent study. (Garrison 1997, 3)

One manifestation of this is the delivery of education through the mass media. It is easy to track Peters' ideas of industrialisation in teaching through the words of Garrison. I will come back to this later. Garrison continues continues:

> On the other hand, an emerging world-view of distance education incorporates highly interactive communications technology along with ideal of both personalised and collaborative learning. (Garrison 1997, 3)

Garrison calls this world-view of distance education the post-industrial model of distance education. Later with Anderson, he speaks about 'little distance education' and 'big distance education' (Garrison & Anderson 1999). Little distance education is an emerging model which includes characteristics of both face-to-face instruction and distance education, and which is built upon a networked learning environment, using videoconferencing, for example. Big distance education, in turn, deals with the broadcasting technology of television and large-scale printed correspondence material. Accordingly, Garrison and Anderson's 'little distance education' is one example of the increasing confluence of traditional education and distance education.

Post-industrial distance education, naturally, follows the era of the industrial approach to distance education which reached its peak in the late 1980s. Industrialisation of teaching originates from Peter's theoretical considerations of the 1960s. Briefly, Peters suggests that conventional group-based education is a pre-industrial form of education, while distance education is characterised by industrialism. He makes his didactical analysis through a comparison with industrial production. Rationalisation, the division of labour, mechanisation, the assembly line, mass production, planning and preparation, standardisation, functional change, and objectification and monopolisation are the terms he uses. His message is that, by taking on board the principles of industrial production, distance educators are able to deliver education to thousands of students and to meet the great variety of educational needs that students have. This is the task that distance education has to fulfil and the industrialisation of teaching is of help in this duty. In fact, Peters claims that industrialisation is inherent in distance education. It is education for the masses, i.e. education for *Gesellschaft* not merely for *Gemeinschaft*. Mass production, the division of labour, the assembly line and so on indicate a sort of education factory, a huge institution situated in some place from where products are delivered throughout a country or all over the world; 'big distance education', as Garrison and Anderson (1999) would call it. Accordingly, the teacher is a part of a complicated teaching-learning system which is organised like an industrial process.

Rumble, among others, points out that distance education is not the only form of industrialised education. In doing this he challenges Peters' (1983, 95–96; 1993, 39) argument that class-based and group-based education, i.e. traditional education, advocates pre-industrial education. Referring to a number of academic writers, Rumble concludes that 'there is plenty of evidence that 'traditional' classroom and group-based education is itself industrialised' (Rumble 1995a, 19).

Rumble's comments refer to a theoretical debate which has been taking place mostly among Australian and British educationalists. This debate has brought the concept of post-Fordism onto the agenda, and the journals 'Open Education' and 'Distance Education' have been the main forums. The ideas of post-Fordism, as treated by the writers in these two journals, represents another contribution to the theory of distance education which may hold some promise for research on inter-institutional networks of schools. It is worth asking whether post-Fordism provides a reasonable framework in which to investigate today's and tomorrows' distance education, and education in general. Neglect of 'the conceptual framework provided by the debate

of post-Fordism may lead to a real opportunity being lost' (Campion 1996, 45). I argue that this framework is also useful in the context of school networks. Whatever is the value of post-Fordism to theory building in education or distance education, the debate surrounding it involves interesting argumentation and assumptions about educational change and restructuring which are associated with networks of schools.

I will now turn to the subject of school, in terms of Fordism and post-Fordism. Arnold encourages us to consider the possible relationship between industrialisation and school as well as the Fordist character of school. It has been argued that:

> the traditional school, based around teacher, a classroom, a course, and groups of 25 children, is characterized as a Fordist, Victorian era "black-smoke" factory— rigid, inflexible, inefficient, bureaucratic, supporting production line processes (Arnold 1996, 231).

Indeed, school has been described as a heavily Fordist institution which mirrors industrial society.

> The classroom emerged, and with it education become a formalised system of production which could be monitored, maintained and controlled in the same way as the factory. Desks were arranged in rows, continuous and regular attendance was encouraged, as was a strict obedience to authority. ... industrial education was no only more efficient, it inculcated in children the new concepts of time, work and lifestyle they needed in their working life. ... By World War I, a full complement of Fordist techniques of continuous production had been introduced. (Renner 1995, 286; referring to Hamilton 1990)

According to some authors I referee in this chapter, distance education represents an ongoing shift towards post-Fordism. What does this imply about school? More precisely, what does it imply about school which is becoming networked and which is increasingly using the same kind of modes of delivery of education that are used in distance education? Farnes believes in downward transfer: 'The area of education where everyone participates, namely compulsory schooling, is now [about 1993] organised on Fordist lines. Perhaps we can look forward to a post-Fordist transformation towards flexible mixed mode methods and autonomous learning as the success of mass higher and continuing education works its way down the educational system.' (Farnes 1993, 18). Mixed modes of delivery in both traditional and distance education will become all the more common. This kind of development blurs boarders between the two, as mentioned above. Networks of

schools is also an example of this kind of blurring. The delivery of education in school networks consists of both 'in-local-physical-school' and 'outside-of-nonlocal-virtual-school' education. It is mixed-mode education in itself.

What, then, does post-Fordism mean in the context of distance education? As two of the main advocates, Campion and Renner describe it in terms of three variables: 1) product variety, 2) process innovation and 3) labour responsibility. This has been elaborated in a theoretical framework which also introduces a concept, neo-Fordims, as follows:

> **The Fordist strategy** for distance education suggested a fully-centralised, single-mode, national distance education provider, gaining greater economies of scale by offering courses to a mass market, thereby justifying a greater investment in more expensive course materials. Rationalisation of this kind allows for increased administrative control and a more extreme division of labour as the production process is fragments into an increasing number of component tasks.
>
> **The neo-Fordist strategy** extends the Fordist system by allowing much higher levels of flexibility and diversity, and by combining low volumes with high level of product and process innovation. However, neo-Fordist production retains a highly-centralised Fordist approach to labour organisation and control. A neo-Fordist expression of distance education might well be represented by centrally-controlled, perhaps multinational, yet locally-administered model of distance education. By also using self-instructional course materials for teaching on-campus students it has the potential to massively reduce costs across the whole student population. However, and, most importantly, a neo-Fordist manifestation of distance education bears a strong relationship to that of the Fordist route insomuch as it has an overall deskilling effect on academic staff.
>
> **The post-Fordist strategy** is characterised by high levels of all three variables: product innovation, process variability and labour responsibility. It is opposed to neo-Fordism and to Fordism, dispending with Taylorist division of labour and rigid managerial control and deliberately fostering a skilled and responsible workforce. A post-Fordist model of distance education would be decentralised and retain integration between the study modes. Academic staff would, however, retain autonomous control of their administered courses, and in so doing, would be able rapidly to adjust course curriculum and delivery to the changing needs of

> students. (Campion 1995, 194; based on Campion and Renner 1992, 10–11; emphasising in the original)

From the point of view of networks of schools, the potential of the above analysis to investigate the relationship between local education (education which is taught by local teachers) and that which is mediated through others, may be strong. It also concerns the position of academic staff. In a school which participates in a network or networks an essential part of the education may be organised by the other network participants. A large proportion of the teaching comes from outside the school. Naturally, the question of the position of local teachers then arises. We face the issue of competency of local teachers. One of the main points of the school network is the sharing of expertise. We could imagine a situation in which a school gains special knowledge outside of its boundaries by means of information and communication technologies. What, then, is the role of local teachers when a substantial proportion of the education is organised with the help of external specialists? Does it bring about a reduction in the needs for the skills of local teachers and, thus, enhance the neo-Fordist aspect of 'de-skilled academic staff'? When Tiffin and Rajasingham (1995) foresaw the development of the virtual classroom they envisioned a physical school devoted to local traditions and the training of skills. Part of the teaching could be organised by local elderly people. A virtual part of that school would then be responsible for education with higher cognitive aims.

In distance education, according to Renner (1995, 289): 'a core of specialised and highly skilled curriculum developers would be supported by a larger pool of dedicated tutor-grade staff, responsible for delivery and student liaison. The division of labour would thus be a characteristic feature, supported by numerical labour flexibility achieved by 'hiring and firing' 'peripheral workers.'. Although school teachers often have permanent employment status, the vision of peripheral workers, described by Renner and Campion, is not a myth. Arnold (1996) speaks about high-tech, post-Fordist school. This is an institution in which *high-tech* refers to the important role of information and communication technologies in the delivery of the curriculum, and in which *post-Fordist*, in turn, refers to the nature of systemic, administrative, and staffing changes. In Arnold's vision, education will be organised with the help of self-employed or contract specialists and local facilitators.

> At the school level, the school-managers, curricularists, and perhaps a core of professionally trained and experienced teachers, coordinate the activities of a

> larger number of assistant teachers, teacher aids, technical and material support staff, and casual or guest teachers, who will be drawn from a variety of backgrounds, and may or may not have formal teaching qualifications or experience. (Arnold 1996, 235)

This is one possible picture of networks of schools. The rhetoric of distance education is also to be found in the quotation. Arnold speaks about post-Fordism, but theorists of distance education, including Campion and Renner, would obviously regard his vision as neo-Fordist.

Flexibility and changing situations are typical of networks. Expertise that can be mediated through a network varies from school year to school year and the consumers of this expertise must, of course, take these changes into account. As a result, there might also be a need for flexibility at the school level to respond to the changes in the net with employing teachers for short periods at a local level. Drawing these strands together, gives a picture which mirrors Campion and Renner's neo-Fordist paradigm of educational organisations. According to this view, the use of external specialists, through information and communication technologies, in education reduces needs for highly-skilled staff at the local level. The lively and whimsical character of school networks, in turn, implies the need for a flexible teacher-employment policy in schools under the 'hiring and firing' principle. The role of the teacher in new learning environments which use information and communication technologies has been eagerly discussed lately in the Finnish educational forum (e.g. Horila 1999; Kynäslahti & Wager 1999). The debate which has occurred around post-Fordism in distance education provides one perspective on the possible changes that the establishment of inter-institutional electronic networks of schools may bring about.

Terminological considerations in distance education

I will end this chapter by discussing the concept of distance education. So far, I have only briefly referred to the Kilpisjärvi project. Chapters 1 to 4 of this work are theoretical in nature, but I cannot discuss the concept of distance education without moving closer to the actual project that I have investigated. This is the case because the context of the Kilpisjärvi project was not a typical distance education context. I other words, the project took place at the school level.

From the very beginning the Kilpisjärvi project was officially called a *distance education* project. In other words, it has been characterised in various kinds of documents and reports as an educational activity that refers to distance education. As a researcher, I inherited distance education, in a way. A fundamental feature of the Kilpisjärvi project, from the perspective of distance education, is that it concerns school. Expressions such as 'etäopetus koulussa' (distance education in school) (Salminen 1997) were used to put the project into a context. Other projects in Finnish schools which fostered distance education in their terminology also emerged in the mid-1990s. These included 'Saariston etäopetusprojekti' (The Distance Education Project of the Archipelago) and 'Etäopetuskokeilu' (A Distance Education Experiment) of the University of Jyväskylä and the Korpilahti Municipality. Common to all these three projects was that education was mediated from outside to enhance quality. It seems that this 'education from outside' aspect came to be called distance education, perhaps without those who used the term exactly knowing what it exactly meant as a concept.

Rönkä and Salminen (1996) throw light on the background of the project from the perspective of distance education. As they comment, in Finland distance education has its origins in the traditions of the correspondence school. Now, in the contexts of projects such as the Kilpisjärvi project, we are back in school again. How have we come to this? Rönkä and Salminen identified five elements which have had impact on the emergence of what in this research is called distance education at the school level. Their analysis concerns the situation at the beginning of the project, in 1994. 1) First, there had been strong development of open-learning programmes in vocational education and training. This development suggested transfer to the school level. 2) Second, on the technical side, Finland had a well-developed infrastructure of telecommunications which enabled the use of videoconferencing. Here was a tool to be taken into use and benefit in the organisation of education. 3) Third, Rönkä and Salminen refer to the geographical and demographic conditions of Finland. It is a country with a large area, a sparse population and small communities spread all over its surface. 4) Fourth, the economic depression at the beginning of 1990s caused a wave of closing down of small schools in Finland. This called for development work to enable small schools to survive. 5) Fifth, the national educational policy favoured intensive use of information and communication technologies in education. It was 'in'. (Rönkä & Salminen 1996)

These themes are also discussed elsewhere in this publication. Compressed into five elements, Rönkä and Salminen's analysis may appear some-

what incoherent. However, it reveals how the new mode of education, education from the outside mediated with information and communication technologies, came to schools. This new kind of education became to be called distance education.

Another way in which the Kilpisjärvi project approached the concept of distance education was a pedagogical one. The preliminary report (Husu & al. 1994) treated distance education from the theoretical point of view of Keegan's classification. Keegan (1990) identified three categories of theories: 1) independence and autonomy, 2) industrialisation of teaching, and 3) interaction and communication. According to the report, industrialisation of teaching has hardly anything to do with the teaching processes of the Kilpisjärvi project, but it may be useful in investigating the organisation of the education, which has been my aim when I have discussed inter-institutional electronic networks of schools. Further, as far as the first leg of the project is concerned, interaction and communication might prove to be a useful category. As the pages of this publication reveal, interaction and communication emerge repeatedly in my research, for example in the idea of translocality. As far as to independence and autonomy were concerned, the report identified some problems at the school level. School is not a home for these elements in the same way as it may be for distance education. Again, my research mirrors the considerations of that preliminary theoretical work: independence and autonomy are not the basic elements.

The preliminary report also coined the concept of classroom focused distance education (Husu & al. 1994). The term itself was a translation from the Finnish 'luokkamuotoinen etäopetus'. The basic idea, simply, is that when education is mediated to the classroom from outside (through videoconferencing in the Kilpisjärvi case), the outcome involves elements of both classroom education and distance education. Classroom focused distance education was defined in the following way.

> In classroom focused distance education a teacher and pupils, who are physically separated from each other, communicate with the help of telematic communication technologies. (Husu & al 1994, 17; my translation)

This definition is somewhat inaccurate. It does not specify whether all the participants are located at separate sites or whether it is just the teacher who is separate from the pupils, for example. The idea, however, is that there is a group (or several groups) of pupils who are taught by a teacher through information and communication technologies, for example videoconferencing.

In addition, there may be another group of pupils in the same place as the teacher, as was mainly the case in the Kilpisjärvi project. However, I find some problems, too, in this more accurate definition, problems which were not current in 1994 when the concept of classroom focused distance education was coined. Does the concept mean that pupils have to be in a real classroom? Where does this leave network-based (virtual) classrooms built up using groupware? Where does mixed-mode education in which only a part of education bases on face-to-face classroom periods fit in?

I have not been eager to use the concept of classroom focused distance education lately. The main idea, rapprochement between classroom education and distance education, is valid. Distance education (and open learning) and traditional classroom-based education have obviously approached each other through the use of information and communication technologies which enable group-based instruction in distance education, as well as through the intensive use of information and communication technologies in classrooms. However, there was not sufficient theoretical follow-up from what was presented at the beginning of the project. I have shifted my attention from the very basics of the theory of distance education to virtual classroom and the network. Thus the theoretical framework of my research deals more with these two themes and their wider background than with theoretical questions of distance education (and open learning) itself.

Conclusion

I started this chapter by giving some broad social views which emphasised the importance of networks in the present situation of societies and in tomorrow's world. This perspective continued the discussion on the space of flows, for example, that began already in the first chapter. After this wide-ranging opening I focused on networks of education by looking at definitions of networks in educational, mainly Finnish, literature. The result was the emergence of five different approaches to networks. This analysis could be regarded as an introductory classification. The inter-institutional electronic network is one of the forms, and it is this type of network that my research concerns. Thus there was a need for closer consideration of the concept. I also took a look at educational reality by giving some examples of inter-institutional networks of schools. Networking brings about changes to schools. I contemplated these changes from the perspective of horizontal integration and vertical fragmentation. In the search for the theoretical background of

networks of schools, I made an effort to find out what theories of distance education could offer a researcher of school networks. This led to discussions of post-Fordism. Finally I clarified the definition of distance education in my research, a concept which I used frequently when I discussed post-Fordism. I pointed out that I have faced some problems when I have used the concept in the context of the Kilpisjärvi project.

Note

[1] It is neither possible nor reasonable to provide an exhaustive list of this literature here. I will, however, take some examples of research that has been done regarding networks of schools.

CHAPTER 3

The Virtual Classroom, Virtuality and the Virtual Community

Introduction

In the first chapter of this publication I suggested that we could imagine that there is a dimension of educational flow which I call eduscape. It is a deterritorialised transnational/translocal sphere of education divorced from the ground, terra firma. It is this dimension in which virtual classrooms and similar phenomena flourish. In this chapter I will investigate the concepts of the virtual classroom and the virtual school, and of virtuality in general in its various forms, including virtual communities.

The term *virtual* is frequently used nowadays. In education we speak about the virtual school, the virtual classroom and the virtual university. It is also used in several other fields. Virtual has become the usual term referring to the use of information and communication technology. On the other hand, virtual is a common English word used in everyday speech. (For the Finnish discussion on *virtuaalinen* see e.g. Tella 1992b; Kynäslahti 1997.) This is something we should keep in mind because there might be a danger of mystifying in the context of environments which information and communication technologies create. What, then, lies behind the word virtual? There must be some phenomenon which virtual indicates. This is why I am beginning this chapter by investigating the concept of virtuality—a task which largely remains undone. When I started my research about five years ago, I checked to see if my respected New Webster Dictionary, published in 1969, would recognise the word virtuality. No, it did not. Nor did the latest edition of this dictionary that I could find. Indeed, the concept of virtuality was virtually unknown. Nowadays it has been given more attention and the word itself has been adopted in academic writing, as the references for this chapter connote. In the following I will do my share of exploring this concept. My approach may be somewhat eclectic. At the risk of being incoherent, I will take a wide approach on the grounds of the pioneer status that theories of virtuality in the context of the virtual classroom still have.

Before I continue, I should say something about the terminology. We are used to terms such as virtual environments, virtual worlds and virtual reality, in the literature on virtuality. Michael Heim informs us that *virtual environments* is a term which was coined by researchers in MIT (Massachusetts Institute of Technology) in the early 1990s. They used the term in sense as what is also known as *Virtual Reality*, the phrase of artist, composer and computing pioneer Jaron Lanier. *Virtual worlds*, in turn, comes from researchers in the University of Washington in Seattle (cf. Heim 1995; Featherstone & Burrows 1995). These terms are only some examples of the vocabulary of virtuality in the English-speaking world. On the other hand, writers who I will quote later seem rather easily confused between virtuality and virtual reality, taking these two terms as synonyms. As a result, virtuality and virtual reality may also overlap in my text although I will make every effort to maintain some distinction. I should also mention the terminology which refers to virtual social spaces. These I will investigate under the umbrella of *virtual communities*. Finally in this chapter, I will analyse the concept of the virtual classroom and the related vocabulary.

As suggested in the previous paragraph, the history and background of the current use of the term virtual seems to be based on technical considerations. When we say today that something is virtual, we assume that information and communication technologies are heavily involved in what we are talking about. Virtual also has a technical aura among distance educators. Erwin Wagner defines *virtual* as follows in his discussion of the virtual university:

> First [virtual] indicates the aspect of introducing a telematic network into the process and interaction of teaching and learning. ... Second it is highlighted that most or even all the communications on a campus may be replaced by electronic networks. Third the characteristic "virtual" encorporates a vision that no real campus as a separate organization will be needed at all ... Summing up one can easily see that "virtual" does not really define something very specific but describes a bundle of more or less different concepts as a metaphor to point out a trend in the change of the organization of academic teaching and learning. "Virtual" may be a transitory concept, until there will be reached more precise concepts, data and experience. (Wagner 1998, 333–334)

Perhaps Wagner is right in his vision of 'more precise concepts', but so far we are dealing with virtual. Thus, some further considerations may be appropriate here.

Virtuality

Although virtual environments today refer to advanced technology, and in that way they are a recent phenomenon, virtuality, of course, is nothing knew. Heim seeks its origins in the metaphysics of the Medieval Age, while some other authors go back to Plato's cave. Huhtamo claims that virtual reality is not just today's phenomenon but that there have been similar things almost every historical period (Huhtamo 1995, 31–32). He points to the churches of the baroque era which create a heavenly illusion, to panoramas and to stereoscopes. Simon Penny (1995) argues that virtual reality is strongly bound to western culture going back even before the industrial revolution. He continues Huhtamo's analysis of baroque churches which create a feeling of peeking into heaven while the physical building vanishes from the viewer's mind. Indeed, today's virtual phenomena seem to be only a part of virtuality. 'Instead of being a unique technical breakthrough virtual has come to appear as a cyclical (or perhaps spiral) recurring phenomenon, i.e. virtuality which is not bound to any technology or epoch.' (Huhtamo 1995, 32). Wood argues that virtuality is the buzzword of the 1990s, as complex and interesting as 'Nature' (Wood 1998, 4). For the past five years I have been trying to unravel the concept of virtuality in today's educational discussions, and I agree with Wood's statement. It is a complex word that were are dealing with here.

As a concept, virtuality includes two aspects which are somewhat contradictory. It refers both to the actual world and to possible worlds. On the one hand, it deals with illusion. We experience a virtual environment as if it were a real environment. We must have knowledge of a real environment in order to have an illusion of it. On the other hand, virtuality indicates something which differs from the actual world. In this sense it deals with possible worlds as well. Possible worlds suggest to us that the actual world we experience could be otherwise than it actually is. This aspect of virtuality, then, does not refer to the basic reality, but to something which is, more or less, different from the world we know. This duality creates a tension which makes research on virtuality the most interesting.

In the following, I will investigate virtuality from three points of view, all of which incorporate the previously-mentioned dualism between the actual and the possible. Later, I will further explore this relationship.

Illusion, or 'as if'

First I will approach virtuality from the perspective of 'as if real'. The virtual world could be regarded *as if* it were the actual world. We could speak about *illusion* here. A virtual environment creates an illusion of a real environment. This approach is clearly very near to the concept of *virtual real*ity. However, it does not only concern virtual reality, but it is a fundamental part of virtuality in all of its guises.

Keown (1998) reminds us that there is some moral aspect in the etymology of *virtual*. He pays attention to the relationship between *virtue* and *virtual*, the former including the sense of developing moral qualities. As soon as he stated this he rejected the moral aspect of virtual in today's usage. According to Keown, nowadays virtual has been appropriated by the natural sciences (for example optics) and computing. He concludes that when we move from virtue to virtual, 'the moral dimension of the term all but disappears to be replaced by a neutral scientific or technical one' (Keown, 1998, 77–78). Keown's words suggest that we have not only derived today's virtual from the natural sciences and computing, but that the present meaning of the term is characterised by those disciplines, as well. He defines virtual in the words of Shorter Oxford English Dictionary (apparently dictionaries have documented the history of virtual):

> Not physically existing but made by software to appear to do so from the point of view of the programme user (Keown 1998, 77)

The definition is clearly technology-based. In other words, an environment is built up, or an experience (hallucination) of reality is created with the use of information and communication technologies.

Woolley combines the technical background and the metaphysical character of *virtual*:

> 'Virtual' has a respectable pedigree as a technical term, going right back to the origins of modern sciences. It was used in optics at the beginning of the eighteenth century to describe the refracted or reflected image of an object. By the beginning of the nineteenth century, physicists were writing of a particle's 'virtual velocity' and 'virtual moment'. The word is still used in physics to describe the exotic behaviour of subatomic particles that appear so fleetingly they cannot be detected. It has come a long way from its original use as the adjectival form of 'virtue', in the days when virtue itself meant to have the power of God. Echoes of that early meaning however, survive in the extitable claims of virtual realists to have the power to create their own worlds. And it is appropri-

> ate that the word should resonate with a certain amount of divine significance, because the computing concept of 'virtual' is much more than a matter of mere technology. It means something that goes to the scientific heart of reality. (Woolley 1992, 60)

In Finland Reitmaa and his colleagues analysed virtual environments from a technological viewpoint. They speak about an environment which is: '[r]ealistic but not real. Not actually realised in the way that practise and effects imply' (Reitmaa et al. 1995; my translation). What is interesting is that in this kind of 'as if' situation, the elements which carry on the illusion become important. Those which refer to reality and which are reminiscent of a real situation thus become crucial. I will give a simple example. Huhtamo helps me here again: 'We can talk on the telephone in an intimate way as if we were in the same room with the person at other end of the wire.' (Huhtamo 1995, 94). On the telephone we do not foster silence, but we keep talking. It is talking which creates this illusion of togetherness, and it is talking that we emphasise. In general, we stress the components which help us to create the illusion of a real situation. To put it another way, virtuality rests on the elements which strengthen the illusion of reality.

Today's virtual classrooms are evidently created with intensive use of technology and thus the technical side is not at all irrelevant. However, when we try to comprehend the concept of the virtual classroom, this technical aspect does not help us sufficiently. It is more important to consider the virtual classroom as an environment in which studying is taking place; accordingly, 'a class*room*'. The idea of virtual community studies will help us here, I assume. My aim on the following pages is to try to get a better look at the core of virtual. So far, it is clear that virtual is something in essence or effect created with the help of technology.

Possible worlds

What does *possible worlds* mean in the context of virtuality? The answer is to be found in the history of modal philosophy. This source has been referred to by researchers of virtual reality (Heim 1995, Inkinen 2000). Heim, a philosopher of the virtual reality, argues that when we investigate the philosophical ground of virtual environments, we can go back to Duns Scotus' term *virtualiter*. (Duns Scotus was a philosopher who lived at the end of the 13th century in England, France and Germany [c.f. Bettoni 1978].) It is question of

possible worlds. Martin Kusch gives an understandable form to this. According to him, Scotus's model deals with the basically simple idea that we can imagine that our world might be otherwise than it actually is (Kusch 1988, 15). We can understand possible worlds in different ways. They might consist of the same elements as our real world. Instead of things being as they actually are, they could be some other way, but we could still recognise that other world. There are other interpretations, however. The real world is not necessarily the starting point, and we might imagine possible worlds which differ fundamentally from it (Kusch 1988, 39). Such possible worlds are something that we cannot imagine on the basis of our knowledge of the real world. Quéau leads us to back to virtuality here. He claims that virtuality leads a human being to an alternative reality which may be rational or irrational, logical or contradictory, physical or fantasy-based (Quéau 1995, 16).

When Himanen (1997) discusses the philosophy of virtuality he speaks about 'volition-reality'. We are able to transform the world which we sense around us to the kind of world that we want. We can do this by manipulating our senses with technology. When doing this, a person chooses his or her perspective or own view on the reality (Himanen 1997, 129). Further, in this world of desire we are able return to some particular occasion of reality and experience it again, and perhaps transform it. A person does not have only one life but several possible lives which he lives simultaneously (Himanen 1997, 133). Accordingly, we can build possible virtual worlds according to our own wishes and desires.

Dyson considers an issue which she calls 'aurality'. This refers to the terrain of sound, and this particular terrain, Dyson argues, is formed by concepts and metaphors that also appear within virtuality: 'Like virtuality, the phenomenal invisibility, multiplicity, and existential flux of sound challenges an understanding of the real based upon the visible, material, and enduring object.' (Dyson 1995, 29). Through technology (recording, digitalizing), sound becomes dislocated and fragmented. Digital technology, in turn, transforms it to zeros and ones for everyone to listen to any place at any time. It is the same with virtuality:

> The computer simulations found in VR [virtual reality] systems are no different—aural, visual, and tactile material simply becomes "information," data, signals within an electronic network, ready to be assembled and reassembled in any manner whatsoever in order to create an infinite array of audiophonic, imaginistic, and even perhaps tactile simulations.
>
> This movement towards objectification, delineation, and fragmentation subverts the "liberatory" space virtuality seems to offer—that is, the freedom to be

> anyone and anything anywhere. As if to deny this techno-metaphysical enclosure, the metaphors of virtuality—of cyborgs, cyberspaces and virtual realities—suggest the possibility of entering an inhabitable *space*. (Dyson 1995, 32)

The aspect of possible worlds is thus also present in Dyson's view. This is the liberatory aspect, as she puts it, 'to be anyone and anything anywhere'. It reflects what Himanen wrote concerning the possibility of re-living and altering ones life. Further, Dyson suggests that this virtual space can be entered only through a prosthetic body, i.e. a symbiosis of human and machine as well as the animate and inanimate. This notion refers both to cyborgs and to the relationship between the actual world and possible worlds, both of which I will consider later in this chapter.

Virtual as 'as good as'

In his inquiry into the philosophy of the Internet, Graham (1999) investigates the relationship between the virtual and 'the real thing', as he calls it. He analyses what the English word *virtual* means. When somebody says that something is a virtual certainty, it can be taken as certain to all intents and purposes, even though it is not so. Virtual, then:

> signals something not the same as, but as good as, the real thing, at least for certain purposes. (Graham 1999, 154)

The addition of 'for certain purposes' is an interesting one. Graham gives an example about being eaten by a tiger. I prefer to create an allusion which is somewhat closer to our everyday living: a (more or less fatal) accident at a nuclear power plant. When, by using technology, we are able to create a virtual accident, the result may be as good as a real accident for the purpose of finding out 'what it is like' (Graham 1999, 156) when such a accident occurs (which obviously is very useful for those people whose reactions are crucial when an accident really happens). The virtual is very like the actual experience. However, 'the real thing', i.e. a nuclear power plant accident, never happened. These considerations lead to the actual-virtual nexus.

The relationship between *actual* and *virtual*

I claimed above that there are different kinds of possible worlds which we can evaluate according to the degree to which they represent the world familiar to us or in how radical a way these worlds differ from the reality we recognise. We can also study virtuality using the *as if* criterion. The virtual world is experienced *as if* it were the real world. There is a certain contradiction between these two aspects: 1) virtuality reflecting a basic reality (an aspect of *as if*) and 2) virtuality dealing with possible worlds.

I will attempt to shed light on this problem by paying attention to the relationship between the actual world and possible worlds, which also reflects the relationship between the actual world and virtual environments. Authors advocating virtual environments, such as Heim (1990: 1995) and Penny (1996), find the fascination of virtuality in this special characteristic. Heim warns us to treat the virtual environment as it were a copy of our actual world. If we treat virtuality as a concept which includes references to both actual and possible worlds, we face the question of what is the relationship between these two. Modal philosophy may be of some help here with its consideration of the identity problem between the actual world and possible worlds. Kusch (1988, 40) wonders if a person can belong to several worlds. If even a tiny detail of a person were otherwise (in some other world), can we regard him or her as that person any more? On the other hand, we may think that a person can belong to several worlds, and thus he or she is not bound to only one world. In his mediating and the most elegant interpretation of this dilemma, Kusch turns to an alternative which considers essential properties. Although we cannot speak about an identity between different worlds, distinction between essential and unessential properties is valid. Although a person can belong only to one world, there might be a parallel person in another, possible world.

I will take an example at the grass-roots level. The creation of reality-like environments through information and communication technology involves simulation. Both artificial copies of the real world and fantastic surrealistic environments can be produced with simulation technologies. Simulation has been used in education for decades, and flight simulators and nuclear power plant training simulators are used for training, for instance. These apparatuses are complicated technical applications which create environments which imitate a real aeroplane or real nuclear power plant as far as possible. The aim behind the use of flight simulators is, of course, to be able to train pilots

in circumstances which correspond to the real situation, i.e. basic reality. A pilot flies a flight simulator as if it were a real plane. However, the aspect of possible worlds peeps out here, too. Actually, it does not just peep out, but is at the very core of the use of simulators in training. What is simulated are situations which are not possible, or which should not be possible, in the real world. McLellan (1996, 467) proposes that virtual environments, in general, hold promise for training of purposes when adequate training could not otherwise be given because of the risks to people or the environment. You cannot train operators of a nuclear power plant to react to accidental situations by causing one! Accordingly, training simulators are an interesting example of the interplay between *actual* and *possible*: on the one hand, the relationship between the simulated environment and basic reality should as close as possible, but on the other hand, the whole idea of simulators is to create a possible world.

Simon Penny speaks about second-phase simulation, which does not produce an identical copy but, rather deals with a construct. He points to the imitating of nature in art, claiming that there are several works in which nature does not mean a representation but the construct of an organism (Penny 1996, 191). Penny asks if it is the artist's aim to simulate a real being or to create a possible being (Penny 1996, 192). This takes us back to the essential properties Kusch talked about. We could replace simulation as if taken directly from the actual world by those which reflect the essential properties of what is being simulated. The result is still related to a basic reality, but at the same time it has new qualities which makes it different from the reality that is familiar to us.

Continuing along this theoretical path we reach the third stage of simulation in which the relation to reality keeps vanishing. Baudrillard's famous ideas about simulacrum could be regarded as the ultimate stage of this vanishing. According to Baudrillard, simulacrum 'bears no relation to any reality whatever', but it is 'its own pure simulation' (Baudrillard 1988, 170). Reality has been reconstructed in advance and thus it fades away as needless (Arppe 1988). Theorists of virtual geography have also investigated simulation as a theoretical dimension of virtuality. Mike Crang and his colleagues (1999) express their intention of breaking away from Baudrilliard's formulations and instead to treat simulation in a looser sense to sign the relationship between real and virtual. For them the virtual appears as the Other to the real. They also speak about the virtual as a *copy*, 'always striving towards but never quite achieving a mimetic replication of the real' (Crang & al. 1999, 6). Here the writers make a significant point. They remark that they do not see the vir-

tual as a poor substitute for real life, and they criticise the 'stigmatic stereotype' of chat-room users as miserable people alienated from real social life, for example. In another approach, the virtual could be considered a representation rather than copy. This aspect refers mostly to virtual reality. A third approach to the real-virtual relationship is to see virtual as an alternative. This refers to the concept of real virtualities, coined by Castells (1996). According to him, one aspect of the rise of the network society (see Chapter two) is the culture of real virtuality. Castells bases his ideas mainly on the media and the use of information and communication technologies in general. A new development in our era is that we can integrate written, oral and audio-visual dimensions of human communication in the same technical composition. Another typical feature has been the shift in media from mass communication to segmentation, customisation and individualisation, mirroring the wider social and cultural differentiation of our times. A special case here concerns those who actively use (i.e. who have the knowledge to use, who can afford to use) information and communication technology to interact in networks of self-selected communities. What is *real virtuality*, then? Castells remarks that all realities are communicated through symbols. 'When critics of electronic media argue that the new symbolic environment does not represent "reality", they implicitly refer to an absurdly primitive notion of "uncoded" real experience that never existed.' (Castells 1996, 372–373). His conclusion is worth quoting here in length:

> What is then a communication system that, in contrast to earlier experience, generates *real virtuality*? It is a system in which reality itself … is entirely captured, fully immersed in a virtual image setting, in the world of make believe, in which appearances are not just on the screen through which experience is communicated, but they become the experience. All messages of all kinds become enclosed in the medium, because the medium has become so comprehensive, so diversified, so malleable, that it absorbs in the same multimedia text the whole of human experience (Castells 1996, 373; emphasis original)

Crang et al. interpret Castells' ideas not as a real-virtual but as real-real relationship. Virtual, in this sense, is not actually real, but because of its capabilities to become real, it does so; a parallel, alternative real. It is clear, then, that whatever perspective we take on the theoretical background of virtuality, we come to the question of virtuality in relation to reality.

Perhaps it would be relevant at this point to give voice to a philosopher. Graham has debated the relationship between reality and virtual reality. He aims to restrict our speculations of possible worlds in the context of virtual-

ity. He does not think that perceiving virtual reality as a realm without limits on the imagination is very useful. It may suit science fiction, but not critical inquiry. Graham operates with two concepts: the *imaginable* and the *conceivable*. What is imaginable is not necessarily conceivable. We might imagine things which are not logically possible and which, hence, are not empirically possible either. As a philosopher, he advocates approaching virtual reality and the future of cyberspace as realms of the conceivable and leaving the rest, the impossible imaginings, to scifi. He adds one more aspect to the possible. In environments which have been created through the use of information and communication technology, what is *technically* possible is critical. Graham seemingly seeks to restrain researchers' enthusiasm for regarding the virtual environment as an arena of endless possibilities. (Graham 1999, 151–153)

According to McLellan, there are several types of virtual reality and different schemas with which to classify them. One model to which she refers comes from Thurman and Mattoon (1994). They argue that different types of virtual reality can be assessed according to how closely they correspond to physical reality. This is called *verity dimension*. Their thinking bears some similarities to my way of treating virtuality. Thurman and Mattoon present a continuum from the 'physical', which shows some correspondence with physical laws, to the 'abstract', which they call 'novel environments'.

> The two end points of this dimension—physical and abstract—describe the degree that a VR and entities within the virtual environment have the characteristics of reality. On the left end of the scale, VRs simulate or mimic the real world counterparts which correspondence to natural laws. On the right end of the scale, VRs represent abstract ideas that are completely novel and may not even resemble the real world. (Thurman & Mattoon 1994, 57; see also McLellan 1996, 458–459)

Different theorists seem to have rather similar ideas about virtuality. Virtuality deals with reconstructing the real world with the use of information and communication technologies, 'dublication' as Poster put it, but at the same time it is also about creating something new, different from the real world. This represents the tension inherent in the concept of virtuality. To Poster the term virtual refers to 'near substitutes', while virtual reality 'suggests that reality may be multiple or take many forms' (Poster 1995a, 29–30). I doubt that the concept of simulacra is very useful for us when we try to understand the phenomenon of virtual classroom. However, as an extreme version of

simulation, it may provide some theoretical perspective on theories of virtuality.

So far, therefore, the following points about the relationship between real and virtual are clear. There is a continuum with two extreme points. At one extreme the relationship between real and virtual is as strong as it can be. We could think of it in terms of 'a perfect simulation'. We could also see it as a copy. At the another end, in turn, there is no longer any relationship between real and virtual. The virtual environment is so different from the real world that we can no longer comprehend a relationship between them. Between these two extreme points is a countless variety of relationships between real and virtual, where the relationship is carried by specific properties that could be called essential properties. They are essential for certain purposes, as Graham (1999) put it.

To summarise the arguments, so far, I would like to refer to Crang et al. (1999). They have identified four dimensions in the theory of virtuality. (Their considerations concern virtual geography, but their ideas are useful to my work as well.) First, to understand virtuality we must look at the virtual-real opposition, which they discuss under the theme of simulation. The second dimension is complexity. This concerns the chaotic, non-linear and complex character of virtual environments. Order, which is in force in our real world, is annihilated by the fluid complexity of the virtual. Further, we could treat virtuality as mediasation. Crang et al. borrow this term from Thompson (1990; 1995) to characterise forms of virtual technosocialities, as they call them. This concerns space-time distanciation of social life when interaction is distanced, with the use of technology, from its original spatial and temporal context to a context of another time in another space: 'the use of communication media involves the creation of new forms of action and interaction in the social world, new kinds of social relationships and new ways of relating to others and to oneself' (Thompson 1995, 49). The fourth dimension of virtuality is the virtual as the spatial. In fact, the writers claim that virtuality 'is at its heart a spatial phenomenon' (Crang et al. 1999, 13). They point to '(re)territorialisations' which are produced through incorporations of the virtual. Whereas virtuality as mediasation concerned contexts of social relationships, virtuality as the spatial refers to geographical contexts. Interestingly, van Dijk, the network-society theorist, also approaches virtuality from a spatial perspective. He puts it simply: *Virtual* means: 'Not tied to a particular place and time and not directly to a physical reality' (van Dijk 1999, 250).

There are several points here that are in common with the thoughts of Grang and his colleagues, and with mine. I have discussed the real-virtual

relationship, regarding simulation as one aspect of it. I have also pointed to the peculiar character of virtuality which allows us to treat time and the course of events in a new way, such as by living happenings anew and transforming them. I concentrated on the spatial dimension mostly in the previous chapters. What I still need to do here is to turn to the social dimension of virtuality in the form of virtual societies and, especially, to the educative dimension in the terms of the virtual classroom and the virtual school.

The virtual classroom and the virtual school

I will now focus attention on the virtual classroom. How are we to understand the concept in the context of virtuality that I have discussed so far? Further, how is the concept defined in educational literature? [1] At the beginning of this chapter I remarked that there is some confusion in terminology regarding the different kinds of virtual educational settings such as the virtual classroom, the virtual school and the virtual university. In the following I cannot avoid contributing to this terminological porridge since different authors use different terms for the same phenomenon.

As I have been familiarising myself with texts about the virtual classroom, the virtual school and the virtual university during the last five years, I have noticed that the writers seem to treat these concepts in certain diverse ways. We could speak about metaphors on this occasion. For some researchers, the virtual classroom (virtual school/ virtual university) is an information system. Others see it as a virtual community. Some people treat it like a spatial phenomenon, a place or a virtual building: people *go* from library to café, they *visit* administration, for example. '[A] place to which people may go' (Waskul & Douglass 1997, 378) is, in general, a metaphor which is associated with environments which information and communication technology creates. (Etzioni & Etzioni [1999] mention Geocities 'neighbourhoods' which imitate real-world places: Hollywood for entertainment and Wall Street for business.) I would like to add the cyborg metaphor as a combination of human beings, buildings and technology.

The *as if* of virtuality has also been used in studies of virtual classroom. Tiffin and Rajasingham (1995, 3) treat the virtual class, as they call it, as real *in effect, not in fact*. The term virtual classroom was coined by Roxanne Hiltz. She speaks about the use of computer-mediated communication to 'create an electronic analogue of the communications forms that usually occur in a classroom including discussions as well as lectures and tests' (Hiltz

1986, 95). A similar view of the virtual classroom has been presented in the distance-education forum. A group of European specialists describe the e-Hermes project: 'The project is based on the creation of a "virtual classroom", which means that every possible aspect of a conventional classroom is simulated.' (Savas & al. 1998, 491). On the other hand, Hiltz' views have been also criticised by distance educators. Garrison (1997) refers to Hiltz and remarks that the virtual classroom is very different from a conventional classroom. Tiffin and Rajasingham's approach echoes that of Hiltz. According to them:

> The idea of virtual class is that everybody can talk and be heard and be identified and everybody can see the same words, diagrams and pictures, at the same time. (Tiffin & Rajasingahm 1995, 6; Rajasingham 1996, 33)

This definition reminds us surprisingly strongly of a traditional classroom where people study together using a blackboard or overhead projector. Interestingly, they treat a traditional classroom as a communication system, again referring to the ability to see and hear the same words. In a traditional classroom, the walls function as a communication facilitator. They hinder interference from outside (noise) so that communication inside the room is possible (Tiffin & Rajasingham 1995, 6). In a virtual classroom the communication means, in turn, is information and communication technologies. Tiffin and Rajasingham's words 'at the same time' in their definition hint that virtual classroom is something like an online course. At least McLellan treats the virtual classroom in this manner. She speaks about 'virtual classrooms where classes are taught online' (McLellan 1998, 57). Referring to Hiltz, Mowshowitz (1994) sees it as just one manifestation of a virtual organisation. A virtual classroom deals with:

> unconventional social figurations whose structures and functions are highly dependent on computer-based information technology. These configurations differ from conventional ones in being unconstrained by familiar spatial and temporal boundaries. Such absence of constraint gives rise to offices and classrooms "without walls," embracing activities distributed over space and conducted asynchronously as well as synchronously. In addition, it facilitates the structuring of corporations with amorphous boundaries, both internal (between units) and external (between the company and outside world). These virtual corporations are characterized by ever-shifting job responsibilities and authority structures that permit extraordinary flexibility in modes of functioning and responsiveness to the environment. (Mowshowitz 1994, 268)

I have quoted Mowshowitz at length. The author combines the virtual classroom with what we could call virtual school and virtual organisations in general. The quotation also refers to the notion of networks which I discussed in Chapter two.

Manninen speaks about the virtual classroom as a practical example of the virtual learning environment. The virtual learning environment, in turn, is an environment which is based mainly on distance education and which is realised through telematique means, including e-mail, computer conferences and the www. The mode of the activities can be synchronous or asynchronous (Manninen 1997). In a recent contribution, Manninen (2000, 38) treats the virtual classroom as a metaphor of classroom or an educational organisation which has been realised with the use of technology. He seems not to make any significant distinction between 'classroom' and 'school' on this occasion. Tella defines the virtual school taking into account the tasks of school. 'Virtual school is based on the concept of the networking learning environment and the technical possibilities offered by new information and communication technology. The most important difference from traditional work methods is that virtual school intentionally utilises new communication tools and computer-mediated human communication.' (Tella 1995). Meisalo and Lavonen (1995) speak about virtual school in terms which are very similar to those of Tella. Tella continues the theoretical discussion by defining the virtual school as a school that lacks a physical building but nevertheless functions as an information system. He analyses the relationship between the real and the virtual: virtual school can be regarded as a real school 'as it can support the basic activities of an ordinary school'. It is interesting to contemplate Tella's argument from the point of view of the theoretical considerations I mentioned above. 'Basic activities' are reminiscent of Kusch' essential properties. There is a link between the actual world and virtual environments, here: an ordinary school and a virtual school share the same basic activities. Although he does not mention exactly what these basic activities are, it can be assumed that he is speaking about educational activities. I would suggest that it is a question, with the words of Uljens (1997) and Kansanen (1999), of teaching, studying and learning. I would like to repeat Graham's view here. He argued that virtual 'signals something not the same as, but as good as, the real thing, at least for certain purposes' (Graham 1999, 154). Again, we could apply Tella's argument. 'Certain purposes' appear as 'basic activities'. In this regard, a virtual school is as good as an ordinary one.

On the other hand, the idea of possible worlds suggests that the virtual classroom includes elements which we do not find in a traditional classroom. Indeed, Tella has frequently argued that the virtual school (or virtual classroom) is 'something more'. He speaks about 'a logical extension'. On the one hand we have a concrete building with rooms and people, and on the other hand we use of computers in education. The logical extension emerges from the relationship between the two. These two last sentences are my interpretation. I find some nascent idea of the cyborg theme here. Similarly, John Tiffin and Lalita Rajasingham (1995) remark that they prefer to use *virtual class* instead of *virtual classroom* because a virtual classroom is not just an electronic simulation of a traditional one. (Curiosly enough, *virtual class* may also have a social meaning. Kroker and Weinstein [1994] use the term to name the dominant class of our electronic era.) Thus, the virtual classroom and virtual school refer to possible worlds which differ from our real world. The virtual classroom (virtual school) is not identical to the familiar classroom (school) that we know, but it is a possible equivalent.

Varis takes a stand which is somewhat different from those described above:

> We should notice, that when we speak about **virtual university**, **virtual school**, **virtual library or virtual enterprise** we refer to an existing institution which is just organised in a new way. Instead, **virtual reality** refers to an artificial reality which has been created with the help of computers and which necessarily does not have any equivalent in the real world. (Varis 1995, 25; emphasis original; my translation)

Varis recognises the possible forms of virtual school (etc.), but he definitely links the current discussion of virtual school to those characteristics of educational institutions which are familiar to us.

As mentioned above Hiltz, Tiffin and Rajasingham treat the relationship between the traditional classroom and the virtual classroom in terms of communication forms. Tella elaborates this further as an educational feature. The aspect of communication is also present in his view: 'Virtual school is an information system based on new information and communication technologies, which is able to deal with all the tasks of school without the need for a physical school building.' (Tella 1995). 'All the tasks' may seem here a little contradictory to his idea of 'basic activities'. My interpretation is that, on this occasion Tella is directly quoting Paulsen, whose expression 'all the tasks' (Paulsen 1987) has caused criticism, as will be seen later. What Tella means is, I believe, the basic academic educational activities.

The spatial metaphor is highlighted by Dillenbourg and his colleagues. They add a new expression, virtual campus, to the flooding pool of terms of virtual environments. They define the virtual campus as 'a set of on-line educational resources, organised around a spatial metaphor, i.e. resources are located in different areas of the cyberspace' (Dillenbourg & al. 1999, 61). The writers suggest three different ways to organise a virtual campus. It may have a tree-like structure, a network structure based on hyperdocuments, or it may be as a real place with rooms connected to corridors and buildings connected to streets. Dillenbourg et al. analyse the spatial metaphor from the perspective of communication. They claim that the form of space influences the form of communication. A discussion takes place inside a 'room'. They do not write about the virtual classroom in their article, but logically a definition of it could be deduced from their ideas: a virtual room where discussions take place. This spatial approach is close to the way in which Tiffin and Rajasingham, as well as Hiltz, treat the virtual classroom.

On the other hand, Tiffin and Rajasingham also approach it from the perspective of a community. Therefore, it is interesting to take a brief look to Jones' ideas of virtual settlements which somewhat combine the spatial metaphor and the community aspect. Quentin Jones (1997) discusses current research on virtual communities. He distinguishes a virtual community from what he calls a virtual settlement. The latter is the cyber-place of a virtual community. His starting point is a 'cyber-archaeological' approach to computer-mediated communication. His aim is to trace the marks of a community which, in virtual settings, typically includes masses of messages from e-mail discussions, chat rooms and the like. This material represents the settlement and enables us to judge whether or not a particular group of computer-mediated communication demonstrates the existence of a virtual community. Such judgement should take into account four minimum sets of conditions: 1) there is at least a minimum level of interactivity, 2) there is a variety of communicators, 3) there is at least a minimum level of sustained membership, and 4) there is a virtual common-public-space where a significant portion of interactive group-computer-mediated communication occurs (Jones 1997). Jones concludes that the existence of the virtual settlement demonstrates the existence of a virtual community. This is also an attractive view in terms of the virtual classroom. Using Jones' approach we could investigate the appearance of a certain quantity and quality of educational activities in a 'virtual space' in order to judge whether an associated community of a virtual classroom exists. Thus, we would track the signs of *teaching* and *studying* in a virtual environment. Jones' ideas require further elaboration if they are to

be applied in the context of the virtual classroom, but they are promising in that regard. They also promote the idea of the virtual classroom as a community.

According to Tiffin and Rajasingham (1995, 177), a virtual class (room) is a meeting place for a virtual community of learners with common educational needs and interests. Manninen (1997, 272) claims that new interactive information and communication technology blurs the border between distance education and traditional education enabling the establishment of virtual communities of learners. He receives support from Westera (1999) who speaks about a paradigm shift in distance education. Westera explains that the ever-growing use of information and communication technology in education has affected both the role of the teacher in the classroom and the social isolation of distant learners. He continues by saying that 'cyberspace appears to be a promising meeting point for anyone involved in the education process' (Westera 1999, 17), thus fostering the emergence of educational virtual communities. 'Obviously, classroom teaching and distance education are on a new educational approach that combines the strengths of both practices, while bypassing their weaknesses' (Westera 1999, 18). The research team involved in the Kilpisjärvi project presented this kind of vision in the preliminary report of the project (Husu & al 1994) in which the concept of classroom focused distance education was analysed. Those considerations remained on a rather tentative theoretical level, however.

In the following I will attempt to take the theoretical considerations of the virtual school one step further towards something which could be characterised as assemblies of technologies and bodies. Tella, again, provides a good starting point here. I think that he is right when he considers virtual school in relation to traditional school a symbiosis.

> If we regard virtual school as a symbiotic extension of ordinary school, part of the activities of physical school may be moved to virtual school and carried out there with the aid of information and communication technologies. Even though virtual school may exist without a physical building, based exclusively on communications networks, e-mail, and computer conferences, at this stage it may be wise to consider the school of the future particularly as a symbiosis of virtual and physical school. (Tella 1995, 15).

This mixture of ordinary school and virtual school is a most interesting one. If I am reading correctly between the lines in the above quotation, Tella regards the symbiosis of ordinary school and virtual school as an either-or situation, virtual and ordinary separated temporally but complementing each

other. Tiffin and Rajasingham present similar ideas by arguing that there will be a need both for virtual class (as they call it) and for traditional school. However, their functions differ.

> The virtual class is a meeting place for virtual communities of learners with a shared interest in the same subject. The conventional classroom of the future will be a community classroom, a meeting place for people who live in the same locality and have interest in common because they are neighbours. ... It will be a place where people learn social and interpersonal skills, to express themselves in song and dance, to take part in sports and team activities, to learn arts and crafts, cooking and woodwork, gardening and pottery and skills of doing that involve touch and taste and smell. (Tiffin & Rajasingham 1995, 177).

Blystone's reflections on virtual school may be regarded as historical here—in the sense that they were published as early as in 1989. His definition of virtual school comes from Paulsen (1987), who defined it as an information system. This system does not exist as a physical building. By way of comparison, Blystone makes a considerable distinction between traditional (this is the word he uses) school and virtual school. Traditional schools deal with buildings and with bodies that are transported to these buildings, and fed there, and so on. He criticises Paulsen's view that virtual school is able to take care of all the tasks of traditional school. Daily meals, for example, are what virtual school cannot provide. The virtual school, on the other hand, is free of these things. It is also free from limitations of time and distance.

Accordingly, Blystone treats virtual school as something different from conventional school. More recently virtual school and conventional school have been suggested to complement each other, as in Tiffin and Rajasingham (1995). Tella also speaks in these terms (Tella 1995, 15) but I also find the idea of parallelism in the text. The functional distinction between virtual school and ordinary physical (Tella's version of Blystone's 'traditional' and Tiffin and Rajasingham's 'conventional') school is not as great as it is in the case of Tiffin and Rajasingham. I call for an approach in which the symbiosis is even closer.

First, I would like to refer to the earlier discussion in Chapter one concerning deterritorialisation. There is an aspect of deterritorialisation in the development of virtual school. School (partly) transcends geographical and other similar physical matters, and more or less leaves a particular territory. Another approach to these developments concerns translocalism. Accordingly, educational activities take place trans localities, and we can speak about translocalities, translocal relationships and translocal fields (see Chap-

ters one and four; Dahlén & al. 1996; Hannerz 1998). The main interests of Dahlén et al., the architects of translocalism, deal with problems of ethnography in a translocal context, and with the question of field, as it is understood in anthropology. According to them, translocal fields are not based on geographical determinants but on common interests and on interaction between the participants. They are combinations of people in diverse localities, the interaction between them and, I claim, the mediating technology. Hence, we return to the idea of symbiosis.

In this connection, it may be seen that the walls of the school may seem to be getting more and more permeable. The perspective I take here might be surprising, for it is that of cyborgs. The word 'cyborg' comes from 'cybernetic organism'. One of the starting points for current academic discussion on cyborgs was Haraway's (1991) cyborg manifesto which points out the blurring boundaries between the human and the animal, organism (human/animal), between the physical and the non-physical, and between man and woman. Cyborg thinking looks at phenomena through alliances and shifting emphasis, not through demarcation, between these counterparts on the grounds of varying situations. To Haraway (1991, 149), a cyborg is 'a cybernetic organism, a hybrid of machine and organism, a creature of social reality as well as a creature of fiction'. It indicates a change in our understanding of a body which we begin to see as a boundary figure in terms of relationships between the organic and the technological, as well as between the natural and the cultural, which have traditionally been considered contrary (Balsamo 1995, 215). This topic has also provoked lively discussion in Finnish academic writing. Discussants have used terms such as media subjectivity, terminal body and, indeed, cyborg. In addition, there has been debate concerning machine man, the integration of machine and body, the alliance of human body and technology (Siivonen 1996; Mikkonen, Mäyrä & Siivonen 1997; Järvinen 1999). Each expression has its own nuance, but all of them deal with the integrated relationship between man and technology. Menser and Aronowitz provide an interesting framework within which to analyse this relation between the human and the technological. They speak about technology within (medical technologies), beside (telephone), and outside (satellites), us. We inhabit technology (a climate-controlled office), or it inhabits us (a pacemaker). Technology may be an appendage to us (eyeglasses) or vice versa (an assembly line). With this charmingly easy analysis the writers demonstrates how human beings are related to technology and how technology to human beings in interactive and complicated ways (Menser & Aronowitz 1996, 9).

The nature of cyborgs as partly human and partly technological is not as far removed from the symbiosis between virtual school and ordinary school as one might expect. Late 20th-century machines, says Haraway, have made several boundaries of dualistic difference, such as natural and artificial, organism and machine, and public and private, thoroughly ambiguous. 'We are living through a movement from organic, industrial society to a polymorphous, information system' where '[t]he home, workplace, market, public arena, the body itself—all can be dispersed and interfaced in nearly infinite, polymorphous ways' (Haraway 1991, 161,163).

Lemke, who advocates education in cyberspace instead of education in schools and in classrooms, places cyborgs in the context of education in the following way:

> It is fashionable today to speak of "cyborgs". This metaphor ... reminds us that we are not just organisms, we are organisms constituted by our interactions with our environments, and increasingly those environments are artefactual. We are made by doing-with, and the things we do-with include computers, video, and all the other tools of our technologies. There are not simply humans on one side and machines on the other. Humans are shaped by their interactions with machines just as machines are shaped by their interactions with humans. (Lemke 1993).

These questions have been asked in the research on virtual environments. Rosanne Stone asks: 'Who am I studying? A group of people? Their machines? A group of people and or in their machines? Or something else?' (Stone 1991, 81). As a researcher I have faced similar questions. The heavy involvement of technology in everyday school life changes the way in which we conceive of school. Where are the bodies (pupils, teachers), where is the building, where do the activities of school take place, and so on? Stone continues: 'I have to start thinking about watching the machines just as attentively as I watch the people, because, for them, the machines are not merely passage points' (Stone 1991, 82). Human and technology blend. This has also been noticed by some anthropologists who call for ethnography (which they call cyborg anthropology) to examine the boundaries between humans and machines as well as the differences that constitute these boundaries (Downey & al. 1995). Escobar argues that:

> The boundaries between nature and culture, between organism and machine, are ceaselessly redrawn according to complex historical factors in which discourses of science and technology play a decisive role. ... "bodies" "organisms" and "communities" thus have to be retheorised as composed of elements that

> originate in three different domains: the organic, the technical (or technoeconomic), and the textual (or, broadly speaking, the cultural). (Escobar 1996, 119).

At this point, I believe, Tella's idea about the symbiotic school moves one step forwards. In accordance with the cyborg metaphor, school now appears partly physical and partly virtual. It is thus no longer very sensible to regard school on the one hand as a physical place and on the other hand as an electronic creation, but rather as a mixture of physical and technical elements as well as of people and activities. The activities that take place in school, including teaching, studying and learning, concern both parts of it, as Tella also suggested. Goldberg and Richards studied the change in school in an American K-12 school-technology project called Co-NECT. They argue that the Co-NECT school is not a building but a community. 'That community can be composed of students and teachers who share a common physical space, or it can be virtual—a community involving schools, museums workplaces, homes and libraries spread geographically across the globe and engaged in a common pursuit.' (Goldberg & Richards 1995, 8). Here is some of that mixture I called for. Kling reminds us that there cannot be a completely virtual organisation. 'Even "virtual organizations" have physical embodiments, since real human beings are located in some specific places when they communicate via computer-networks' (Kling 1998, 67). It is not sensible to speak about virtual school as a pure electronic construction. There are always real people, flesh and blood, involved as well as some places, some buildings, some rooms where these people carry out their activities when participating in virtual environments. It is this mixture of physical and virtual, real things and electronic versions which fascinates me and which leads me to explore the cyborg metaphor.

Hence we have varying aspects of traditional features and new, electronic features. When talking about virtual environments Stone notes that: 'concepts like distance, inside/outside, and even the physical body take on new and frequently disturbing meanings' (Stone 1991, 84). This view is in accordance with the nature of virtuality. Virtuality, as we saw above, refers both to the actual world, which is familiar to us, and to possible worlds, which might be either recognisable or totally strange. The symbiosis of conventional school and virtual school, then, begins to appear not just as a symbiosis, but as some kind of new creature: a mix of bodies, buildings, and technology. I definitely do not want to introduce the new concept of cyborg school into the overflowing pool of terminology of information and commu-

nication technology. Instead, I claim that we could benefit from the idea of cyborgs when we look at (if we use Arnold's [1996] expression) the high-tech school, a metaphor that Lemke (1993) suggested.

Cyborgs have also found their way into the Nordic educational discussion forum. On the pages of the Nordic Journal of Pedagogy, Søby refers to cyberspace as a social and educational dimension. He argues in his article, which has the tittle 'We All Are Cyborgs', that:

> Culture becomes digitalised. All that is analogous and solid becomes digital and disappears in cyberspace. Man will more and more reflect himself from the computer screen. Identity and body will be intertwined together with information technology. … Technology is no longer outside of us but almost inside. (Søby 1998, 19; my translation from the Norwegian)

According to Søby, we are approaching a cyborg identity because of our intensive relation to information and communication technologies and networks. He refers to Turkle (1995) and to Stone (1995) regarding the flexible relationship between the human and the technological in research, which is something that education research should follow. From the Australian perspective, Luke (1996) criticises education because of its fear of technology. When educators speak about technology they preferably refer to the critical approach of the Frankfurt School. Cyber culture, in turn, is regarded as more or less nonsense (Luke 1996). Søby agrees. He claims that education is a technophobic discipline which make efforts to emphasise the border between technology and culture. The cyborg metaphor, in turn, disregards this kind of demarcation.

Another example of Nordic educational cyborg discussion is my own article in the Finnish Journal of Education (Kynäslahti 1999), in which I present the same kind of ideas about the cyborg metaphor.

Classroom or school?

The concepts of the virtual classroom and the virtual classroom seem to flourish side by side in educational literature. Their juxtaposition is perhaps not necessary, at least it is a difficult thing to do. However, I find it interesting to make some analysis of the concepts on the basis of the texts to which I have referred in this chapter. [2]

The three metaphors that I introduced do not emphasise either of the concepts. Information system, community, and place can all refer to both the

virtual classroom and the virtual school. The case of cyborg is a little bit different, and that is why I will consider it further. Before that I will reflect a little on the ideas of the different theorists to whom I have referred. Hiltz, as mentioned previously, speaks about a communication forms of the traditional classroom. The association with the classroom is obvious. Tiffin and Rajasingham take some distance from the traditional classroom on one hand, but, on the other hand, their suggestion that 'everybody can talk and be heard and be identified and everybody can see the same words, diagrams and pictures, at the same time' (Tiffin & Rajasingahm 1995, 6; Rajasingham 1996, 33) brings to mind classroom rather than the school. Accordingly, the phenomena these theorists speak about deal with something that we, on the basis of the reality we are familiar with, could regard as some kind of classroom. Dillenbourgh and his colleagues (Dillenbourgh 1999), interestingly enough, associate a form of space with a form of communication, concluding that a discussion takes place inside a 'room'. Again we see a classroom in our eyes. Mowshowitz speaks about both 'classrooms without walls' and 'virtual corporations' (Mowshowitz 1994, 268). My interpretation of his ideas is that a virtual organisation (school) includes virtual classrooms. Manninen (2000, 38) associates virtual classroom with both the traditional classroom and an educational organisation (school). For him, according to my interpretation, there is no need for a virtual school because the concept of the virtual classroom already includes the aspect of educational organisation.

The sharpest distinction that I have found in the educational literature between the virtual classroom and other kinds of studying which take place in environments that information and communication technologies create, is made by Dwyer and his colleagues. They speak about a virtual classroom which is 'distinct from user-initiated, independent accesses to our on-line materials because it will have an instructor and a registered group of participants. This brings together a community of learners into a virtual classroom where they can interact with each other.' [http://www.tc.cornell.edu/Papers/dwyer.apr95/ctc.virtual.class.html].

The number of participants is restricted, there is a teacher, and there is interaction between the students (and, obviously, with the teacher as well). Dwyer & al.'s text suggests that having online resources available for learners is not enough to be called a virtual classroom, but a virtual classroom necessitates the elements listed above.

Tella, Paulsen and Blystone's focus is clearly on the virtual school. They discuss how education could be organised without a physical school building. Tella, however, developed this idea towards a symbiosis of the virtual and the

ordinary school, as we saw above. My own thoughts about a cyborg-like school, in turn, question the whole issue. If we regard school as a mixture of physical and virtual elements, it is no longer sensible to talk about a virtual school. *School*, then, already includes a virtual aspect. This does not mean that we should no longer speak about virtual classroom, however. It retain it's attractiveness as the kind of phenomenon described in this chapter or reported later in Chapter eight.

The virtual community

The virtual classroom is a gathering place for a group of people with sufficiently similar educational interests, a community. Inspired by theorists in the field, I gave this kind of statement earlier in this chapter. On this basis we can treat virtual classroom as a virtual community.

Research on virtual communities may be useful for us in understanding the phenomenon of the virtual classroom. By *virtual community* I refer to a group of people who interact with each other using information and communication technologies repetitiously over a relatively long period in the pursuit of common interests. (This is more or less a simplified version of Jones' (1997) minimum set of conditions for virtual settlements which I discussed earlier in this chapter.) It should now be clear to the reader, that the term virtual does not necessitate this kind of electronic approach, but in the current academic discussions on virtual communities the connotation with technological environments is obvious. Van Dijk defines the virtual community in his 'The Network Society' (1999):

> Virtual communities are associations of people not tied to time, place and other physical or material circumstances, other than those of the people and media enabling them. (van Dijk 1999, 159)

He continues with the argument that virtual communities consist of people with a particular interest or range of activities and therefore they are called *communities of interest* (1999, 160). I will later speculate on the concept of translocal fields which share the same basic idea as van Dijk's communities of interest. The only difference, perhaps, between these two is that the advocates of translocal fields replace 'or' with 'and'; it is a question of participants who share common interests *and* who carry out activities according to these interests.

Virtual communities are the subject of eager investigation nowadays (e.g. Jones 1995; Jones 1997; Porter 1997). It seems that these communities provide a new unexplored target for researchers in a great variety of disciplines including sociology, anthropology, communication studies and arts. If we regard the classroom as a community, a variant of the virtual communities in education, then, is the virtual classroom. On the one hand, these disciplines find new targets through virtual environments to revitalise research, and on the other hand they cannot ignore the developments which are going on in the present world regarding the new social and cultural forms that virtual environments provide and nourish.

I will allow Poster to lead us to the world of virtual communities:

> Virtual communities derive some of their verisimilitude from being treated as if they were plain communities, allowing members to experience communications in cyberspace as if they were embodied social interactions. Just as virtual communities are understood as having the attributes of 'real' communities, so 'real' communities can been seen to depend on the imaginary: What makes a community vital to its members is their treatment of the communications as meaningful and important. Virtual and real communities mirror each other in chiasmic juxtaposition. (Poster 1995b, 90).

Thus, the same themes that characterise this chapter are also present in research on virtual communities. One of the environments which Poster investigates is Multi User Dungeons. Reid (1995), another MUDs researcher, argues that the illusion of reality is based on the capability of the virtual environment to share the experiences of reality among its users. It is critical that the users react to each others' moves and that the acts which they carry out make cause similar effects as they do in real life. Thus, we are speaking about interaction here. Through acts and the consequences of these acts an individual can feel part of a virtual environment. Reid specifies this statement further. It is crucial that users *want* to share the common illusion of a real environment, a real community. This suggests a idea of a common agreement among a community concerning shared experience of reality. Stone treats virtual communities in the same way as she speaks about them as interactive environments based on mutual understanding (Stone 1995, 84).

I started the discussion about imagined communities in Chapter one. I will continue it here. Imagining seems to be a key word for many researchers in the field of virtual communities. Anderson (1983) claims that we need technology (information and communication technology nowadays, I would like to argue and here I am accompanied by Ribeiro [http://www.alternex.

com.br/~esocius/t-gustav.html]), for the notion of parallel communities in synchronic time in addition to the community we live in. This was possible for mankind:

> ... when substantial groups of people were in a position to think of themselves as living *parallel* to those of other substantial groups of people—if never meeting, yet certainly proceeding along the same trajectory. Between 1500 and 1800 an accumulation of technological innovations in the fields of shipbuilding, navigation, horology and cartography, mediated through printed capitalism, was making this type of imagining possible. It became conceivable to dwell on the Peruvian altiplano, on the pampas of Argentina, or by the harbours of 'New' England, and yet feel connected to certain regions and communities, thousands of miles away, in England or the Iberian peninsula. One could be fully aware of sharing a language and a religious faith (to varying degrees), customs and traditions, without any great expectation of ever meeting one's partners. (Anderson 1991, 188; emphasis in the original)

This citation, even if separated from its larger context, reveals how Anderson´s ideas relate to virtual communities, and that there are also problems when we use his concept of imagined communities in that context. In both cases we are speaking about the global sphere and how the use of technologies makes it possible for people from different localities to feel connected to each other. It is also a question of sharing something (interests, values, cultural heritage) in common across traditional (geographical) borders. Komito deliberates upon the question why Anderson's imagined community has become so popular in discussions of virtual communities:

> In both cases solidarity is a projection on the part of individuals, rather than a practice founded on actual behaviour. If the common experience of newspapers, television, and cinema seems sufficient to explain, for many, the solidarity of national identity, then why should the solidarity of community be less feasible? (Komito 1998, 99)

It should be borne in mind that the context of Anderson's text differs from that of current virtual communities. Anderson talks about the emergence of nation states, nations and nationalism (as Komito's comment indicates) which took place centuries ago, as the subheading of his book 'Reflections on the Origin and Spread of Nationalism' suggests. It is perhaps also not of minor importance that he published his ideas in 1983 when the current explosion of virtual worlds was just a tiny speck in picture of the future.

It seems to me, that it is the very ideas of imagining and imagining a community, without paying much attention to the greater context, which re-

searchers on virtual communities have picked up from Anderson, as the following quotation shows: 'The context of CMC [computer mediated communication] necessarily emphasises the act of imagination that is required to summon the image of communion with others who are often faceless, transient, or anonymous.' (Foster 1997, 25). The basic idea of an imagined community is simple: 'In fact, all communities larger than primordial villages of face-to-face contact ... are imagined.' (Anderson 1991, 6). Accordingly, we are conscious that there are people somewhere outside of our everyday physical environment who share something essentially common with us. In other words, we imagine a community with regard to certain ties which are not based in inter-personal contacts inside the boundaries of a certain geographical territory. In the context of the virtual classroom, these ties point to education: there are people in different localities who share educational interests with each other. Anderson continues: 'Communities are to be distinguished, not by their falsity/genuiness, but by the style in which they are imagined.' (Anderson 1983, 188). It is not surprising that Anderson´s comment has won sympathy among researchers of virtual communities. They often face criticism according to which virtual communities are not true communities (see Crang above). I would like to argue, that virtual communities are not even expected to be 'true' communities in the sense that we compare them to 'conventional' communities in our world. The same aspects of strangeness and unfamiliarity are present in them as are present in virtuality in general.

I will come back to technology. Anderson talks about newspapers as a medium which enables us to imagine a community. The reading of a newspaper is a happening which is performed 'in silent privacy... Yet each communicant is well aware that the ceremony he performs is being replicated simultaneously by thousands (or millions) of others of whose existence he is confident, yet whose identity he has not the slightest notion' (Anderson 1983, 35). A page of a newspaper links happenings and persons to other happenings and persons in the reader's mind, weaving these separate events and people together around an imagined community (Anderson 1983, 61–62). The power of the medium (or media) is essential here regarding virtual communities. Communication provides a way for a person to be conscious of other people who are using the same medium (newspaper, or computer-mediated communication, for example) more or less simultaneously. We only need to think about a computer user in the silence of his or own room. This person is involved in some of the activities networks offer: discussions in news groups, MUDs and chat rooms. He or she is aware that the ceremonies he or she is

performing are being performed by a number of other people all over the world who share the same context, i.e. posting to the same news group, playing the same MUD and so on.

People who share something in common and who live in, as Anderson puts it, '*otherwise unrelated* localities' (Anderson 1983, 54; emphasis original) have gathered together to meet each other. Is this not just what it is all about in virtual communities? People who otherwise are unrelated gather together through communication and information technologies according to some 'Islam' which they share (see Chapter one), in order to perform mutual ceremonies. Moreover, is this not just virtual classrooms are about? People who otherwise are unrelated gather together through communication and information technologies according to educational interests which they share in order to perform mutual 'ceremonies'. Is this not indicative of the educational culture I discussed in the first chapter of this volume?

Appadurai, the architect of worldwide scapes, extends Anderson´s imagined community to imagined worlds, and further claims that many people live in such worlds today. He argues that the imagination has been given new significance in social life, and that possible lives concern an increasing number of persons all around the world. Just as Jones (1997) speaks about online communities and offline communities, Appadurai combines persons´ real and imagined lives:'...it is in the grinding of gears between unfolding lives and their imagined counterparts that a variety of "imagined communities" [Anderson 1983] is formed.' (Appadurai 1991, 198). Due to the possibilities offered by global mediascapes people's lives are increasingly powered by imagined alternatives instead of the givenness of things.

An important notion here is, I think, that virtual communities are something that people attain only partially. We live in a real environment, in an offline community, and we only visit virtual worlds. (*Online community* means here the virtual community to which we belong through our modem and *offline community*, then, a face-to-face community.) There has been some concern that virtual worlds might replace the real world in people's minds and that people's real lives will suffer from surfing in virtual worlds. Although this kind of speculation may be reasonable the real world has not disappeared, and we, at least most of us, are still immersed in the physical environment of our everyday reality. We 'will always have to return to the embodied reality of the empty stomach, stiff neck, aching hands, sore back and gritty eyes caused by many hours in front of a computer terminal' (Lupton 1995, 102). Steven Jones regards online communities as no better or worse than offline ones, just different (Jones 1997, 17). This reflects the view of

Graham expressed us earlier in this chapter. A virtual community (or whatever the phenomenon) may be as good as a real one for certain purposes. We treat the virtual classroom no better or worse than a traditional one, just more or less differently. The words of Andersson about the falsity/genuineness of communities are also echoed in Jones' statement. Jones continues: 'Naturally we understand online life only in relation to its offline counterpart'. We could also ask what our relationship to the offline community in which we live is and what our relationship is to the online community or communities we join. A person may feel as a stranger in the offline community and more like home in an online community. Mitra gives an example of this kind of situation. He points to the capabilities of computer-mediated communication to produce interpersonal and group relations in diasporic immigrant communities. He speaks about new social blocks 'of atomised individuals who find themselves spatially removed from the people with whom they have been historically affiliated' (Mitra 1997, 57). For them, joining national newsgroups on the Internet is one way to rediscover these lost ties. The example given is soc. culture.indian, a newsgroup which focuses on the society and culture of India. The majority of its users live in the United States, some in Western Europe, while the number of participants in India is small. Mitra argues that the users outside of India 'attempt to negotiate their dual identity as an immigrant and as a member of a place of origin, an amalgam which now becomes discursively produced in their postings' (Mitra 1997, 63–64). The newsgroup become a way for some persons of a certain ethnoscape to express diasporic homesickness through an imagined community, in a situation in which the interface towards the real environment they live in might be problematic.

Life in virtual worlds bears both parallel and alternative characteristics regarding life in the real world. It is some kind of addition (duplication, says Poster [1995a]) to our life in our actual environment, consisting of both familiar and strange elements. Certainly, there is a border between the actual world and virtual worlds. Carried by technology (be it a computer or a set of video conference equipment) we step into another kind of world in which we stay for a while, and then come back. This brings us to the idea of border crossings which are characteristic of virtual communities. We speak about translocal and transnational phenomena, and also about the border between online and offline communities. People from different cultures and locations with distinct backgrounds gather together because of certain shared interests. Their ties to their offline communities may be tight (as they apparently are in the case of MUDs), while an online community is a marginal feature for their life, or vice versa (as Mitra suggests). However, in both cases it is true that

people who otherwise are unrelated have gathered virtually together. How do people's lives in a virtual environment relate to their real lives and how do they criss-cross between the two? Virtual environments promise alternatives and even wild possibilities to break away from everyday reality. The symbiosis of these possibilities and the reality of the givenness of things we live in, are interesting phenomena.

The anthropologist Ribeiro provides some kind of synthesis of several themes which I have discussed in this chapter: virtuality, imagining and the transnational perspective with its aspect of deterritorialisation. He speaks about an imagined and a virtual transnational community. About the distinction between virtual community and imagined one he writes: 'The difference [between an imagined community and a virtual community] lies on the fact that an imagined community is an abstraction symbolically and politically constructed, while the virtual community, besides being that, is a reality of a different kind, a sort of intermediate, parallel state between reality and abstraction where simulation and simulacra have lives of their own. The virtual reality is "there" it can be experienced, manipulated and lived as if it were real.' [http://www. alternex.com.br/~esocius/tgustav.html]. (Once again we can see how 'virtual', 'virtuality' and 'virtual reality' are interchanged.) It is interesting how Ribeiro combines reality, abstraction, simulation and simulacra. I find a similarity here to my own theorising of virtuality. For Ribeiro, the virtual community intermediates between the real and what he calls the abstract. It is 'a reality of a different kind', and I sympathise with that. His view is anthropological based on transnationality. He claims that transnationality brings cultural implications which 'can only be dealt with admitting the existence of the virtual and imagined transnational community'. His text does not give us a wider analyses of this transnational phenomenon, but in any case, his call for attention to these phenomena is welcome.

Conclusion

The possible existence of deterritorialised and translocal electronic dimensions was discussed in the first chapter. In the field of education we could call this the eduscape. Virtual classrooms and virtual schools, which is what this chapter has been about, could be located in this kind of dimension.

In order to further understanding of the virtual classroom and the virtual school I have made an effort in the previous paragraphs to examine the concept of virtuality. This concept has not been explored as deeply as we might

expect given the number of phenomena that are described today as *virtual*. My perspective was to contemplate the relationship between the traditional classroom (school) and the virtual classroom (school). This perspective is also used in other literature concerning virtual classroom and similar phenomena: actual—virtual, actual world— virtual world, for example. This relationship is part of the core of virtuality.

Two aspects of virtuality stood out. One of them emphasises the similarity between the real world and the virtual world. I called this the aspect of 'as if'. The other deals with possible worlds. It may also consider the virtual world in terms of the actual world, but it does involve the notion of virtual worlds which are totally different from the actual world. The origins of this can be traced back to the concept of modal philosophy, *virtualiter*, as Heim and Inkinen actually did. These two aspects are somewhat contradictory. I used educational simulations as one way of analysing this contradiction. It seemed that my analysis of the relationship between the 'as if' and 'possible worlds' worked sufficiently well in the context of simulation, but I certainly do not claim that this relationship was totally clarified in my text. However, it has some promise for the research on the virtual classroom.

Theories of the virtual classroom seem to include some metaphors which I analysed. Researchers regard it as an information system, or a virtual community, or it may be treated as a spatial phenomenon. I introduced the idea of cyborg as another possible metaphor. This lead to considerations about the relationship between a traditional school and a virtual school. This relationship is understood differently by different theorists. I suggested the cyborg metaphor as a partial solution to the dilemma.

The virtual community in the context of the virtual classroom emerged as being worth further consideration. This was made easier by the fact that there is relatively abundant research about virtual communities. The two aspects of virtuality appeared to be hold in this field, too. Virtual communities were examined as both real communities and possible communities. The notion of imagination seemed to be essential in this regard. Finally Ribeiro's analysis of virtual, imagined and transnational entities tied different theoretical strings together to some extent.

Notes

[1] Virtual classroom has several synonyms, expressions which vary in closeness to the meaning I give it in my research. There have been distinguished analyses and lists of the terminology of this field, and I do not find it sensible to repeat them here. Tella (1995), for

example, questions whether we should speak about the virtual, distance, tele or network school. He analyses the terminology of educational writings in English which includes expressions such as electronic education, electronic classroom, electronic college, electronic campus and on-line education.

[2] In order to reduce the confusion caused by the vocabulary, I looked at how *virtual school* and *virtual classroom* are used in today's educational praxis. By 'praxis' I refer to the WWW. I simply carried out searches using AltaVista. *Virtual school* gave 22.701 references, and *virtual classroom* 35.818. As far as the web is concerned, *virtual classroom* seems to be used more frequently than *virtual school.* I analysed the first 50 hits for both of the search entries in order to find out in what kind of context each expression has been used, and what meaning they have. The result was that there was not a big difference between the two. *Virtual school* and *virtual classroom* often refer to online resources of universities, schools and other educational institutions. Both of them are used in names of software products as well. Further, *Virtual school* is 'an online community' [http://www.vsg.edu.au] while *virtual classroom* 'brings together a community of learners' [http://www.tc.cornell.edu/Papers/dwyer.apr95/ctc.virtual.class.html].

Virtual school is 'a location in cyberspace' [http://ibis.nott.ac.uk/vsb/papers/hkconf99.html], while *virtual classroom* is a Internet web-site [http://www.kumc.edu/instruction/Vir_Clas/about.html]. This short analysis did nothing to ease the confusion. However, there were some special uses. *Virtual school*, for example, refers to the possibility to visit a school virtually [e.g. http://ccsd.net/virtual_tour]. Some web pages presented a hierarchy of these two concepts. NorthStar Academy, for example, mentions attending a virtual school through software and 'he/she will see the school graphically represented on the screen', after which the student double-clicks the icon of a subject area 'to get to his/her classroom' [http://www.northstar-academy.org/pages/howitwks.htm]. A special view on *virtual school* is offered also given by the European Schoolnet. This is a virtual school with a motto: 'For European teachers—by European teachers!' [http://www.en.eun.org/menu/vs/vs-set.html]. Here, the virtual school is seen through the eyes of teachers, more precisely, through European eyes: 'The Concept of the Virtual School is ***teachers meeting teachers***, colleagues exchanging materials, ideas and experiences and having discussions on everyday-problems. The Virtual School will help schools and teachers to find quality resources in the Internet.' [http://www.en.eun.org/ vs/about/about.html], emphasis original).

The Finnish version *virtuaalikoulu* produced 104 hits in AltaVista, while *virtuaaliluokka* was found on only 27 pages. Analysis of them did not produce any new perspectives. The total number of web pages was so small that I would not like to argue that *virtuaalikoulu* is used more than *virtuaaliluokka* in the Finnish educational context.

CHAPTER 4

An Ethnographical Approach to Virtual Educational Environments

At the start

> What a proper ethnographer ought properly do to be doing is going out to places, coming back with information about how people live there, and making that information available to the professional community in a practical form, not lounging about in libraries reflecting on literary questions. (Geertz 1988, 1)

This motto of the ethnographer is to be found on the first page of Geertz' 'Works and Lives', under heading 'Being There'. I, as an ethnographer researching virtual environments, immediately ask: 'Being *where*?'. In order to act as 'a proper ethnographer', where do I go when I want to carry out research in a virtual classroom?

Introduction

Erickson describes Malinowski as a product of the cultural milieu, mostly the German milieu, of the late-19th and early-20th centuries. Intellectuals of that time made a distinction between *Naturwissencshaft* and *Geisteswissenschaft*. The latter differed from the former in the same way as humans differ from the whole body of living beings and inanimate nature. Human beings can make and share meanings, and should be studied in relation to this special feature. In human sciences, methods should be interpretive. Erickson points to Dilthey, Weber and Husserl in this regard. The spirit of the epoch favoured an implicit view of human nature. Expressionism concerned the inner side of human experience, as depicted in Freudian psychology. Malinowski's interest in implicit cultural knowledge and the elaboration of research methods was an echo of these influences. (Erickson 1986, 122–125)

Why begin with Malinowski? Malinowski was an anthropologist who went to the Trobriand Islands, stayed there for three years and participated in the everyday life of the people. In his ethnography (Malinowski 1984) he describes the culture of the Trobrianders as seen from the inside. He does even

more than that, in fact: He claims that as a long-term participant observer he is able to bring out aspects of this culture of which the Trobrianders themselves are unaware. His classical work represented a shift in the development of ethnographical research, and has been a guiding principle for much of later ethnography. Something similar is going on today, and that is what this chapter is all about.

A short introduction to ethnography in the context of education

Ethnography has been described in cultural anthropology with the phrase 'doing fieldwork' (Wolcott 1988, 187). Another typical element of the discipline, and an essential part of fieldwork, is participant observation. Ethnography is naturalistic. It is conducted in natural settings, a feature that I will discuss later. In the following I will present 'ethnography in a nutshell' continuing with Wolcott's (1988, 1992) analyses. Ethnography incorporates both process and product. A researcher gathers data using an ethnographic approach, and fieldwork and participant observation are in a constitutive role. The researcher produces an *ethnography*, a complete account of the way of life of some particular group of people. What distinguishes 'doing ethnography' from just 'borrowing ethnographic techniques' is cultural interpretation. A researcher conducts a study in terms of a cultural context, paying attention to how particular individuals, customs, institutions or events relate to a generalised description of the way of life of a socially interacting group, thus seeking a holistic perspective. Wolcott notes the anthropological tradition to investigate Other, i.e. strange cultures and unfamiliar people in remote environments. He asks the question whether this cross-cultural aspect is a prerequisite of ethnographic study in education. Spindlers (1992) answer to this question is: 'Yes'. They emphasise the connection between ethnography of education and anthropology which emphasises cross-cultural perspective. Wolcott's approach is different. He remarks on the temptation to conduct the study as though school and other educational settings comprised a strange environment in an unfamiliar culture. Thus, ethnographers working in education may face problems of anthropology at home (Messersmith 1981; Jackson 1987). This leads us to another feature to which Wolcott pays attention: the researcher as a research instrument. As a participant observant, the ethnographer is part of his or her research. The researcher has some kind of role when he or she stays a lengthy term among the people he or she is studying. Fi-

nally, we come to the constitutive question of the relationship between theory and working in the field. In theoretical terms, how structured should the ethnographer's work and data gathering be? There is no simple answer. Different methodologists have different answers (see for example Hammersley 1992). The tension which arises from this dilemma is something which is typical in ethnography (of education).

Martyn Hammersley, another ethnographic theorist in education and the social sciences, points to five features with which ethnography as a method complies:

1. People's behaviour is studied in everyday contexts, rather than under experimental conditions created by the researcher.
2 Data are gathered from a range of sources, but observation and/or relatively informal conversations are the main ones.
3. The approach to data collection is 'unstructured' in the sense that it does not involve following through a detailed plan set up at the beginning; nor are the categories used for interpreting what people say and do pre-given or fixed. This does not mean that the research is unsystematic; simply that initially the data are collected in as raw form, and on as wide a front, as feasible.
4. The focus is usually a single setting or group, of relatively small scale. In life history research the focus may even be a single individual.
5. The analysis of the data involves interpretation of the meanings and functions of human actions and mainly takes the form of verbal descriptions and explanations, with quantification and statistical analysis playing a subordinate role at most. (Hammersley 1993, 1–2)

I will continue my account of the ethnography of education from the Finnish perspective, but before doing so I will offer a few thoughts on how we can locate the position of ethnography in the wider framework of qualitative research. From my discussions with colleagues in the educational field, I have the impression that people's understanding about the relationship between ethnography and the other qualitative approaches is not clear. It is this lack of clarity I will address in the following.

Creswell (1994, 11) notes that qualitative approaches may be, and have been, classified in several different ways in the human and social sciences. He makes his own synthesis, ending up with four design types which are frequently used in research: 1) ethnography, 2) grounded theory, 3) case studies,

and 4) phenomenological studies. His classification is clearly presented and it is useful in its explicitness. I will take each type in reverse, and offer a few remarks by way of clarification.

> **Phenomenological studies** concern detailed descriptions of lived experiences of the people being studied. They are marked with a philosophy which bases, among others, on Husserl and Heidegger. A researcher investigates 'a small number of subjects through extensive and prolonged engagement to develop patterns and relationships of meaning … Through this process the researcher 'brackets' his or her own experiences in order to understand those of the informants'(Creswell 1994, 12).

According to this definition, phenomenology, unlike ethnography, does not necessitate living in the natural setting of the people being studied. The connection between the researcher and the objects of the research people, then, could be something other than direct everyday interface. This definition also emphasises the small number of people who are studied. Further, ethnography is not associated with a certain philosophy to the same extent as phenomenological studies are.

Creswell's definition of **case studies** is rather brief.

> Case studies concern a research of a single entity or phenomenon which is bounded by time and activity. (Cresswell 1994, 12)

This definition presents case studies as a wide range of research activities. It even allows for quantitative methods to be included, as obviously they sometimes are.

Grounded theory emphasises the importance of data (Strauss & Glaser 1967; Strauss & Corbin 1990).

> A researcher 'attempts to derive a theory by using multiple stages of data collection and the refinement and interrelationship of categories of information'. Characteristics for grounded theory is 'the constant comparison of data with emerging categories, and theoretical sampling of different groups to maximize the similarities and the differences of information' (Creswell 1994, 12).

Ethnography may be theory-based, or then theoretical considerations may arise from the data. This is not a critical point here, although the role of the theoretical background has often been discussed among ethnographers (e.g. Hammersley 1992).

According to Creswell (1994, 11–12), a researcher in **ethnography** studies an intact cultural group in natural settings during a prolonged stay collecting mainly observational data. His perspective is surprisingly narrow. Although the origins of ethnography certainly lie in intact cultures, his definition leaves the inquiries which are conducted in the researcher's own society outside of the picture. (In my case, the investigation of virtual environments could be regarded the study of intact environments, environments which so far mainly appear as strange and unexplored.) Creswell continues by reminding us that the research process is flexible and responds to lived experiences in the fieldwork. His remark about mainly observational data is worth comment here. Ethnography is, thus, characterised by (participant) observation more intensively than the other research designs Creswell introduces.

Although we cannot be satisfied with Creswell's narrow view of ethnography, his classification of qualitative research designs help us to clarify the relationships between (partly) different qualitative approaches. In the following I will focus to education in my efforts on locate ethnography in the family of qualitative research approaches.

Tesch (1990) analysed the development of ethnography as one of the modes of qualitative research in America and Britain. Being rather old, her analysis does not illuminate the recent trends, but gives the background of how ethnography has developed as a method in educational research. The pioneers in the field were anthropologists whose research dealt with educational matters, although educators were also involved, such as Montessori who published 'Pedagogical Anthropology' in 1913. In the 1950s, American educationalists began to study education from the point of view of anthropology, and to use anthropological methods in their research. Spindler was one of these forerunners. In the following decade some educators became interested in what was going on in schools and in classrooms. They were not content with research methods that relied only on measurements, but wanted to develop a narrative approach. Jackson's 'Life in Classrooms' (1968) belongs to this chapter of the story. According to Tesch, the term ethnography became just about synonymous with the term qualitative research in American education. A similar development occurred in Britain, although the term was not here as popular as it was in the USA. Educationalists who conducted ethnographic research rather spoke about field research and participant observation. While some researchers relied on the symbolic interactionism of sociology, others leaned on the tradition of social anthropology. (Tesch 1990, 45–47)

Tesch (1990) further classifies the origins of qualitative research. She finds four main elements in qualitative research in education: 1) anthropology, 2) phenomenology, 3) critical theory, and 4) action research. In the following I will give a brief synopsis of her analysis (Tesch 1990, 43–51) in order to locate ethnography in relation to other kinds of qualitative approaches.

> Tesch starts her analysis with naturalistic inquiry which has its origins in ethnography and phenomenology. This is treated as a parallel term to qualitative research. Using qualitative methods (including ethnography) implies that one is conducting naturalistic research. It is 'a non-positivistic approach to research in which the researcher is the instrument, and the focus is on understanding the people under study give to their experiences" (Tesch 1990, 50–51).
>
> She treats educational ethnography as a derivate of anthropology. I discussed her ideas about ethnography of education earlier in this chapter, and thus I will not repeat them here. A further development was ethnography of communication, in other words, microethnography. This is a sociolinguistics-based approach to study involving the recording of naturally-occurring interaction.
>
> Phenomenological studies rely on Husserl. Langeveld brought them to educational research. "Phenomenological studies differ from naturalistic studies and ethnography in its emphasis on the individual, and, on subjective experience." (Tesch 1990, 48). Ethnography, then, is the study of communities and cultures as entities.
>
> Action research (or collaborative research), in Tesch's terminology, involves improving practice by using or in co-operation with practitioners. A special feature of it is research as empowerment. This emancipatory view integrates action research with critical theory in juxtaposition to 'technical action research', the aim of which is efficient practice according to certain criteria, which probably are never questioned during the research process. The goal of emancipatory action research is "to provide teachers and students more 'intelligence' about their situation" (Tesch 1990, 48, 50).
>
> Phenomenography is based on the ideas of Marton. Tesch juxtaposes phenomenography with phenomenology, remarking that phenomenography is not the application of a philosophical method to research, while phenomenological studies are. Marton's ideas convey the interest in studying the content of thinking. Phenomenography examines 'explanations people carry around in their heads for the various aspects of reality they encounter." (Tesch 1990, 49)

Tesch's locates educational ethnography within the tradition of anthropology. Ethnography of communication is a variant of this tradition, coming from the field of sociolinguistics. Ethnography itself involves inquiry of communities and cultures as entities. However, all of these different qualitative approaches could be more or less located, according to Tesch, under the umbrella of naturalistic inquiry (on naturalistic inquiry, see Lincoln & Cuba 1985).

Finally, Wolcott introduces a tree analogy of qualitative inquiry. The researcher climbs up the tree making choices at every fork. Everyday life is the soil in which the tree is rooted. The first choice in the climb is to decide between field-oriented research and archival strategies. The ethnographical approach involves the former. The next task is to weight observation strategies against interview strategies. Our choice is that of participation. Do we mean nonparticipant observation or participant observation? The latter is our answer. Now we face a sociologically-oriented branch leading towards phenomenology, among other things, and a branch which leads to anthropological alternatives. We choose the anthropological alternatives. We are now on the branch of cultural interpretative ethnography, which is where we build our nest. (Wolcott 1992, 19–29)

I have highlighted three different approaches that locate ethnography, more precisely educational ethnography, in the family of qualitative research. This brief analysis could be considered a 'triangulation' of diverse views. Creswell sees ethnographers as explorers of unfamiliar environments, in the traditional manner of anthropology. Tesch characterises educational ethnography as inquiry into communities and cultures. Ethnographers go to natural settings of education, such as schools, to find out what is going on. Wolcott emphasises the cultural interpretation. It is this element which makes an inquiry an ethnographic inquiry. It is not enough just to use ethnographic methods.

The Finnish tradition of ethnography of education

Syrjälä and Numminen argued in 1988 that the ethnographical approach was rapidly becoming popular in Finnish educational research. (Interestingly, ten years later, Eskola and Suoranta [1998] criticised the fact that the situation of Finnish educational ethnography was miserable.) Viljanen (1997), as a Finnish anthropologist, suggested that Spindler's 'Doing Ethnography of Schooling' (1982) was an essential agent in this success. She acknowledged, however, that this shift happened in a situation in which critics of ethnography were storming about in anthropology, and that this criticism did not reach Spindler's book. Paradoxically, ethnography became popular in Finnish education at the same time as anthropologists like Clifford and Crapanzano were questioning its very existence!

It may look as if the ethnographic tradition in education is not as deep-rooted in Finland as it is in the USA, for example. This is partly true, but I

think that Judén-Tupakka (2000, 16) makes a good point concerning Finnish anthropology. She points out that several anthropologists, including Westermarck (1932) and Granquist (1947; 1950), have conducted research which relates to education. On the other hand there have been educationalists such as Bruhn (1935) and Päivänsalo (1953) who conducted anthropological research. Judén-Tupakka does not speak particularly about ethnography, but about educational anthropology in general.

I will now briefly analyse how some Finnish educators have treated ethnography. Syrjäläinen (1990) was one of the first researchers (keeping in mind Judén-Tupakka's remark) who used an ethnographic approach in the field of Finnish education. Her definition of ethnographic research is rather traditional, mirroring the theoretical considerations of Anglo-American educational theorists, including Erickson, Wolcott and Spindlers. According to Syrjäläinen (1994, 68), ethnographic research involves a long-term fieldwork period during which the researcher gathers data through participant observation and interviewing. The researcher tries to understand phenomena from the perspective of the people that he or she is investigating. Ethnography is both process and product. She tracks down its roots mainly in sociology, in particular to the Chicago School, and does not mention anthropology on this occasion. In her doctoral thesis (Syrjäläinen 1990), however, she does briefly allude to anthropology as the origin of ethnography. Eskola and Suoranta put more emphasis on the anthropological background in their definition of the ethnographical approach in education and social sciences. They state that:

> We talk about ethnography when it is a question of anthropological methodology or textual presentation.
>
> Ethnography is a mode of observation which takes place in natural settings of social reality. (Eskola & Suoranta 1998, 194; my translation)

According to Eskola and Suoranta, it is characteristic of ethnography that observation takes place in everyday situations, that data is gathered from several kinds of resources during long-term fieldwork, and that this gathering is rather unstructured. They also remark that the target of the investigation is often a single case or one group of people. The case study-analysis of Syrjälä and Numminen (1988, 24–37) has often been quoted as one of the pioneering works of Finnish educational qualitative research. They present ethnographic research as one type of case study, and they characterise ethnography in similar way as the authors above. The cultural aspect is emphasised more than in other definitions, however. In their view ethnographers are interested

in how human behaviour can be interpreted in relation to a community and through the culture of that community.

Eskola and Suoranta (1998, 105) claim that the Finnish tradition of ethnographic educational research is very narrow They find only two works which can be characterised as ethnographic: Syrjäläinen's 'Oppilaiden ja opettajan roolikäyttäytyminen luokkahuoneyhteisössä' (The Role Behaviour of Pupils and Teachers in the Classroom) (1990) and Laine's 'Ameba pulpetissa' (Ameba at Desk) (1997). I do not agree with them completely. For example, Tella's 'Introducing International Communications Networks and Electronic Mail into Foreign Language Classrooms' (1991) and the UTOPIA project could both be characterised as an ethnographic studies. Tella visited a number of schools during a fieldwork period and conducted ethnographic research using participant observation in foreign-language lessons and analysing e-mail messages. Despite this small addition, we could claim that the branch is still merely a shoot in Finland. On the other hand, there does seem to be an interest in ethnographic methodology among Finnish educators. Works of reference which include also considerations of ethnography of education, such as those I have quoted above, are available in Finnish. The new environments created by information and communication technologies provide a challenging target for the elaboration of methodology, and this may inspire educationalists to take more interest in ethnography (in the field of media education, for example).

Towards ethnography of media education

As I mentioned at the beginning of this chapter, Erickson explains how the shifting cultural milieu of the 20th century had implications in terms of changes in ethnography. Chapters 1 to 3 of this volume cover some of the emerging features which might be called new elements of today's cultural milieu. Viljanen describes how anthropologists question research targets and theoretical presumptions decade after decade, indicating the self-reflective character of the discipline. This discussion is also going on in Finnish anthropology as 'Kaukaa haettua' (Far-fetched) (Viljanen & Lahti, 1997) suggests. In this particular book, a group of leading Finnish anthropologists discuss changes in fieldwork, including the effects of the rapid developments in society. On the other hand, Fischer (1991) makes an interesting remark about the relationship between anthropological fieldwork and the development of information and communication technologies. He observes that film at the

beginning of this century and silicon chip at the latter part of it have influenced changes in the spatio-temporal-visual dimensions of social life. Modern anthropological fieldwork grew up in this new environment:

> film, for instance, was brought to India and was produced and disseminated not only in urban cinemas but also in rural travelling shows long before the Malinowskian revolution in anthropology began—and yet, oddly, until very recently, anthropology has largely ignored this perceptual world (Fischer 1991, 531).

Ethnography of education is also at a turning point. Our society is changing and our comprehension of school is changing. Virtual classes and flows of education are on the increase. Something similar to what Erickson was talking about in his article is happening today. The current cultural milieu is different from that of ten or twenty years ago. In the field of education, one indicator of this change is the emergence of media education in Finnish universities (given various names in different universities). This shift has implications on ethnography in general and in the context of education.

As indicated earlier, ethnographic research is carried out in natural settings. Accordingly, research takes place in which the phenomenon under study (a classroom, a school, a community) is situated. Interestingly, 'natural' brings 'nature' to mind. Nature, in turn, could be regarded as something different from technology, even opposite to it, as I mentioned earlier in the context of cyborgs. As a result, when you carry out an ethnographic investigation in environments which are created with the use of information and communication technologies, you are conducting naturalistic research in an unnatural environment! I admit that this previous sentence is partly a play on words. Nevertheless, the contradiction at which it hints brings to the surface, once again, the call for flexible thinking regarding traditional boundaries, such as that of between organisms and machines. Another thing that 'naturalistic' brings to the fore is the need to examine the nature of different kinds of environments which are based on the use of information and communication technologies. It is more convenient for us to claim that we are conducting a naturalistic research in such an environment if we can say something about its nature. I have attempted to do that in my research, as I hope the previous chapters verify.

Another thing worth thinking about is how the tools with which we examine these environments affect our ethnographic work. By 'tools' I refer to various forms of information and communication technologies. It is not only that we investigate environments which technology creates, but we also often

investigate them through technology. For example, we follow a network-based course through our computer, through groupware, through www technologies. The process of inquiry, then, is mediated. As I mentioned in Chapter one, in the words of Tella (1999), communication is increasingly mediated. In fact, mediation as a concept (c.f. Tella & Mononen-Aaltonen 1998, 111–118) is ethnographically relevant in terms of the new environments referred to above. The new information and communication technologies through which we examine those environments require new forms of mediation. We try to acquire knowledge using mediating technologies. Another thing is the effect these technologies have on the process of inquiry. Our investigation, then, is mediatised (c.f. Tella 1998, 119–121) by the very technologies we use. These two phenomena, mediation and mediatisation, are among the features that are emphasised in ethnographical studies of environments which information and communication technologies create.

What I have faced in the course of my research is the changing character of fieldwork. Our understanding of the word *field* has changed mirroring the wider changes around us. Söderholm (1997, 111) argues that, while fieldwork has been under constant rethinking by those who do it, it has been field*work* which has received renewed consideration, not *field*. Hannerz (1998) speaks about the problems in delineating the units of study in transnational studies (on *transnational*, see Chapter one). He wonders how ethnographers conceive of the units of their transnational research when these units are spatially dispersed. It need not be a village, a town, or a neighbourhood, and may be less bounded to a territory, cyberspace being one example here. A concrete question which arises is where an ethnographer should carry out his or her research. When a 'community may be spread over not two or three, but dozens or hundreds of locations in the world, how does one decide on a manageable selection, one that can yield the most desirable combined ethnography' (Hannerz 1998, 247). It is not just that an ethnographer would like to visit every corner of such a community, but an essential part of it may exist in a some kind of deterritorialised form, as he also remarks: 'ethnography may have to be *between* these sites' (Hannerz 1998, 247; emphasis original). I will come back to this theme when I discuss translocal ethnography. In the context of the virtual classroom, it is also a question of who inhabits these ethnographic fields. It is not only people that we find there, but people and technology mingled together in puzzling ways.

Morgan argued over ten years ago (1984) that qualitative research is not favoured by researchers of distance education because of the time and space separation. Accordingly, in the context of distance education, quantitative

methods such as questionnaire mailing are easier to use (Eastmond 1994, 131). The situation has now changed. New educational environments which information and communication technologies create provide interesting challenges for researchers who use ethnographic inquiry as well as other qualitative approaches in their study. In Jonassen's immense Handbook of Research For Educational Communications and Technology (1996) there is an article dedicated to qualitative research (Saveney & Robinson 1996). Although the authors mention several times the need to 'ask new questions' which new technologies bring about and the need 'to expand our views of what we should investigate and how' (Saveney & Robinson 1996, 1174), they do not shed any relevant new light on my problems of ethnographic research related to the use of technologies in education. The relationship between new information and communication technologies and qualitative research is developing. These 'new questions' have not been posed, let alone answered. Another well-known handbook, The Handbook of Qualitative Research in Education (LeCompte & al. 1992) include no article about the use of technology in education. This does not mean that there is no qualitative research on educational technology. For example, Woodward and Rieth (1997) emphasise the importance of the observational and naturalistic studies that have been conducted during the last two decades in technology research in special education. However, although ethnographic and qualitative research on the use of new technologies in education has been done, methodological considerations appear to be few in number. Reports on qualitative studies are to be found in journals of educational technology and in journals of distance education, but not so much in the literature on qualitative educational methodology or in anthropological writings on education. One exception is Anderson and McClard's (1993) anthropological research on study time and computing. In the late 1980s they investigated American freshmen students' conceptions of time and how these conceptions related to the use of computers. They collected computer data and they made observations of computer use in the freshman residence hall. [1] Another piece of research is Warschauer's (1998) study of a computer-based English as a Second Language writing course in a Hawaian college.

I made an effort to trace qualitative research reports in educational literature, mostly in journals which concern the use of information and communication technologies. My intention was to study how researchers treat methodological questions. How did it feel to conduct qualitative research involving information and communication technologies? Had they experienced any special methodological difficulties because of this relation to technology? In

general, do they bring up any particular issues which might further the development of qualitative research methodology (especially ethnography). In the following I will list my findings.

Tella's (1991; 1992a) research is interesting from my point of view. Like mine, it concerns a school network although the character of that network is somewhat different. His investigations concerned pupils' use of e-mail in English studies in Finland and in some other countries. His approach was ethnographic. He made participant observation in classrooms and analysed e-mail correspondence. He complimented his inquiry with questionnaires. Later, he continued with a Finnish network of schools in a project called UTOPIA (Tella 1994b). The methodological approach was similar to that in his earlier research. An interesting feature here is that the researcher analysed data which consisted of computer conference material, in other words early Internet material. Although he does not suggest that there is anything special from ethnographer's point of view in his research, I find some emerging special features in this new kind of educational environment. While the earlier study (Tella 1991) concerns of e-mail messages, the later one (Tella 1994b) shifts attention to computer conference. I found some change here towards the creation of a more coherent environment, through the use of information and communication technologies. While his earlier research is characterised as an ethnographic inquiry, in his later work Tella speaks somewhat confusingly about phenomenology, symbolic interactionism, the ethnogeny of the anthropomorphic model, and phenomenography. In his abstract he treats ethnography as a method of data gathering and analysis.

My other examples come from the English-speaking world. Howard investigated human-computer interactions with adult learners in Canada. He argued in 1994 that systematic qualitative examination is rare in this field (Howard 1994, 33). His approach was a phenomenological one involving unstructured interviews and life memories. Eastmond (1994) reports his research on adult distance education through computer conferencing in north-eastern United States. He used unstructured interviews and observations in students' homes and workplaces, and interviews with faculty and staff members. The aim of his study was to investigate student perspectives on learning in an on-line course. Eastmond gathered rather rich data over 18 months: over 1000 pages of field notes for analysis. His study resembles mine in some ways. He went on to make observations there where the learners were located, i.e. in their homes or workplaces. This virtual classroom, if we care to use the term here, consisted of students in their own settings and of the members of a distance education institution. However, Eastmond does not offer

any further methodological considerations about doing ethnographic research, which his work evidently is, in this kind of environment. Murphy et al. (1996) examined how pre-service student teachers and a group of graduate students at Texas A&M University perceived and used computer conferences. The students participated in a project which aimed to provide an authentic context within which pre-service teachers could learn about technology use in the classroom, and to provide graduate students with an opportunity to learn to moderate computer conferences. The researchers made a qualitative analysis of data from six computer conferences each of which had a specific content area. They also lurked at the conferences, but they do not make any particular remarks about this kind of participation. They conclude their analysis with two findings: 1) student moderator roles reflect the influence of both instructor and personal communication style, and 2) the participants adopted behaviours that fostered communication in a text-based environment and led to positive attitudes about computer conferencing (Murphy & al. 1996, 20). Larson and Bruning (1996) investigated interactive, collaborative, satellite-based mathematics courses in twenty-one Nebraska high schools. In this research, which they characterise as a multisite study in which qualitative research methods were applied, the researcher used three methods of data collection: 1) open-ended questions and statements, 2) classroom observations and interviews in four selected sites, and 3) additional semi-structured interviews. Larson and Bruning comment that classroom observations primarily served the purpose of methodological triangulation. They do not present any further methodological considerations. The research showed the effectiveness of collaborative satellite distance education in mathematics in providing the classroom teacher with resources which they could use with underachieving students and to which they would not typically have access. Saye (1997) conducted a two-year ethnographic investigation in a secondary school in the south-eastern United States in order to examine the role of 'electronic educational technology' in schooling from student's perspective. He collected data from interviews with nine senior students, teachers and administrators, from classroom observations, surveys and documents. He describes his research as microethnographic classroom study. He concludes that the majority of students, like their teachers, preferred technology as a support to traditional teacher-centred instruction. Land and Hannafin (1997) examined patterns of scientific understanding among four American seventh-graders in an Open-ended Learning Environment. This is a technology-based environment which combines computer-generated graphics, simulations, video and print-based materials. The researchers used think-

aloud protocols and interviews. One of them also participated in the lessons as a teacher's aide, but despite this the writers do not report participant observation as a method used. In fact, there are no special methodological considerations in their article. Land and Hannafin characterise their research as a 'qualitative study'. Herrman (1998) studied on-line communities. Her research is about an international on-line group of professionals and students of education and psychology, based on ListServer technology. The data was gathered during a five-year ethnographic study, as the author describes her research. I find some interesting methodological features in her article. She speaks about participant observation in which she 'proceeded slowly, from silent to voiced participation, and from side-channelled communication to public postings to the list' (Herrmann 1998, 17). Further, she interviewed some members of the community in person, by phone and via e-mail. Herrmann's work gives us a picture of a new kind of fieldwork that ethnographers in information and communication technologies face. Participant observation can take place from 'the anthropologist's armchair' through a screen and a keyboard. For example, Waskul and Douglass (1997) conducted participant observation by chatting in chat rooms in their study about the 'cyberself'.

This brief review refers to miscellaneous sources. Some of the research listed here was conducted in higher education, some in a school context, some is about computer conferences, and some is about videoconferencing. Although the review is not exhaustive (nor was it intended to be that), it tells us a couple of things. Firstly, qualitative research has been conducted in various contexts of educational technology. Qualitative research, including ethnographic research, can be and has been done regarding technology in education. Secondly, researchers, obviously, have not experienced any great need for methodological development. If this had been the case, I would have expected to find some methodological considerations in the texts. Thirdly, participant observation has been carried out from inside and from outside of the new environments that technology creates. Some researchers have made observations through technology, while others have observed users in situ (in a classroom or a in home, for example).

Table 2. Qualitative researches of use of information and communication technologies in Education.

	Howard	**Hermann**	**Wasskul & Douglas**	**Murphy & al.**	**Larson & Bruning**	**Saye**	**Eastmond**	**Tella**
Country/ Year	Canada 1994	International 1998	USA 1997	USA 1996	USA 1996	USA 1997	USA 1994	Finland/ International 1991
Data gathering	Interview & Life Memories	Participant observation & Interviews	Chatting Participant obaservation	Analysis of network data	Multisite participant observation	Participant observation	Participant observation	Participant observation & Analysis of network data
Participating in the net	No	Yes	Yes	No	No	No	No	No
Technology	PC	List server technology	Chat	Computer conference	Interactive collaborative satellite(-based course)	'electronic educational technology'	Computer conference	E-mail Internet
Special attention to methodology	No	No	No	Lurking	No	No	No	Some
Educational institution	Adult learners	University	–	College	High school	High school	Open learning	Upper secondary school
Character of research (as/if mentioned)	Phenomenological	Ethnography		Case study	Qualitative research methodology	Micro ethnography & Grounded theory	Ethnography	Ethnography & Microethnography

Different ethnographic approaches to the study of new environments created by information and communication technologies

Ethnographers' attempts to investigate new environments which information and communication technologies create have produced new terminology. Cyberspace ethnography, technography, cyber ethnography, cyber anthropology and cyborganthropology are used in academic writings to indicate and explain the changes which are taking place in ethnography.

Hakken (1999) tracks the origins of what he calls cyberspace ethnography. In the USA these origins go back to computer science in the 1950s and 1960s. Criticisms of technology were associated with the sociologists' interest in the impact of computers on society (but not vice versa). Ethnographic research was conducted by computing/work sociologists. Hakken mentions Braverman's (1974) research on the 'degradation of work' as an typical example. Ethnography also emerged in science, technology and society studies as well. I will discuss STS studies later in this chapter. After this brief history Hakken presents five streams of ethnography which are relevant to cyberspace:

1. A Braverman-influenced hybrid of critical computer science combined with ethnographically informed sociology
2. A practice of ethnographic study integrated into some form of contemporary information-systems development and social-psychologically oriented "field" studies on human-computer interaction
3. The sociology of techno-science, equally concerned with the day-to-day reproduction of actual technology actor networks as with their historical development
4. More general popular, postmodernist-influenced, approaches to cyber-issues, such as Computer Mediated Communication which is being developed especially in Communication and Cultural studies (Jones 1995, 1999)
5. An anthropologically-oriented tradition based on transferring older models of fieldwork into new venues, such as computerised workplaces, occupational and community groups, MUDS and MOOS, and larger cyberspace communities and on-line chat groups

(modified from Hakken 1999, 43)

Education is absent from Hakken's list. However, at least the two last streams he mentions are also relevant to ethnography in new educational environments. While some aspects are not of great interest here, the list does give a background to the development of ethnography up to the present day.

Hakken continues by arguing for ethnography in environments which information and communication technologies create. These arguments include:

> AITs [advanced information technologies] really are capable of mediating cultural reproduction in profoundly different ways from previous ITs [information technologies] (e.g. interpersonal conversation of book).
>
> AITs have come to mediate so heavily the lives of so many of the peoples whom anthropologists study that we can no longer ignore them.
>
> So many people are convinced that contemporary societies are currently experiencing a "Computer Revolution" [Hakken uses this expression to refer to phenomena such as the 'Information Society'] that, despite difficulties in documenting it, the perception itself is worth studying.
>
> Since a great deal of anthropology is about cultural change, understanding computarization is at the center of anthropology's interest in contemporary social formation reproduction. (Hakken 1999, 44)

Hakken speaks as an ethnographer who 'looks to the future'. He is interested in developing ethnography in correspondence with the increasing use and importance of information and communication technologies in today's cultures as well as conducting this kind of ethnographic research himself.

Some researchers conduct social research on technology under the rubric *technography*. By this they refer to:

> the social-scientific study of technical settings. [Technography] adopts certain features of the 'ethnographic' method, which draws on anthropologists' approaches to observing and describing social behaviour. For instance, social scientists involved in ethnographic studies join the technical setting as participant observers who work with 'natives', but who remain wary of straightforwardly accepting the language, beliefs and expectations that characterize the setting in which they are carrying out the study. (Woolgar 1996, 89)

As the concept itself suggests, technography associates ethnography with technology. According to Woolgar's definition, we could use this concept rather widely to define ethnographic research on people and in technical settings. However, the term is not, obviously, very widely used. Theoretically, it arose from the debate about technological determinism. The interpretative nature of technography, which reflects to the anthropological approach, is evident in the emphasis on the user perspective. 'Technographers' are inter-

ested in how users confront and respond to the social relations embodied in technologies. Woolgar continues:

> If we are to understand the effects of ICTs and the conditions for their success and failure, we must obviously give central role to considerations of the user ... We need to ask what generates and sustains users' expectations and what influences their responses to ICT systems. (Woolgar 1996, 90).

Gajjala speaks about *cyberethnography*. This is the study of online interaction. He describes it as an attempt to differentiate ethnography online from face-to-face ethnography. It concentrates on the textual nature of online interaction when it complicates discussions regarding presentation, authority and writing in cyberspace. Gajjala has himself contributed to cyberethnography by doing participant observation in a study of an e-list. [http://www.pitt.edu/~gajjala/define.html] *CyberAnthropology* completes this list of new terminology of ethnography. It seems to be used in the University of Florida.

> CyberAnthropology recognizes that the new 'virtual' communities are no longer defined by geographic or even semiotic (ethnic/religious/linguistic) boundaries. Instead, communities are being constructed in cyberspace on the basis of common affiliatative interests, transcending boundaries of class, nation race, gender and language. [http://www.clas.ufl.edu/users/seeker1/cyberanthro/CyberAnthropology.html]

Ethnography of virtual communities is, thus, one of the interests of Cyber-Anthropology. The definition above also questions what *field* is in this context. Instead of seeking boundaries of a field it emphasise a uniting interest or interests (like education in virtual classrooms).

These short flashes of variety in terminology indicate that several researchers around the world are working with similar current problems of ethnography. The solutions they have found so far are in the form of a new concepts, such as technography for Woolgar and cyberethnography for Gajjala. There does not yet appear to be any single imposing movement or school of ethnography of new environments, merely a variety of pioneers and trends.

These trends deal with the growing use and significance of information and communication technologies in human lives. Current developments are substantial in disciplines which investigate these human lives. Escobar discusses the situation in anthropology:

> If anthropology is to 're-enter the real world' and 'work in the present' it will be necessarily have to deal with the steady march of cyberculture. Cyberculture, moreover, offers a chance for anthropology to renew itself without reaching

> again, as it was the case with the anthropology of this century, a premature closure around the figures of the other and the same. These questions, and cyberculture generally, concern what anthropology is about: the story of life, as it has been and is being lived today, at this very moment. (Escobar 1996, 131–132)

The author argues that there is a new technology-based culture, to be called cyberculture or anything else, which anthropology cannot neglect. Further, this emerging culture provides a new world for anthropologists to explore. It is a challenge for them to find out what will become real and what remains fantasy in these developments. Escobar (1996, 115) makes a worthwhile comment when he remarks that much of the literature concerning new technologies has been written by authors of science fiction or enthusiastic technology builders. I agree with this notion. Names such as Gibson and Rheingold are often quoted in serious academic writings. On the other hand, the whole phenomenon of virtuality, as we saw, criss-crosses between the real and the imagined. Thus, the task of distinguishing these two is not easy, and perhaps not even always necessary. Among the many questions Escobar poses in his article, is one on how domains of cyberculture can be studied ethnographically, and how, for instance, notions of community, fieldwork and body will be transformed by new technologies (Escobar 1996, 113). What this entails is a: 'rather traditional ethnographic project: to describe, in the manner of initial diagnosis, what is happening in terms of the emerging practices and cultural transformations associated with rising technoscientific developments' (Escobar 1996, 119). The relationship between anthropology and advanced technologies is part of a wider branch of research, called science and technology studies (STS). 'STS topics of interest to anthropologists in recent years have ranged from ethnographies of scientists, laboratory studies, and studies of reproductive and medical technologies, gender and science, ethics and values, and science and engineering education to the more fashionable studies of new computer and biological technologies, virtual reality, virtual communities and cyberscpace' (Escobar 1996, 115). There appears to be, as Escobar's text suggests, a trend towards an anthropology of virtual culture, to use the concept favoured by Jones (1997) and his co-authors.

Translocal aspects of ethnography

Another branch of anthropology, which has its roots in the development of ethnography, could be called 'trans-anthropology'. In this I am referring to those anthropologists whose research concerns transnational and diasporic phenomena, for instance (Hannerz 1998). I have given attention to transnationalism and to its different concepts earlier in this chapter, as well as in previous chapters, and therefore there is no need to repeat them here. Instead, I will give some thought to the development of ethnography. One of the leading figures in the field of transnational studies, Arjun Appadurai, speaks about *transnational anthropology* and speculates on the emergence of a new kind of ethnography: Should we talk about cosmopolitan ethnography, global ethnography, macro ethnography, or, perhaps, translocal ethnography? (Appadurai 1996, 51). This conceptual consideration is based on notion of:

> ...the deterritorialized world that many persons inhabit and the possible lives that many persons are able to envision. The terms of the negotiation between imagined lives and deterritorialized worlds are complex, and they surely cannot be captured by the localizing strategies of traditional ethnography alone. What a new style of ethnography can do is to capture the impact of deterritorialization on the imaginative resources of lived, local experiences. Put another way, the task of ethnography now becomes the unraveling of a conuncrum: what is the nature of locality as a lived experience in a globalized, deterritorialized world? (Appadurai 1996, 51–52)

I mentioned above the term 'translocal'. It is a useful term in media education. Appadurai speaks about *translocalities* (Appadurai 1996, 192), by which he means localities which are the result of the movement of people (tourists, refugees, foreign workers). Garsten interprets translocality as a locality which:

> while belonging in some sense to a particular nation-state or other spatially bounded form of social organization, is made up of "kinds of locals" and circulating populations woven together, which make social relations inherently unstable and the creation of locality problematic. (Garsten 1999, 49)

Translocality, in the Appaduraian sense, is a locality in any case and more or less a place: tourist sites, refugee camps, settlements of migrant workers. They are creations of globalisation. Globalisation is also behind the methodological considerations of a group of Swedish anthropologists. Hannerz and his colleagues have encouraged ethnographers to take seriously the meth-

odological implications of globalisation. They note that geographical and similar boundaries are increasingly of less importance for the practice of ethnography concerning phenomena such as global education, business and mass media.

Dahlén, Hannerz and Lindquist (1996) treat *translocal* in a way which differs somewhat from the ideas of Appadurai. They pose the question how to define the field in translocal research. While traditionally, for an anthropologist a field has been a geographical location, a place, it cannot be defined with spatial terms in translocal research. They suggest that a *translocal field* could be defined in terms of interaction between sites, a translocal field of interaction based on common ideas and interests and on the activities which are in accordance with them. Geographical aspects are of less importance. Activities inside the field must be more or less regular in character. The idea of field has slightly changed from the ethnographical view as multi-site research (or multi-locale ethnography [Marcus & Fischer 1986, 93]), including several localities, to something which is between people who live or work in separate localities. According to Appadurai's approach somebody (or his or her ancestors) have moved from one place to another. The Swedish view does not necessitate any moving of people. Dahlén et al. prophesy increasing importance for translocal fields:

> Translocality will become more and more usual in fieldwork. Not only anthropologists will increasingly conduct translocal research … [b]ut also those anthropologists who work with a traditional, geographically bound field will meet translocality in terms of the ideas and cultural conceptions of their fields. (Dahlen & al. 1996, 14; my translation from Swedish)

There is some research that has been characterised as translocal. Garsten (1999) investigated the globalisation of the organisational culture of Apple Computers. Her research concerned employees in different offices of the company and the way in which they used information and communication technologies to be in touch with each other. The translocal character of her work was manifested both as fieldwork in local offices and as the study of interaction between people in these separate offices. Garsten states that as an ethnographer she became aware of the increasingly deterritorialised nature of her anthropological research target, organisational culture. Uimonen, another researcher focusing on translocal ethnography, calls cyberspace as "site". She points to the need 'to acknowledge more "translocal" sites, the existence of which are important components of the network/s of sites that multi-sited fieldwork aims to capture' (Uimonen 1999, 12). If deterritorialisation is seen

in the same way as I described in Chapter one, *translocal* will also be seen in a new light. For today's ethnographical approach to information and communication environments, giving a multi-site type meaning to translocal fields is not very useful. We need to treat a translocal field as a field in which the "site" has a deterritorialised dimension (such as eduscape). While members of this kind of field still really live in localities, wherever they are, the field itself is not 'a sum of these localities'. Hakken calls attention to the ethnographer's willingness to find the geographical "thereness" of Malinowskian fieldwork. One solution to this problem is to presume 'that on-line activities constitute a sufficient analogy to the field site' (Hakken 1999, 58). This is, to a great extent, what the concept of virtual community is all about. It also comes near the idea of the translocal field as an entity of interaction. Nor is Hakken content with the term multi-sited in the context of cyberspace, which still retains the notion of localised sites. Instead he suggests terms such as *non-site bound* and *trans-sited*. Dahlén et al.'s view of the translocal field as interaction is a good move in this direction.

In the educational context, field has often meant a particular classroom or a school. Some research may also concerned several classrooms or schools, but usually there is no interaction between them. Also in education ethnographers increasingly face research targets to which field does not apply on geographical or physical grounds, since it include members, individuals as well as groups of people, in separate locations. The crucial point here is that these members interact on the basis of some educational interests using information and communication technologies on more or less regularly. The idea of their coming together through interaction arises from their educational interests and needs, and the activities they carry out thus constitute to the satisfying of these needs and interests.

Ethnography faces cyborgs

It is not only our understanding of field which changes the ethnographic study of environments which information and communication technologies create. It is a the question of who inhabits these environments. I refer to the problem which raised in Chapter three and my quotation from quoting Stone: 'Who am I studying? A group of people? Their machines? A group of people and or in their machines? Or something else?' (Stone 1991, 81).

An interesting new feature in anthropology is *cyborg anthropology* which was launched as a concept among American anthropologists in the

early 1990s. Downey, Dumit and Williams, who are pioneers in this field, define cyborg anthropology in the following way:

> We view cyborg anthropology both as an activity of theorizing and as a vehicle enchanging the participation of cultural anthropologists in contemporary societies. Cyborg anthropology brings the cultural anthropology of science and technology into conversation with established activities in science and technology studies (STS) and feminist studies of science, technology, and medicine. As a theorizing activity, it takes the relations among knowledge production, technological production, and subject production to be a crucial area of anthropological research. Although the cyborg image originated in space research and science fiction to refer to forms of life that are part human and part machine, it is by no means confined to the world of high technology. Rather, cyborg anthropology calls attention more generally to the cultural production of human distinctiviness by examining ethnographically the boundaries between humans and machines and our visions of the differences that constitutes these boundaries. (Downey & al. 1995, 264–265)

The two last sentences are interesting. The cyborg metaphor, as we have already seen, has its origins in the scientific work which relates to space flight, and nowadays the most familiar use of this metaphor is in science fiction and the fantasy business. This state of affairs easily leads to the association of cyborgs with non-scientific nonsense. However, as Downey et al. emphasise, it is a question of human-machine or human-technology relations. I will quote Donna Haraway here. Although she is not an anthropologist but writes, as she says herself, with ‘applied visa for an extended stay in the permeable territories of anthropology’ (Haraway 1997, 49), we would do well to pay attention to the message of this pioneer of the cyborg research.

> Cyborg anthropology attempts to refigure provocatively the border relations among specific humans, other organisms, and machines. The interface between specifically located people, other organisms, and machines turns out to be an excellent field site for ethnographic inquiry into what counts as self-acting and as a collective empowerment. I call that field site culture and practice of technoscience. (Haraway 1997, 52)

Further, it has been argued that:

> ... the human-centered foundation of anthropological discourse, and the placing of agency solely on the skin-bound individual ... must be displaced, the emerging cyborg anthropologists adamantly claim that human and social reality is as much a product of machines as of human activity, that we should grant agency to machines (Escobar 1996, 117–118)

David Tomas envisioned the development of anthropology in a rather radical way, speaking of postorganic anthropology. He claims that anthropologists are forced to take into account not only the organic Other 'but also the postorganic, the classical (hardware-interfaced) cyborg and the postclassical, (software-interfaced) transorganic data-based cyborg or personality construct' (Tomas 1991, 32). The shift towards this new anthropological view of cyberspace is part of the wider change to a postorganic society and to digital life-forms through software systems.

What is of interest here is how cyborg anthropologists have been on the lookout for a change in ethnography:

> How the positioning of technologies has defined the boundaries of "the field" as well as the positioning of anthropologists within it has been a notable silence in ethnographic writing. (Downey & al. 1995, 266)
>
> [A] current study for cyborg anthropology is a recognition of new areas or field sites in which to examine ethnographically how technologies get to participate as agents in producing and reproducing the diverse features of social life (Downey & al. 1995, 267)

According Escobar, the elaboration of ethnography is a crucial part of cyborg anthropology. Among the many issues he raises on this occasion is the appearance of computer-mediated-communities, as he calls them, including virtual communities.

> Anthropological analysis in this area can be crucial not only for understanding what these new 'villages' and 'communities' are but, equally important, for imagining the kinds of communities that human groups can create with the help of emerging technologies. We can anticipate active discussions on proper methods to study these communities, including questions of online/offline fieldwork, boundaries of the group to be studied, interpretation, and ethics. (Escobar 1996, 122)

Hakken stresses that 'humans have been quite "cyborgic" from early in the emergence of species. Technology is so deeply implicated in human existence that it is a core aspect of our being … we have probably almost always been cyborgs' (Hakken 1999, 72). He is not concerned with the implementation of medical devices (heart pacemakers and artificial hips) inside a human body through the barrier of the skin. He criticises some theoretical trends in cyborg anthropology (Davis-Floyd 1995) which produce a dichotomy between human and cyborg. Instead, he promotes the idea of continuum from the all-biological to the all-artificial. When we move along this continuum

(from the biological to the artificial), some steps in the development of cyborgification may be such turning-points that we are justified in treating cyborg phenomena through typologies which reveal substantial differences in the ratio of biological to artificial content. One such step 'may be closely tied to the enhanced information processing characteristics of AIT, that in cyberspace we become cyborgs of profoundly new type' (Hakken 1999, 72).

Conclusion

I began this chapter by pointing to the relationship between ethnography and a wider intellectual and cultural milieu. According to Erickson, the Malinowskian shift in ethnography was a result of this kind of relationship. I have speculated in this chapter that there may be a call for a similar renewing of ethnography in our era of emerging cultures and environments which information and communication technologies create.

The Finnish ethnography of education is a rather young branch of research, based rather heavily on the Anglo-American tradition. While new learning environments have been widely under study internationally, methodological considerations appear to be few as far as research of these new environments is concerned. Media education as an emerging sub-discipline may provide new challenges for elaborate Finnish ethnographical research.

Outside of education is a wealth of theoretical contemplations of new perspectives on ethnography involving new research targets which we can put under the umbrella of cyberculture. I have mentioned some terminology that is relevant in this respect. What was paramount on that occasion was the idea of translocal ethnography which emphasises interaction between members of an ethnographical field. This indicates a shift from geography-bound to a more deterritorialised ethnography, such as in virtual classrooms. Another point involved speculations about how the character of human beings as ethnographic research targets may change in new technological environments. The heavy involvement of information and communication technologies in association with the absence of the physical body confounds the human-technological and biological-artificial boundaries. These are problems which cyborg anthropology has brought into the discussion.

Note

[1] Anderson and McClard found that students have a particular orientation towards time which differs from that of others, including university administrators and professors. They also found that the intervention of the computer changed this orientation because, for example, the computer was an effective tool in times of crisis, or because students began to do their papers further in advance than they did formerly due to the revision possibilities the computer provides.

CHAPTER 5

An Ethnographer's View of the Kilpisjärvi Project

Introduction

In Chapters 5 to 9 I will report my research which was part of wider research and development project called *the Kilpisjärvi project* concerning the use of information and communication technologies in lower-secondary school education and networking of schools (Husu & al.1994; Meisalo 1996). There was an earlier research project with the same name (Urponen & Vesterinen 1986) which dealt with social issues of the Kilpisjärvi village and was part of an arctic building project. Some of the results of the earlier research are relevant here, but otherwise there is no further connection between the two projects.

The Kilpisjärvi project deals with the establishment of a lower-secondary school in a small, geographically isolated village in north-eastern Lapland. Parents and schoolchildren of the Kilpisjärvi community wanted to establish a new school so that pupils would not need to move to a boarding school almost 200 kilometres away. There was already an elementary school in the village. The lower-secondary school was established in 1994 with the help of the Second Teacher Training School and the Department of Teacher Education of Helsinki University. These two schools were linked together using information and communication technologies, mainly ISDN-based videoconferencing complemented with audiographics, fax and e-mail.

Before going any further, I will consider some ethical issues here. I will use the real names of the locations and schools on the following pages. Kilpisjärvi is a real place in north-western Finland and, similarly, the Second Teacher Training School of Helsinki University and the Kilpisjärvi School are the real names of the schools in which I conducted my research. My decision not to use pseudonyms was based on an inclination to avoid quasi-pseudonyms. By this I refer to the kind of approach to ethnographic writing as, for example, Roberts (1982) took. He conducted an anthropological research in the Häme Province, in southern Finland. He used the pseudonym 'Pellava' for the the municipality in which he conducted his inquiry. When

he describes the geography of 'Pellava' he refers to 'Lammin kunnan vuoden 1975 kunnalliskertomus' (The Communal Report for 1975 of the Commune of Lammi). Accordingly, you cannot avoid revealing that 'Pellava' is Lammi. I was afraid that the same would happen to me. The Kilpisjärvi project has been rather famous in Finland and several references I use has 'Kilpisjärvi' in the title. The same is true of the Second Teacher Training School. The participation of this school in the Kilpisjärvi project is well known and a book (Salminen 1997) has been published on the subject entitled: 'Etäopetus koulussa: Kilpisjärvi-projekti 1994–1997' (Distance education in school: The Kilpisjärvi project 1994–1997). Accordingly, anonymity is not the choice of the school itself.

The anonymity of the people under investigation is a more tricky question, however. I will use expressions such as *a pupil in Kilpisjärvi*, *pupils in Kilpisjärvi*, or *one of the parents in Kilpisjärvi*, *all the distance teachers*, in my text. The numbers of pupils, teachers and parents who where involved in this project were small. The anonymity of these people is therefore questionable. On the other hand, all of them knew that they would be investigated and reported on in public. This, I hope, will ease the ethical issue.

Background of the project

Who uses technology and why? This simple question is a good starting point from which to investigate the background of the Kilpisjärvi project. It is also the question that Hank Bromley poses in his study of interchange between society and technology regarding the use of technology in education. Both society and technology have their own influence on the way in which technology is used. According to the deterministic view, this use is dictated by technology itself. An alternative view emphasises users' intentions regarding technology as a neutral tool. The way technology is used is, then, determined by users' needs and interests. Hank Bromley (1997) presents an intermediate model for analysing interaction between society and technology, both at the macro and micro levels. In brief, Bromley's model suggests that at the macro level of the context of development, encounters between previous technology and social determinants produce new technology which face social determinants at the micro level of the context of use, producing social impacts. Interchange between society and technology follows here the pattern: society—technology—society. Bromley's model provides a framework for analysing some salient elements in the background of the Kilpisjärvi project.

I will not deal with the technical application of the project here, which have already been reported by Salminen (1996).

The Macro Level

In the first chapter I discussed the Finnish educational atmosphere from the perspective of the information society. Official governmental policy fosters the development towards an ever more elaborate information society with regard to education as well as other social areas. This presents a challenge for educational institutions, including schools and departments of teacher education, to meet the requirements of our future society and to benefit from the opportunities that the information society provides. In the days when the Kilpisjärvi project was about to begin, teacher educators seemed to be aware of this challenge. A report concerning the use of information and communication technology in teacher education was entitled 'Näytön edessä' (Meisalo & Lavonen 1995). The title is a wordplay meaning both 'In Front of the Screen' and 'Giving Proof'. The report was written by a working party which contemplated how the requirements for basic information-society skills should be addressed in the field of education. The working party concluded that teacher education had a crucial role here (Meisalo & Lavonen 1995, iii), and it referred to the Kilpisjärvi project, which had recently begun, as one example of endeavours in this direction.

Another feature of the macro-level background of the Kilpisjärvi project is the position of teacher-training schools. A special characteristic of the Finnish teacher education is that it is based in universities. Classroom teachers complete a Master of Education degree, while subject teachers complete a Master of Arts in their own discipline. The shift to the present academic teacher education, which emphasises theoretical studies, took place in the late seventies, replacing the former more practical teacher-college education system. The teacher-training schools of Helsinki University were part of The Department of Teacher Education, and thus part of the university when the project started. (The situation has somewhat changed since then, but the teacher-training schools are still included in the Faculty of Education.) During the years before the Kilpisjärvi project, this state of affairs had been severely threatened. In 1992 the Ministry of Education set up a committee whose function was to prepare for the possible discontinuation of the training-school system (Ministry of Education, 1993a). The main reason behind this threat was the poor economic situation of the State and the need to de-

crease the numbers of personnel in universities. One of the points which was criticised by the committee was that, due to the increasing number of student teachers, training schools had difficulties organising practice periods for all of them. Teacher educators were not at all sympathetic to these problems. Another committee, representing departments of teacher education for the most part, took an opposing stand. This committee declared that teacher-training schools were an essential part of teacher education, a place where theory and practice could meet. According to the committee, these schools were also important as innovative institutions, fostering beneficial research and development work and predicting teachers' work in the future (Ministry of Education 1993b, 47–48). These opinions committee found favour in Parliament, and so far teacher training schools have been saved. Their future is still not at all secure.

On the macro level, the Kilpisjärvi case concerns with the educational situation in sparsely-populated areas. I will say a few words about that, too. Rural education is once again facing troubled times in Finland. A significant underlying factor is the deep economic crisis at the beginning of the 1990s which caused the closing down of a series of small rural schools. In the early 1960s, when the grounds for the present comprehensive school system were set Parliament emphasised the need for educational equality between privileged and less privileged areas of the country. A rather common opinion was that the delivery of educational services in sparsely-populated areas was not satisfactory. Thus, geographical equality was one of the aims of the comprehensive-school system from the very beginning (Jakku-Sihvonen, 1996).

In the early 1980s two Finnish authorities presented an optimistic view of the future of small rural schools in an OECD/CERI report (Sher, 1981):

> In the planning of the nation's school network the Finnish authorities have had to choose between two alternatives: to take rural pupils long distances to large schools (where the organization of schooling would perhaps be easier and more economical), or to keep the schools as near as possible to the pupils' homes and have many small schools. The latter strategy has been adopted as fully as possible in recent years. ... [T]he Finnish authorities believe that maintaining as many schools as possible will promote equal opportunities for education in all parts of the country—even though many schools will remain rather small. (Laukkanen & Muhonen 1981, 275–276)

In 1990, when Finland was one of the richest countries in the world, there still seemed to be goodwill towards small schools. A high-ranking Finnish authority forecast the coming developments in the 1990s:

> At the end of the nineties the number of rural schools [in Finland] will be almost the same as it is now. There is a risk of economic and political decisions which could produce some changes, but the government promises to continue to provide regional coverage by the school network. (Yrjönsuuri 1990, 6)
>
> The number of rural schools may decrease somewhat, but most of them will survive. (Yrjönsuuri 1990, 3)

This forecast was based primarily on demographic estimations, birth rates and migration. Wisely, Yrjönsuuri stated that there was a risk of economic and political changes which might have an impact on rural education. This was exactly what happened. In the early 1990s, the country was faced with a deep economic crisis, and support by the State to maintain the delivery of education diminished. The closing down of small schools became, once again, a tempting idea for decision-makers in municipalities. In 1993, a new law concerning general schooling once again gave municipalities the freedom to decide how it should be organised. This, in turn, was part of a wider development in governmental policy towards the decentralisation of power. In education, this trend has been apparent in the weakening of centralised control and the shift to more peripheral decision making. Instead of the earlier, strict national educational policy, power has been decentralised to a local level. Tendencies towards decentralisation have also affected Finnish curriculum policy, with a shift from a very detailed core curriculum to a more general framework, enabling local curriculum design. A new national school curriculum, which outlines the main goals and encourages local school-based curricula, was adopted into use in 1995.

The decentralisation of power has had implications at the local level in Finnish rural municipalities. The National Board of Education conducted a study in 1995 regarding equality in education. The main aim of the research was to investigate how the decreased funding of schools has had affected on education and educational equality in Finland. According to the research report (Jakku-Sihvonen & al., 1996), there were 4,539 primary and lower-secondary schools in Finland in 1994. Between 1980-1994 a total of 684 primary and lower secondary schools had been closed down. However, during the same period, 291 new schools were established, thus the total loss of schools was only 393. However, a more careful look at the distinctions between different parts of the country, gives a better picture of the developments in all of the schools. Between 1980 and 1994, 51 schools were closed down and 111 schools were established in the region around the Helsinki metropolitan area. Of all new schools, 38,2% were situated in this region.

There was a different pattern in the two northernmost provinces of the country. Ten new schools were established and 86 were closed down in Lappi and 34 new schools started and 125 schools closed in the Oulu province. The report (Niemi & Ojala, 1996, 147) states that most of the closed-down primary schools were small rural schools. The reasons for closing them were: decreased funding by the State, the economic problems of the municipalities and lower levels of enrolment of pupils in small schools.

It is a question of how rural communities can stay viable in the current situation of social change, and how rural people can develop their living conditions. The use of information and communication technology may be one way for rural schools to secure the continuity of their existence, and at the same time enhance the quality of education. It provides an opportunity for a school to loosen the restrictions caused by its small size or isolated location, and to widen its curriculum options (Kynäslahti & Stevens, 1996).

The Micro Level

The micro level in my research concerns the people and the school in Kilpisjärvi and the Teacher Training School. I will discuss the motives of the Kilpisjärvi people to be involved in the project several times in this volume. Thus, it is not sensible to go into detail here. Briefly, people in Kilpisjärvi wanted their children to be able to continue their studies at the secondary level in the village. This was a problem for the local school which had offered only primary-level education up to that point. For the obligatory secondary level the children (13–15 years old) were forced to move to the boarding school in Hetta, the centre of the municipality, almost 200 kilometres away. The parents found this a severe problem for the children, for themselves and for the whole community. The lack of a local lower-secondary school drove many families out of the village when their children reached the relevant age. This is why people started to campaign for a secondary school in the village. However, they were aware of the disadvantages of a small rural school (for disadvantages, see Kalaoja 1988, 78–85). The parents were concerned that the children might become too isolated in the village, lacking contacts with other children of their own age and with outside world. It might also be difficult to attract competent teachers, for example in subjects such as Finnish, History, Religion and tutoring. One teacher would have to teach many subjects and so the number of teachers would be limited. The use of information and communication technology appeared as an opportunity for the peo-

ple in the Kilpisjärvi village to establish a lower-secondary school and to enhance the living conditions in this geographically-isolated community.

The situation of the Teacher Training School differs of that from the Kilpisjärvi School. On the Finnish scale, it is a big urban school with a great variety of courses in many subjects. Thus, its interest in participating in the project did not lie in widening the curriculum or in improving the competence of teaching. It was rather rooted in the information society discussion and the need to develop teacher education to meet future requirements. The project offered the Teacher Training School a chance to train student teachers to use distance education technologies, as well as a chance to develop the pedagogy for videoconferencing in the school context. Despite the sovereignty of the school to deliver education, the teacher-training schools would also receive extra resources through the link, in other words, they would acquire 'classrooms' for student teachers. According to the committee's (1993a) report, teacher-training schools were stretched and there were difficulties in organising practice periods for all student teachers. Therefore, the pupil groups could function as outside practise resources through electronic links. Further, collaboration with a small rural school would provide the opportunity to introduce rural schools as a pedagogical environment for student teachers. One of the defects of teacher education, in regard to rural education, is that the rural environment and small rural schools are too often neglected (Bell & Sigsworth, 1987; Kalaoja, 1991). Thus, the project was a promise to develop teacher education in this sense.

There were also other motives. Teacher-training schools had faced a situation quite similar to that of rural schools in the 1990s: the threat of being closed down. More precisely, there was a danger that teacher-training schools would lose their status and privileges, and they would continue their work as municipal schools, i.e. as 'ordinary schools'. To ensure their future, they have therefore been anxious to develop their activities. For the Second Teacher Training School of Helsinki University, research and development work has been one way to display its academic character and its capabilities to bring together theory and practice. The emergence of the Kilpisjärvi project provided the school with the opportunity to be involved in educational research to experiment with new forms of education, and to establish the reputation of teacher-training schools as innovative research units.

The Kilpisjärvi people joined the project with their own needs and interests. In some respect these needs and interests were theirs alone, but they also reflected wider developments in Finnish society. Thus the interests of the two sets of participants matched. I would like to use again a term which I

have, apparently, fallen, the milieu. It was into this kind of micro milieu that the Kilpisjärvi people entered in 1994.

The research and the research team of the Kilpisjärvi project

The Kilpisjärvi project research team consisted of eight persons with Professor Meisalo at the head. The performance of the team is reported elsewhere (Husu & al. 1994; Meisalo 1996; Falck & al. 1997). The main objectives of research of the Kilpisjärvi project were defined in the 1994 report in the following way:

1. To investigate aspects of technical and instructional access in classroom focused distance education, i.e. to make clear the technical and instructional arrangements which are needed to make distance teaching between two classrooms possible.
2. To investigate aspects of quality in the instructional process of classroom focused distance education:
   2.1 What kinds of teaching and studying methods are developed, and how do they function in the teaching situations?
   2.2 What kinds of teacher and pupil roles can be found in the process?
   2.3 How does the social climate develop in the "double classroom"?
3. To investigate what meaning classroom focused distance education has for the teachers, pupils and local communities involved.

(Falck 1996, 57)

The research targets were divided among the research team without much difficulty. Each researcher chose targets according to his or her own interests. These topics included for example the teacher's pedagogical thinking, the teacher's planning of the teaching, verbal classroom interaction and the participants' attitudes towards information and communication technologies.

My part in the research was concentrated on the third main task focusing on the perspective of Kilpisjärvi. As I will explain in this chapter, my research interest somewhat changed from the beginning of the project. Because of the holistic character of ethnography, my research is also relevant, to some extent, to the second main task listed above. My results report what was going on in online lessons, and I also describe features which partly answer

'What kinds of teaching and studying methods are developed, and how do they function in the teaching situations?' (2.1). I also say something about teachers' and pupils' roles (2.2), and describe issues which deal with 'the social climate' (2.3) of the "double classroom" (virtual classroom).

The Kilpisjärvi project from a qualitative research perspective

The Kilpisjärvi project has been classified as action research. One year after the project started, Falck (1996) analysed the ongoing research and argued that the most appropriate classification was as a form of action research. She concluded that, when judged on the grounds of the key points suggested by Kemmis and McTaggart (1988), the Kilpisjärvi project:

> "is in accordance with or at least strives towards most of the key points. Goals and methods like improving practice by changing it, developing through a self-reflective spiral, collaboration, participation theorising, collecting and analysing evidence, and starting small are very much in line with what [the researchers of the Kilpisjärvi project] are trying to do" (Falck 1996, 60)

What was not addressed, in that phase of the project (1996), were key points which refer to action research as a critical and emancipatory political process (Falck 1996, 60).

I discussed different forms of qualitative research in the previous chapter. I tried to locate ethnography in the family of qualitative approaches, action research being one of them. It was seen as performance in which the research aims are to improve educational practice by or in collaboration with practitioners. The ethnographer, on the other hand, tries to avoid any strong impact that the research he or she is conducting might have on the people under study. Although an ethnographer participates in the daily lives of people, he or she does not aim to change that daily life. As a result, there is some tension between action research and ethnographic research. What, then, was it about my ethnographic research in relation to the wider research that was conducted in the Kilpisjärvi project, that characterised it as action research? First, as an ethnographer I worked as ethnographers are used to working: I listened, I kept my eyes open, I interviewed, I hung around. I absorbed information rather than delivered knowledge. I was not there to tell people how they should change their behaviour in order to make the Kilpisjärvi project work better. Second, as a part of the whole project, my contribution also be-

came a part of action research. I informed the entire research team what I had found out in my fieldwork and what kind of results I obtained. These contributions obviously had some consequences for the practices of the project. Accordingly, my ethnographic inquiry may have caused some change to the phenomenon that I investigated. I did not intentionally influence, and I did not want to influence, directly the everyday life of the Kilpisjärvi school, the relationship between the school and the surrounding community, or the online lessons. I just carried out participant observation. However, from the point of view of the whole Kilpisjärvi project, my contribution and the contributions of other members of the research team, targeted to improve educational practices.

What kind of indirect impact did I have? I have not analysed this question systematically. In the following chapters I give some insights which could provide some answers. The most significant contribution, obviously, is the information which I brought from Kilpisjärvi to the teachers in Helsinki. They wanted to know how online lessons worked when observed in situ in Kilpisjärvi, if the pupils followed orders that the teacher had given, and whether they learned enough in their online lessons. The Helsinki teachers were given similar information also in their discussions with the Kilpisjärvi teachers. However, the Kilpisjärvi teachers did not participate in the online lessons as I did.

In conclusion, let me return to the basic question. Was my research action research or not? The answer is: 'No'. My work as researcher was not aimed at changing things, but to try to interpret them and to bring out the voice of the local people in Kilpisjärvi. However, when doing this, I was aware that the results of my work may be of benefit, in Tesch's (1990, 50) words, in improving educational practices.

Preliminary research

My eagerness to investigate the project from the Kilpisjärvi perspective arose from previous participant observation that I carried out in the Ruskela primary school in the Tuusula municipality.

A group of student teachers at the Department of Teacher Education at Helsinki University experimented with the use of audiographics in school education during the school year 1993–1994. These students in Helsinki taught pupils in Ruskela through an audiographics link. Some parents in Ruskela village proposed that the Department of Teacher Education, which used

audiographics for distance learning in teacher education, should experiment with the technique and deliver distance education to the small local school. Audiographics in the early 1990s was a rather new thing in the Finnish educational context. It was hardly used at all at the school level, and distance education in general was a rather unfamiliar mode of education for schools. Behind the parents' proposal, at least in part, was the threat that the local school would be closed down. The pupils in the upper grades were transported to a bigger school in another village. Thus, it was critical to enhance the performance potential of the school to include the whole primary education level, making it a more sovereign and powerful educational unit.

In order to get some idea of 'what is going on there' at the other end of the link, I went to Ruskela to make observations. I did not conduct any systematic ethnographic research there. My aim was to get to know how pupils were experiencing the new kind of teaching, how they worked during these distance lessons and what the whole situation looked like in general as far as the school was concerned. I discussed the use of audiographics with the local teachers. I brought the knowledge I gained there to discussions with my colleagues, the same colleagues who later formed the Kilpisjärvi project research group.

Although my activities in Ruskela School cannot be called ethnographic research, the experiences I had there turned out to be some kind of preliminary research for my later ethnographic work in the Kilpisjärvi project. This earlier experience meant that I was not entirely a new boy when it came to conducting participant observation in a technologically-created classroom, when I entered the Kilpisjärvi School for the first time.

A brief history of the project

Above, following Bromley's ideas, I identified 'who' was involved in the project and 'why'. I will now give a brief view to the history of the case. This goes back to 1990 when the Department of Teacher Education started experiment with distance education for in-service teachers (Kynäslahti & al. 1994). To serve the needs of students in different parts of the country the in-service training unit (Luokanopettajan poikkeuskoulutus) established audioconferencing links and, later, audiographic links between Helsinki and various localities in Finland.

Since the reactions to the use of technology were mainly positive, the idea arose to test it in a school context as I described above. These experi-

ments attracted a certain amount in media and they aroused interest among the wider public. The central administration of Helsinki University was interested to develop the use of information and communication technologies in teaching, and in supporting the research and development work which had started at the Department of Teacher Education. At the end of 1993, the central authorities at the university asked the department to establish a project in which the department and its teacher training school would collaborate with the Kilpisjärvi school using information and communication technology. The aim of this collaboration was to support the process of establishing a lower-secondary school in the remote village of Kilpisjärvi. The University of Helsinki has a research station in this village. Thus, making schooling easier for the children of the personnel of the station was one reason behind the interest of the university. The department answered the call, and the project started in 1994.

The research team has published several reports and articles on the project. Full details of the technology used, the technical and pedagogical the training of teachers and pupils, funding, and other basic information which is not the main interest in my research, are to be found in these publications (see for example Husu & al. 1994; Meisalo 1996; Falck & al. 1997).

The research focus

'There has never been a standard format of presentation for ethnographic research reports.', argues Hammersley (1990, 18). He continues by suggesting that the structure which is recommended for quantitative reports is seldom suitable for ethnography. Creswell widens the perspective to embrace qualitative research in general: 'Unlike with quantitative designs, few writers agree on a precise procedure for data collection, analysis, and reporting of qualitative research.' (Creswell 1994, 143). This leaves the field open for the researcher, which is a good thing in terms of flexibility but which could lead the researcher astray in its vagueness. As mentioned in Chapter four, the Finnish tradition of ethnography of education is very narrow. Therefore, I do not have a wide range of examples to give to illustrate how my Finnish colleagues have reported their research. According to Creswell (1994, 143), guidebooks in this field are few. As a guideline I will, to some extent, follow Hammersley's (1990) ideas about ethnographic writing. I will then discuss the research focus, the case(s), and the methods used. I will also describe my

different roles in the fieldwork, which is also a typical feature in ethnographic study (Kelles-Viitanen 1984; Syrjäläinen 1990; Creswell 1994)

With *research focus* Hammersley refers 'to the most general set of phenomena about which the study makes claims, and the aspects of them that are concerned' (Hammersley 1990, 24). My research focus is:

> **This research is about inter-institutional networks of schools where information and communication technology is used intensively in the organising of education, looked at from the perspective of a small school.**

There are three main components in my study:

1) The community

The community means here mainly the parents of the four pupils who completed their lower secondary school education in the Kilpisjärvi school during 1994–95. It was they who were my main informants from the community's side. However, I lived in the village during my field trips and got to know it quite well. I heard people comment about the project and I was informed by the parents what villagers in general thought about their local school. I also met parents of other pupils during school days and at parental evenings. Thus, the 'community' is not strictly restricted to the parents of those four pupils. On the other hand, pupils belong to the community as well, and so do teachers. In any case, I located both pupils and teachers in the following element, school.

2) The school

By school I mean the building, the pupils and the personnel (mainly teachers), and the activities which occur in the school. Further, as discussed further in Chapter six, I claim that 'school' has also become also something else in the Kilpisjärvi project due to the outside networking.

3) Distance education and online lessons

I clarified my use of the term distance education in Chapter two. It is based on the ethnographic reality of my research. Accordingly, distance education was the term which all the participants, i.e. the pupils, teachers, and parents, used. The extracts from the interviews and from my field notes on the pages of the following chapters are full of 'distance education'. It refers to education which was organised by teachers out-

side of Kilpisjärvi through the network. In practice this points to certain teachers in the Second Teacher Training School at Helsinki University. Distance education is often synonymous with *online lesson*s in my text. When people spoke about 'what happened in distance education' they actually meant what had happened in online lessons. Online lessons refer, naturally, to lessons when the videoconference (and/or audiographics or audio-conference) link between Kilpisjärvi and Helsinki were used.

I will discuss the interplay between these components. This I will do at three levels: 1) the community—school (Chapter seven), 2) the school (Chapter eight), and 3) the online lessons and the virtual classroom, as the core of the 'distance education' element (Chapter nine).

The fieldwork site(s)

Following the guidance of Hammersley I report in the following what he would call case(s). The use of *s* in parenthesis is a direct quotation from Hammersley. He obviously refers to the possibility of many cases inside one research project. In my research it indicates the problematic definitions of the field or fields which were included in my work. I am not sure whether I should speak about one case or about research in which the case boundaries are somewhat blurred. I will consider this problem in terms of fieldwork.

I use the concept 'inter-institutional electronic network of schools' frequently in this research. This calls for some explanation of which schools were included, and whether other participants also emerged. The network consisted mainly of four schools: The Kilpisjärvi School (both the primary and the lower-secondary school), the Lower Secondary Teacher Training School of Helsinki University (which, for practical reasons, I call 'the Teacher Training School' in this research), the Primary Teacher Training School of the Helsinki University, and Ruskela School. Other schools were intermittently involved, but were not significant for my study. Further, the Department of Teacher Education of Helsinki University was an important member of the network. What was crucial here, naturally, was the research team which consisted of people from that department. The Media Education Centre, which was established in the middle of the project, also played a significant role.

In Chapter four I discussed changes in fieldwork when ethnographic research is conducted in environments which are created using information and

communication technology. I faced this kind of problem myself in my research. When defined geographically, the field was the village and, especially, the school of Kilpisjärvi. People who were involved included pupils in the lower-secondary classes and their parents and the Kilpisjärvi teachers. My main interest in the fieldwork in Kilpisjärvi was to carry out participant observation of online lessons. It thus followed that the whole virtual classroom became my field. (I will question later, in Chapter nine, whether any virtual classroom existed in the Kilpisjärvi project. However, to make it easier for me and my readers, I speak about virtual classroom here.) This, in turn, meant that all the participants in the virtual classroom, including the teachers and pupils in Helsinki, became part of my research as well. As a result, the physical class*room* of distance education at the Secondary Teacher Training school became a site of my visits. This meant that I had two fieldwork sites: Kilpisjärvi and the Helsinki classroom. McCall and Simmons discuss the problems of making direct observations in social research. One thing they point to is that organisations might be manifested in several locales simultaneously (McCall & Simmons 1969, 4). The observer, however, can undertake his or her study only in one place at one time. My study of the virtual classroom takes place simultaneously in two locales at 1200 kilometres distance from each other. I do not regard my research as multi-site ethnography, however. It rather deals with the aspects of ethnography which I discussed in Chapter four. To a great extent it was, in Hannerz' (1998) words, between these two localities, a more or less deterritorialised form of ethnographic field. I will discuss the translocal character of my research in more detail in Chapter nine.

It was, in fact, not the village itself that I was investigating in Kilpisjärvi, but the relationship between the parents and the school. An ethnographer who carries out a study in a school often goes to classrooms to observe lessons, depending on his or hers the interests. It is not necessary to make a distinction between a school as a field and lessons as a field. As an essential part of school work, the lessons that take place in a school building are included with the school as the field. In my case the situation was more complicated. The on-line lessons did not take place in the Kilpisjärvi school. As I have stated elsewhere (Kynäslahti 1997), they did not take place in any geographical place. They also involved people outside of Kilpisjärvi, the pupils and the teachers in Helsinki. Thus, the Kilpisjärvi school site and field were complemented by another field of a somewhat metaphysical character, the virtual classroom.

The problems with defining of the fields in my ethnographic study do not end here, however. The participants from the Teacher Training School brought their own interests and needs with them to the on-line lessons, which I could not ignore. I cannot avoid Bromley's (1997) question *who and why* is involved in the use of new technology in education. Although my research perspective is that of Kilpisjärvi, I must not forget the interests of the other participants. In fact, my study is penetrated by the whole composition of the project and the different interests fostered by the parties behind it including the Department of Teacher Education and the University of Helsinki. Here appears the holistic character of ethnography.

Characteristic of my research is that it deals with something new. With this somewhat naïve sentence I mean that the main target of my ethnography is an environment which is a new phenomenon, unknown to me, to my readers and to those who have been involved in it, i.e. the pupils and teachers (as well as the parents and authorities etc.). When an anthropologist embrace upon field research he or she certainly approaches something which is unknown to him or her. This is part of the reason for going. An ethnographer doing educational research enters a school in order to find out something new to him or her. There was a Trobriands for Malinowski. The people of Trobriands certainly knew they were Trobrianders. In my case, the pupils and teachers in the virtual classroom did not necessarily know what it was that they were involved in. In autumn 1994 a group of people who had never met before were brought together in an electronic environment. None of them had ever worked in a virtual classroom before. Lutz points in his definition of ethnography to interaction between society and environment (Lutz 1981, 52). In my case people created the environment themselves through interaction. A classroom which was established by linking two pupil groups and a teacher through the videoconference was an unfamiliar environment for the participants. As time went on they became familiar with it and they found appropriate ways to work in it. They were pioneers of a sort who settled down in a virtual classroom. Hannerz' (1998; see also below) notion of differences between classical ethnography, as he calls it, and current ethnography is partly true of my work. There were no long-term residents, as is the case with classical ethnography, in my virtual classroom. It was populated by newcomers who were as lost in it as I was.

A description of the Kilpisjärvi village and school

The village of Kilpisjärvi is situated in the north-western part of the Finland, near the Swedish and Norwegian borders. It is part of the Enontekiö municipality, located 180 kilometres away from the municipal centre. The village consists of three relatively compact units of habitation around a road that goes through it. All of the houses are new and they are provided with modern conveniences. The nearest village, Kaaresuvanto, lies at a distance of 110 kilometres. The area between these two communities is very sparsely populated. Although Kilpisjärvi is possibly the most geographically isolated locality in Finland, it has close international contacts to the other side of the Norwegian and Swedish borders. Norwegians come to do their shopping there and the road is used by Norwegian lorries. From Easter to autumn the place is populated by tourists. The climate is subarctic. The village is situated 270 kilometres north of the Arctic Circle. Lake Kilpisjärvi does not usually melt until June. With an annual mean temperature of - 1.9 degrees Celsius, Kilpisjärvi is one of the coldest places in Finland. The sun does not rise above the horizon from the 1st of December until the 12th of January but, on the other hand, it never sets from the 21st of May until the 24th of July (Oja 1999, 123).

The problems with the word 'rural' (c.f. Cole 1989; Herzog & Pittman, 1995) surface when we try to characterise the community of Kilpisjärvi. We usually see a rural community as a place where the living is based on farming, and in Finland, also on forestry. The same families might have inhabited the same location for hundreds of years. Neither of these descriptions fits the community of Kilpisjärvi. Farming and forestry are impossible due to the cold climate. There are only a few families making their living from reindeer-keeping in the village. The adult people have moved into the village, some from other communities in northern Finland, and some from cities in the southern part of the country. Only the children are ´native´ inhabitants. Urponen and Vesterinen (1986), who have investigated modern forms of northern communities, classify Kilpisjärvi as a governemental service community with some features of an investment village. People work in public services in a governmental service community, and most of the inhabitants have typically moved to the village. It is a developing community although its location is often remote. In Kilpisjärvi , however, there are features such as tourism and border trade that indicate an investment village, in other words, an active locality which is mainly integrated into the economy of the surrounding society.

During the project there were about 130 inhabitants living in about 50 households in the community of Kilpisjärvi. The age distribution was distinct. There were just a few retired persons. Until recently, people who retired moved elsewhere because most of the houses were owned by their employers. Nowadays there are also private houses. The main employers are the Frontier Guard, Customs, the school, the shop, a Helsinki University research station, the Road Administration and a Forest Research Institute station. Many people work in tourism, especially in the period from March to September. The character of the Kilpisjärvi village is unique. It is the only mountain village in Finland, as one of the villagers commented to me. Tourism is based on nature and the great wilderness which surrounds the village. The fells could be exploited as a more elaborated skiing-resort business with, in the Finnish context, outstanding possibilities for slalom, in addition to the current tourist business which is characterised by rather peaceful cross-country skiing by middle-aged and elderly people. The many nature parks in the region restrict the development of a large scale tourist industry, but on the other hand the lack of big hotels, restaurants, and discos is an essential characteristic of tourism in Kilpisjärvi. The state owns practically all the land in the region and thus its use for a variety of purposes, such as reindeer keeping, tourism and nature reserves, is controlled by the authorities. This seems to cause some bitterness among the villagers. In a sign I saw in the local market, Kilpisjärvi was described sarcastically as a place were every square meter is protected by law because there are some rare butterflies and lichens in the area. However, some features of a new kind of tourism have emerged, including snowmobile cruising by Norwegian tourists. Snowmobile driving is more strictly restricted by law in Norway than in Finland, which pushes people to go to Finland to cruise in vast wild areas. When I once again visited Kilpisjärvi at Easter, 1997, the village looked and sounded like a racing circuit. Skidos, as snowmobiles were called, were whizzing about everywhere.

The villagers commented to me that it was young and energetic people who moved to Kilpisjärvi. I was also told that some people who have experienced dramatic happenings and disappointments in their lives come to the village to seek isolation and distance from society. However, in my opinion the villagers are characterised more by activity than by withdrawal. One indicator of this is the large number of clubs and associations. There are a sports club, a nature club, a hiking club, a culture association, and, what is relevant to my research, Kilpisijärven nuorten tuki -yhdistys (The Association for Supporting the of Young People of Kilpisjärvi). This association has been active in campaigning to enhance the educational conditions in the village.

The age structure is becoming normal. A couple of retired persons have remained in the village. Another feature in the development of the village is that, due to the new secondary school, teenagers no longer move out of the village during the school year. Accordingly, the village has two new age groups: pensioners and teenagers. The new land leasing and planning policies (Kilpisjärven osayleiskaava 1994) mean that people are able to build their own houses in the village, and this is changing way of life there. It is possible that at least some of the children will stay or move back to the village, and perhaps inherit their homes. As some of my informants predicted, marriages between villagers might also increase in view of the more permanent way of life, thus creating kinship among them. The adult people I interviewed saw the future of Kilpisjärvi as promising, and as lying in tourism.

The School

Active campaigning to get educational services to the village is nothing new in Kilpisjärvi. Local people have on several other occasions been active in efforts to improve living conditions by enhancing possibilities for schooling. The history of villagers' activity in this matter goes back to the time before 1982. The first elementary school in Kilpijärvi was established in autumn 1982 with 3 pupils and one teacher (Helsingin Sanomat 3.10.1982). Before then, children had been obliged to move to the nearest village of Kaaresuvanto 120 kilometres away to get an education. This had been a severe problem for the villagers. They had two choices: either to move out of the village to a community with a school, or to send their children. Although there were, and still are, several employers with jobs to offer, people moved away because of the lack of a local school. They did not want to be separated from their children. In this sense, the year 1982 radically changed the situation. People who had left because of the educational situation moved back to the village. The school was situated in a local motel, and moved from the motel to a temporary school building in 1986 (Lapin Kansa 19.2.1986). This had also been preceded by strong action. The villagers had demanded better conditions for school work than the room in the motel could provide. When the authorities did not react quickly enough, the parents threatened a school strike. To push further for their demands, they announced that they would pay an extra of 300 Finnish marks per family every month for the school (Pohjolan Sanomat 7.2.1986). This was roughly the sum of money that the authorities had applied for from the State, but had not yet been given a deci-

sion. These happenings were still remembered at a parents' evening I attended in 1994. The parents were, on the one hand, proud of their activity which indeed had led several times to a positive result, but on the other hand they found their former anxiety somewhat amusing.

The school is situated in the middle of a small complex of buildings which now serves as the centre of the community. There is a market, a hotel, the school and some private houses. With the exception of the hotel, all the buildings are rather new with modern facilities. The activities around this neighbourhood make this part of the village the most lively one all year around. The school is a modern building with 4 classrooms and several other rooms. It is one of the meeting points of the community where various activities take place. There is a library, a sports hall (which is also used as a chapel) and a small health centre in the building. In the evenings there is also some open education for adults. Accordingly, the school is a multi-purpose building serving local people in various ways.

When a visitor enters the building he or she first faces a big fireplace behind which there is a hall. This is the heart of the school both physically and functionally. The fireplace enhances the comfortable appearance of the place. The hall is used as a dining room when the whole school gathers together for a lunch at 11.45 a.m. It is also a place where parents wait for their children at the end of the school day, often chatting with the teachers, the cook or the cleaner. I also heard some more serious and critical discussion between teachers and parents, audible to everybody in the school, indicating the rather open atmosphere I found in the school. Accordingly, it is not only members of the school who meet each other in the hall, but the school and the local community also come together in this very room. There is a teachers' room in the school but it does not serve as teachers' meeting place during breaks. The kitchen is rather the place where the teachers and other members of staff gather to drink coffee and to talk about practical and pedagogical matters, as well as to chat about topics of the day. Perhaps the kitchen is more appropriate and inviting as a meeting place for the whole staff, and the teachers' room is regarded more as a place for teachers only. In any case, with its nice furnishings, the teachers' room would be a much more comfortable meeting place than the somewhat uncomfortable kitchen. It is, in fact, actually not teachers' room, but is used mainly for the storage of official papers and as a place for making a phone call in a peaceful environment.

The way in which the school building is used by the members of the school community reflects the nature of the Kilpisjärvi school in that the members of the school community adapt the building for their own purposes.

As a small unit, the school is a rather egalitarian community where actual questions and problems are often shared by the whole personnel. The teachers do not strongly appear as a distinct group. Pedagogical questions are naturally discussed mainly by the teachers, but I did not witness situations in which comments by other members of the staff were ignored or disparaged. There were several occasion on which discussions were rather critical and people openly scrutinised each other. I found this sense of openness in the school and the school building, as well as in the way how the building was used. This seemed also to be true, at least to some extent, to the relationships between the parents and the school. One of the teachers commented that the parents gave their opinions in rather straight and open way to the school personnel without the hesitant expression that often accompanies criticism. As I stated before, I saw this kind of interchange in the hall. On the other hand, the whole school community comes together every school day at least at lunch time, which helps to strengthen the feeling of unity at this school which has classes from level one to level nine.

The pupils and teachers

The following table gives the numbers of pupils in the Kilpisjärvi school who participated in distance education during the project.

Table 3. The numbers of pupils in the Kilpisjärvi school who participated in distance education.

School year		Girls	Boys
1994–1995	7th grade	1	3
	9th grade	2 (in some lessons)	
1995–1996	7th grade	1 (in some lessons)	
	8th grade	1	3
1996–1997	9th grade	1	3

Table 4. The numbers of pupils in the whole Kilpisjärvi school.

School year	Pupils
1994-1995	20
1995-1996	20
1996-1997	20

In the following I try to paint a picture of the way of life of these young people, and to describe how they spent their leisure time in Kilpisjärvi. This picture is based on the interviews with the four pupils who participated in the project over the three years, and on my own observations when I lived in the village. (However, I never carried out participant observation among these young people other than on school days.) All the four pupils lived in the built-up area of the village, called Tsahkkaluokta, where the school is also situated. Thus, it was easy for them to see each other even outside school, as well as to participate in the activities of the school/activity centre. Sports was an important part of their lives. They all took part in team games which were played in the sports hall of the school. They played volleyball, badminton, and a game called *sähly* (which is played with sticks and a small ball). Almost every time I went to the school in the evening I saw at least one of these pupils taking part in sports activities there. Two of them told me that they liked to play computer games, and one mentioned TV-watching as a normal way to spend leisure time. In 1995 when I interviewed the pupils the first time, all of them said that they read books and comics and listened to music. In 1997 they no longer mentioned these hobbies and they seemed to use the library less often. All these activities are rather typical for young people in Finland, as well as in many other western countries. They spent a large proportion of their leisure time outdoors, hanging around with their friends in the village or doing sports. They skied, jogged and cycled. All the boys used to fish and hunt (willow grouse for example). The wilderness which surrounds the village provides good opportunities for fishing and hunting, something which is rather special to Kilpisjärvi, and something which their classmates in the suburbs of Helsinki lack. Perhaps the most characteristic and special aspect of the Kilpisjärvian way of life for young people concerns snowmobiles. This was manifested several times during the three years of the project. The snowmobile was always a welcome topic for the Kilpisjärvi boys when it was discussed in the distance lessons.

Although the boys met each other outside school, they did not spend much time together. In school, however, they were a rather cohesive group. I never saw any serious tensions between them. The girl told me that she hung around with other girls of the village. I asked the four pupils what they talked about when they were with their friends. The usual answers were 'All kinds of things' and 'Nothing special'. The topics that the boys mentioned included icehockey, computers and computer games, hunting and fishing, and, of course, snowmobiles.

During each year of the project, from 1994 to 1997, there were six teachers in the Kilpisjärvi School. Two of them taught only a couple of lessons a week. The pupils in the secondary school were taught mainly by three teachers (plus the teachers in Helsinki during the online lessons).

Methods used

The principal method I used was participant observation which also includes interviews and the use of documents. I visited both Kilpisjärvi and the Second Teacher Training School in Helsinki. I recorded some online lessons on videotape. I sent a questionnaire to the Kilpisjärvi parents.

A great help for me has been the sources of data which were gathered by my colleagues in the Kilpisjärvi research project. Thus, the data I have used in my research includes both that which I gathered personally, and that which was gathered by my colleagues. My personal data was gathered as shown in table 5 (see also Appendix 6).

Essential support for my research was provided by the numerous discussions with other researchers, especially at the beginning of the project, but even before that. During the preliminary research period we used to get together to speculate about the sensibility of audiographics in school and the use of information and communication technologies in school education in general. These discussions continued, and later became more structured in the shape of the Kilpisjärvi project. We gathered together informally and formally, and exchanged ideas on the topics of interest of the moment. Some conclusions from these discussions found their way onto the pages of our two reports (Husu et al. 1994; Meisalo 1996), especially to the first one which was jointly written by all of us. The importance of our meetings for my research diminished somewhat at the end of the project, and the meetings were less frequent. On the other hand, my research had found its own path and thus became distinguishable from the research interests of my colleagues.

Table 5. Data gathering.

Field trips to Kilpisjärvi
31.10.1994–4.11.1994 12.12.1994–15.12.1994 30.1.1995–2.2.1995 9.4.1996–20.4.1996 23.3.1997–11.4.1997
On-line lessons observed
57 lessons
Videotaped lessons
6 lessons
Interviews in Kilpisjärvi
Pupils
semistructured interviews in February 1995 structured interviews in April 1996 structured interviews in April 1997
Teachers
structured interviews in April 1996 structured interviews in April 1997
Parents
structured interviews in April 1997
Open-ended questionnaire to the parents 1996

When I met the pupils of the lower-secondary school for the first time in Kilpisjärvi, I was introduced by the principal of the school as a project researcher. I told the pupils that I would be in their classroom for a number of lessons and that I would make observations on how this composition, two groups of pupils connected to each other using videoconferencing, worked. I tried to give them the impression that I would not investigate the pupils in particular, but that I wanted to get a wider picture from the perspective of Kilpisjärvi. I met the parents for the first time on the 12th of December 1994. (*Parents* means here mostly the mothers. I also met some of the fathers later.) I informed them about my research and some of the ethical considerations. I explained that their children would not be 'laboratory rats', and that there would not be any sensitive private information about the pupils and their homes in my report. With this in mind, I declined the principals later sugges-

tion that I should go to the pupils homes to interview their parents. I conducted the interviews in the school building. The atmosphere in this first parental evening was very supportive, both for my research and for the whole project. The Kilpisjärvi people had their lower-secondary school and they wanted to do everything to ensure its success. On the other hand, the parents knew in advance that the project would involve a group of researchers. They had been briefed on this on previous occasions. I told the Kilpisjärvi teachers personally what I was doing there, and that I was not observing them. I also went to some local lessons. The Kilpisjärvi teachers were very friendly towards me during the whole project. One of them refused be interviewed at first but after second thoughts she accepted.

Before the interviews I told the pupils, teachers and parents that their comments may be published in my results, but that I would follow certain principles to ensure anonymity. This meant that I will not mention their names, but I would use expressions as 'one of the pupils', 'some Kilpisjärvi teachers' or 'a parent'. The questionnaires were anonymous. Anonymity, though, was rather questionable. The number of homes was four. I could easily personify their answers, for example when they gave opinions which were related to their work.

The interviews with pupils 1995 were recorded and transcribed. On all the other occasions I just made notes during the interview and edited them immediately afterwards, at my lodgings in Kilpisjärvi. I did this because I intended to do some joint research involving New Zealand and Finland. My partner in New Zealand, Dr. Ken Stevens, conducted his interviews in that way. The purpose was thus to make data gathering similar in the two countries. Because of certain developments this research co-operation was never materialised completely. Nevertheless I repeated this form of interviewing in 1997. Later I regretted that I did not record those interviews.

On the other hand, the interviews were not the main source of information. The best way to get to know what people thought was just hanging around, 'being there'. One of the parents was the housekeeper and another the caretaker of the residence were I usually stayed in Kilpisjärvi. Further, one of the parents was the cleaner in the school, and I met another almost daily in the local shop, which she owns. I had long discussions with these parents almost daily about the new method of schooling their children were experiencing. In addition, I went to parents' evenings both at the beginning and at the end of the project. The formal interviews thus gave more supplementary than basic information. This was also true concerning the teachers. Taking part in everyday school life was, of course, very informative for my

research, as is usually the case in an ethnographic study. Further, I met the principal of the school on several occasion outside of my visits to Kilpisjärvi: at meetings and seminars and during his trips to Helsinki. Another teacher also worked in the biological research station where I usually stayed during my field trips. We used to talk a lot about the project and about her opinions of new situation at the school. The problem with the interviews with the pupils was that their responses were often very brief: 'Yes', 'No', or 'I don't know'. In that sense the lack of a recording was not serious. The biggest problem with recorded interviews was the translation. The genuineness of the voice of the speaker, whether it was a pupil or a teacher, was lost. Translating the comments of the interviewees from spoken Finnish to written English was frustrating and, I am afraid, even misleading. This is the reason why I present most of them both in English and in Finnish in this and in the following chapters.

In addition to my own data, I have used data which was gathered by other researchers of the project research team. These include: 1) interviews with the Helsinki pupils 1995 concerning interaction during online lessons (by Marjo Salonen) and their experiences of technology (by Jari Salminen), 2) interviews with teachers of both schools in 1995 concerning the technical aspects (by Jari Salminen), 3) interviews with both the Kilpisjärvi and the Helsinki teachers in 1995 and 1996 (by Tor Kronlund, partly accompanied by myself).

I intended to observe 100 online lessons. After about 50, however, I felt that the point of saturation had been reached. There was no longer anything new. During last lessons I wrote only a few lines in my notebook. I decided to stop after the 57th online lesson. Hannerz makes a reasonable point when he compares transnational and multisite ethnography with what he calls classical ethnography. In the latter, an ethnographer typically works in a community where most of the members are life-time residents. Even a one-year stay in such a community is short for a researcher compared to the involvement of the natives. Outside of these classical cases there are communities which might be short-term phenomena, or whose members are as footloose as the participant ethnographer (Hannerz 1998, 249). Accordingly, Hannerz hints that the traditional requirement of ethnography for a long-term fieldwork phase is not always appropriate when research is being carried out in new kind of spatial and temporal circumstances. Virtual classrooms obviously belong to these latter cases. In the Kilpisjärvi project, two groups of pupils and a teacher met periodically a couple of times a week during online lessons of 45 minutes each. If, by way of analogue, we look at a traditional

classroom in which pupils spend their schooldays together as an object of classical educational ethnography, then the participants of the online lessons apparently represent this new kind of ethnography.

I also had some videotaped lessons, some of which I had taped myself. They did not bring any special new insights to my research, but were more useful to my fellow researchers. When I sat in on the online lessons in Kilpisjärvi I sat in a corner of the classroom or at the teacher's desk in front of the room. In some cases the teachers and pupils in Helsinki did know that I was observing the lesson. In most cases, however, I greeted the teachers before the lesson started. In Helsinki I sat at the back of the classroom. The Kilpisjärvi pupils did not always know that I was there.

The progress of the research

There are several methodological books on how ethnographic or, more generally, qualitative data can be analysed. Foster's (1996, 62–67) ideas may be informative here because he focuses on analysing observational data which has been gathered in school settings. First a researcher looks out for key themes and topics. He or she pays attention to sections which are particularly interesting and compares similarities and contrasts between different parts of the data. The chronological structure of the notes is broken down allowing for the reorganisation of the data under particular topics, themes and categories. The second phase involves outlining the conceptual categories into which the data can be classified. According to Foster (1996, 64), conceptual categories are 'simply labels assigned to types of phenomena sharing certain characteristics'. Further, he suggests two possibilities for the basis of a category system, the first being the existing theoretical framework and the second being what emerges from the data itself. The relationships between categories may be problematic and require clarification. One piece of data may be placed in several categories. Foster uses Dey's (1993) term inclusive categories for this. Exclusive categories, on the other hand, allocate a piece of data to a certain category. All in all, Foster claims that the category system is the farthest point of analysis that most qualitative research ever reaches.

In the next paragraphs I describe how the research problems progressed in the course of my ethnographic study. I will consider how I ended up investigating the features which I report as research results in the chapters seven, eight and nine. A certain lack of structure is typical of ethnographic study, as the methodologists above suggested. In my research the interplay

between theoretical elaboration, fieldwork with its data gathering, and data analysis has, perhaps, been even more vivid than in most educational ethnographic inquiries. This is how I sense the situation myself. The reason, I think, is that the field of media education is experiencing continuing rapid development, not least because of the expansion of information and communication technology. During the research period from 1994 to today there have emerged fundamental new phenomena and powerful theoretical domains, including all activity surrounding *network*s. Further, my research is part of a bigger project, the Kilpisjärvi project. The focus depended somewhat on that of the other researchers. Pedagogical aspects, verbal interaction in the classroom, people's experiences of technology, and some administrative matters, were among the topics which were investigated by my colleagues and were not therefore not the main interests in my work.

My fieldwork started a couple of months after the project had begun. I had previously visited Kilpisjärvi as a tourist a couple of times. However, I was more familiar with the wilderness around the village than with the community or the way of life there. I had never set foot in the local school. The first thing was to get a general picture of the community and the way of life there. Another thing was to become familiar with the school and its people. The questions I had in my mind on my first field trip and which I had presented in the preliminary research plan, were:

> **What is the relevance of distance education which uses advanced information and communication technology for the local community, for the local school and for the pupils?**
>
> **What are the effects and opportunities that the distance education connection brings to the village?**

It became obvious very soon that my aims were too ambitious. These kinds of question were too wide in scope, and therefore too difficult for my research. This was especially true of the second question. It is difficult to assess out things like the effect of distance education on some community. It would require a very long-term and wide investigation. To some extent, the same applied to the question about 'relevance'. The whole community could not be my target. What was essential from my perspective was to limit my inquiry to those community members who were the most relevant to my research, i.e. parents (in addition to the pupils and the local teachers), and more precisely, the parents of the pupils the lower-secondary school of Kilpisjärvi. Thus,

my research interests turned to the relationship between the school and the community, the latter meaning mainly parents, and the role of distance education in this relationship.

The question of 'opportunities' was largely answered in a research report (Kynäslahti 1996). Opportunity refers to something which awaits fulfilment. The report listed a group of them which, at that stage of the project, seemed promising. I will discuss this fulfilment in Chapter ten.

As I mentioned earlier, the preliminary research gave me some idea of what an electronically-created classroom is. When the Kilpisjärvi project began, the virtual classroom was not as hot topic as what it became later. Terms such as *virtual classroom* or *virtual school* were certainly not unknown, but they were still young phenomena and I did not comprehend them profoundly. This situation changed at the very start of the project. What became obvious to me was that I had to define in some way the peculiar phenomenon of online lessons which I observed. They were not just lessons online, but they created an environment which was something more than just a lesson. Was it a virtual classroom but then what is a virtual classroom in fact, or what it could it be? Thus my ethnographic work also involved conceptual elaboration of the virtual classroom. This made me to consider:

Did a virtual classroom emerge in the Kilpisjärvi project, and on what grounds could we judge whether it appeared or it did not appear?

Generally, online lessons and the virtual classroom became more significant part of my ethnographic work than I had originally surmised. I had imagined that I would work more with the surrounding community. The micro-perspective of the virtual classroom/ online lessons, however, is well suited to my capacity as an ethnographer and my competency as a media educator.

The problems with the definition of the ethnographic *field* appeared in this occasion as well. To be able to address the above questions, I was obliged to adapt my ethnographic style to better to suit the context which the use of information and communication technology created.

The question:

> **What is the character of local education and distance education when the local school is linked to the inter-institutional network of schools?**

interested me from the very start of the project, although the term inter-institutional network of schools appeared, as a result of theoretical development, somewhat later in my research. This theme has thus run all through the research process. Networking with other schools seemed to change the Kilpisjärvi school. What caught my attention was that part of the school appeared more or less separated from the rest because of intensive links outside. This led me to consider vertical fragmentation and horizontal integration. My findings called for theoretical considerations of what a networked school is. Originally, I was interested in the ability of the Kilpisjärvi school to sustain its own autonomy and to be able use its local control over education even though it is linked to the outside world. These questions focused my attention on the role of local teachers in networks of schools and, interestingly, on the community control concerning education in the local school. Considerations of post-Fordism came to the fore at this stage of the research.

Syrjäläinen (1990) states that she began data analysis, to some extent, during the data-gathering period. In my research the importance of constant analysis was obviously greater, and the interplay between gathering, analysing and theorising has been a fundamental element. Media education is a discipline which is developing at tremendous speed. This is also true of which I put under the umbrella of cyber culture in Chapter two. I have been obliged by this development to engage in perpetual discussion between theory and the reality of ethnographic work.

Foster (1996) pointed out that a category system may be based on an existing theoretical framework, or categories may emerge from the data itself. As is often case in an ethnographic inquiry, these two bases also existed in my research. The developing theoretical framework possibly had more significance than is usually the case. Otherwise my analysis basically followed the line which Foster introduced. Compared to Syrjäläinen's work, my examination of the data began more intensively during the field periods. Firstly, the project lasted three years and therefore it was sensible to benefit from the data which already existed. Secondly, as a research group we published preliminary and intermediate results regularly during the project. Thirdly, as already stated, fieldwork and theoretical work progressed hand in hand, which

required data analysis. However, the results which I present in the following chapters are the product of the final analysis following the end of the Kilpisjärvi project in 1997. The categories of the analysis have changed during this process in accordance with the shifts in the research problems which I described above.

Roles

My relationship with the Kilpisjärvi parents, the pupils and teachers

Junker's typology of social roles in fieldwork is often quoted (e.g. Gold 1969; Kelles-Viitanen 1984; Hammersley & Atkinson 1995). He speaks about complete participation, participant-as-observer, observer-as-participant, and complete observer (Junker 1960). In complete participation the ethnographer immerses herself or himself totally in the society he or she is investigating becoming a member of the group or already being a member of it. Those who are being studied do not know that they are the target of research. In this case, it is really a question of a 'role' when the researcher pretends to be something other than he or she in reality is. The role of the participant-as-observer differs from complete participation in that the people involved in the research are aware of researcher's role as an observer. The observer-as-participant situation relates to brief contacts between the researcher and the informants, including one-visit interviews (Gold 1969, 36–37). In the role of a complete observer the ethnographer does not have any contact with the people who are being observed. Here, observation is often carried out indirectly through a one-way mirror or video camera, for example. Most often, of course, the researcher's role is somewhere between these two poles. Zelditch puts this in a simple way. In participant observation, 'The field worker directly observers and also participates in the sense that he has durable social relations in [the social system under investigation]. He may or may not play an active part in events, or he may or may not interview participants in events which may be considered part of the process of observation.' (Zelditch 1969, 9). Junker's typology does not differentiate whether the role a researcher takes already exists in the field, or whether he or she creates a new one (Hammersley & Atkinson 1995, 108). Indeed, this aspect is a significant in ethnographic research which concerns school, as I will argue later.

Characteristic of my work as a researcher in the field has been my role as a representative of the Kilpisjärvi project research team. This has given me

some kind of official status in relation to the people in Kilpisjärvi. When a researcher is attached to the authorities which are behind the project and its funding, some things happen that are worth mentioning. The role of the researcher becomes rather ambivalent in relations both to those who are under study and to those who are organising the project. These kinds of problems have been addressed within the theme 'ethnography at home' or 'anthropology at home'. Researchers doing ethnography in school projects in their own society have often found themselves in a complicated situation. Donald Messerschmidt reports on his experiences in the Experimental Schools Program in Wyoming. Although as a researcher he was an independent counterpart studying educational change regarding to the program, to the local educational authorities he was 'the evaluator' or 'the Fed' with connotation of 'spy' (Messerschmidt 1981, 192–193). Timothy Sieber (1981), on the other hand, comments about his role as an ethnographer doing research in three local schools and different community groups in a New York City residential community. To the teachers of the local public school he was mostly a threat who interfered in their work, to the middle-class newcomers he was, or at least that was what they thought, a source of information of the quality of education in the local schools to confirm their assumptions, and to Puerto Rican parents he was part of the school system with which they had a distant relationships because of linguistic problems and the discriminative attitude of the teachers. Accordingly, Sieber was in the middle of the distinct interests and fears of different parties. Eija Syrjäläinen conducted ethnographic research in two Finnish schools. She analysed her roles in the field in terms of two characters: 1) the expert, and 2) a friend (Syrjäläinen 1990, 274–277). In her role as an expert, she gave the teachers the impression that the researcher would deal confidentially with the information she obtained from her informants, and would not hurt anybody involved in the research. As far as the pupils were concerned, it was important that they felt that the research of which they were a part was important and gave valuable knowledge. The role of a friend was important in the actual research situations, such as the interviews with pupils, as well as for the trust between the researcher and the informants. Syrjäläinen identified one role more in her performance as an ethnographer: that of a traitor, or at least something approaching it. All the findings in ethnogaphic research are not necessarily flattering to the people involved. Thus, the researcher misuses the confidence of the informants.

My role was not that of a cool outsider making observations in the local school of Kilpisjärvi. There were several reasons for this. On the one hand, I became rather familiar with the people who were involved in the project, es-

pecially with the teachers and further personnel of the Kilpisjärvi school and also with the parents, although perhaps not so much with the pupils. One of the parents commented in a humorous way that I was a part of the furniture. On the other hand, however, I was always a researcher from the University of Helsinki. This meant that I was a representative of the parties who funded the project and upon whose goodwill its continuance rested. Hence I was both 'Heikki', i.e. almost one of us, and The Researcher From The University who might have the power to influence the ongoing project and especially the future of distance education in the Kilpisjärvi school.

There was some criticism, rather heavy in some cases, by some parents and teachers against the general pedagogical style of the Kilpisjärvi school. They preferred the pedagogy of the Teacher Training School which, according to them, was more logical. To those persons I became a listener to whom they told their concerns and criticism. Distance education had given the people in Kilpisjärvi the opportunity to compare the education in their school to that of the other counterpart. Similarly, I was also some kind of educational resource from outside, an outsider who listened and even asked for people's opinions and experiences on the school and its education. Sieber (1981, 217; see above) reported how middle-class parents tried to use him in their efforts to intervene in the school's affairs. I never felt that the critics attempted to benefit from me in that way. They did not ask for my confirmation of their assumptions, but obviously it was important to them that they were able to give me their opinions and shape their worries about the education their children were receiving to me. As a researcher from the university and a doctoral candidate in the field of education, I could have been useful to them in the way that Sieber talks about, but I never sensed this undercurrent. Warschauer expresses rather similar feelings. The computer-based second-language course he investigated was not a big success, mainly due to the teacher's unsuccessful pedagogy. The students were not happy with the course or with the way in which computers were used. Warschauer claims that the opportunity to put forward their views about the course to 'a sympathetic outsider' gave the students confidence in their opinions (Warschauer 1998, 75).

I was frequently told what a good thing the project was for the village of Kilpisjärvi. Here, I believe, my role as a researcher and representative of the organisers came to the fore. An example from Den Hollander's experiences illustrates what I mean:

> In a town in southern Georgia (1932) it was rumoured after a few days that I was a scout for a rayon concern and might help to get a rayon industry estab-

> lished in the town. My denial reinforced the rumour, everyone tried to convince me of the excellent qualities of the town and its population—the observer had turned into a fairy godmother and serious work was no longer possible. Departure was the only solution. (Den Hollander 1967, 13).

Although my experiences are not at all similar to Den Hollander's disastrous fate in Georgia, the aspect she reports was present in my fieldwork. The pupils, parents and teachers in Kilpisjärvi stressed the importance of distance education for the wellbeing of the community. I became a little suspicious of this attitude. The behaviour of the pupils during the distance lessons clearly indicated that they did not like them very much which they also told me in the interviews. Still they praised the project. One of the Kilpisjärvi teachers assessed the situation in the following way:

> ***Teacher**: You know they're like that, when you ask they're just happy with everything … when you ask personally, it comes out whatever … Yes, and then, I don't know if they're afraid of what'll happen if they say it [distance education] isn't so great. I know, for example—I don't know if this happened to be the slogan of the day or whatever—that one of the pupils will absolutely not choose a certain optional subject if it's organised through distance education … sometimes they're happy when the connection doesn't work. (In95/Ja/KiTe3)*
>
> *(Interview by Jari Salminen)*

> ***Opettaja**: Nää on nimittäin sellaset, että kun kysyt, ne on ihan tyytyväisiä kaikkeen … Kun sä kysyt ite, niin sielt tulee ihan … Niin ja sit en mä tiedä, pelkääkö ne sitä, ett mitä tapahtuu, jos sanoo, ett ei se [etäopetus] oo niin hauskaa. Mä tiedän esimerkiksi – en mä tiedä, onko tää ollu joku päivän heitto tai muuta – yks oppilas ei ehdottomasti valitse erästä valinnaisainetta, jos hän tietää, että siitä tulee etäopetusta … ollaan jopa josku onnallisia siitä, se yhteys ei toimi.*

The parents were even more enthusiastic in their comments. The principal of the school and the teachers shared this same attitude. I did not suspect that the pupils, parents and personnel were lying to me, however. The project evidently has been very important for the whole community and the people in Kilpisjärvi, for the most part, could see the opportunities that distance education is able to offer to the village. I do suspect, however, that they did not take me as an neutral outsider to whom they could openly give their real opinions and experiences about this distance education project. On the one hand, they wanted to tell me, and through me the organisers of the project, how grateful they were for this opportunity that have been given to the village, and on the other hand they tried to ensure the continuity of the project by assuring me of their trust in its the success. At the parental meeting in De-

cember 1994, when the project had been going on for about three months, the parents told me that they were very satisfied with distance education. They assured me that if there were any problems regarding distance education, for example that the children did not learn enough in the lessons, they would come to help and do the best they could. Thus, the atmosphere was very positive. In May 1997 when the project was ending, my interviews with the parents revealed that the beginning of distance education in the school was not at all as successful as the earlier statements had indicated. Ironically, at this time too the situation was again exceptional. The project and the school year were at the end, and so was the funding of distance education by the university. The local people in Kilpisjärvi were very worried whether or not it would continue also in the future. I was frequently asked about the future of distance education as if I had some kind of authority over it. Thus, again my position differed from a neutral one in their minds.

Another aspect of my role as a researcher doing ethnography was the degree of my participation and involvement. The principal method I used to gather data was participant observation combined with interviews. In a small rural school, a visitor who stays for weeks making observations is no longer just a visitor or an outsider, and more so if he is a formerly teacher as I happen to be. What I mean by this is that, in a way, I seemed like one the teachers. There was no need for 'passing', I just blended in, I believe. I imagine that the parents who did not know me and who visited the school assumed that I was a substitute teacher. The youngest pupils treated me like a teacher, and they were partially right in fact. During my five field trips to the Kilpisjärvi school I taught a couple of lessons when the teacher was ill or could not be present for other reasons. In this way my performance as a researcher bore some resemblance to active participation [1].

In addition to making observations, carrying out interviews and otherwise collecting data, an important part of my research was 'just being there'. 'As a set of methods, ethnography is not far removed from the sort of approach that we all use in everyday life to make sense of our surroundings.', writes Hammersley (1993, 2). As anthropologists use to do research by walking around and keeping their eyes and ears open, for me it was also important just to 'walk around' in the Kilpisjärvi school and to look at the everyday lives of the people there, accordingly: just being there.

I have already mentioned about my relationship with the parents as an 'official' representative of the project. Another side to this relationships was me as 'Heikki', 'part of the furniture' as one parent commented. Ethnographers who work in their own society have similar experiences. Hastrup states

that in fieldwork at home the people you study talk to you as if you were a real person in their world (Hastrup 1987, 104). A researcher becomes 'Tim' (Sieber, 1981), 'Donald' (Messerschmidt 1981), or 'Heikki'. In this role I was both a familiar person and an expert with whom the parents could talk about the education of their children, in other words a teacher. Thus, I was both 'stranger and friend' (see Powdermaker [1966]).

Spindlers (1992, 58) state that in the small community of the school and classroom, awareness of the researcher's (they use term anthropologist-ethnographer) role, as well as the other effects of his or her presence and situation is critical. Because an educational ethnographer usually operates 'at home', i.e. in her or his own society, and in the more or less familiar school context these kinds of consideration become important, possibly more so if the field is familiar. Westheimer and Borman discuss in their article emic research in education: 'Most of us were socialized by schools, capitalized by schools, credentialed by them, and our institutional identities are a source of our authority. We may have rejected, rebelled against, or otherwise repudiated elements of our institutional histories; but we remain inexorably bound to these histories.' (Westheimer & Borman 1995, 104). They continue:'... we might find that our lives so reflect our own schooling and institutional constraints that we resemble snail examining its own shell.'. It is apparent that a teacher's background is a critical thing for an ethnographer who does research in a school environment. It can help him or her to get into the life of the school community, and 'to enhance [researchers] field relations with heads and teachers' (Mason 1990, 104). Beynon's teacher background and knowledge about teaching and schools helped him in passing into the teacher community. One of the teachers said to him:' Good Lord, I didn't realise you were one of us! I thought you were one of the 'experts' who never taught, but knew all about it.' (Beynon 1983, 42). Syrjäläinen comments that her teacher background helped in relation to both the pupils and the teachers. It created a common basis for discussion and mutual confidence (Syrjäläinen 1990, 274).

My relationship with the Helsinki pupils and the teachers

I do not know exactly what my relationship with the Kilpisjärvi pupils was. It was, on the surface, casual and friendly. I also occasionally met some of pupils outside school and we chatted about things in a neighbourly way. On the other hand, I obviously appeared as a strange adult person whose role was not perfectly clear to them: a guy scribbling busily in his notebook and asking questions. As a person I was, again, 'Heikki', but as a researcher I was more

distant to them. They were aware of my job in Kilpisjärvi because I told them about it.

The case of the pupils in Helsinki was different. Although they saw me several times when I was in the classroom making observations, no close relationship materialised between us. Pupils at teacher-training schools are used to people sitting in the back of the classroom. Apparently they are not interested in whether such are researchers or student teachers or anything else. I did not interview those pupils, nor were there any other research acts between me and them. I tried to chat to some of them without any great success.

My relationship and role regarding the teachers in the Teacher Training School was different from my relationship with the Kilpisjärvi people. The main field for the ethnographic research was the virtual classroom, which included the pupils in Kilpisjärvi and Helsinki, and a teacher who was usually situated in Helsinki. Hence, the teachers at the Teacher Training School became a part of my study. Although I was not very interested in their teaching in a pedagogical sense, I think they did not understand this completely. I did not think about whether they were good or bad teachers, or whether they made clever or naïve pedagogical moves. I wanted to find out what was the teacher's part in this virtual classroom. On the other hand, some of my fellow researchers in the project investigated pedagogical matters. They observed classroom interaction and the pedagogical roles of the pupils and the teacher (Salonen & Falck 1996), for example. As far as the teachers were concerned, my role as a researcher was affected by the doings of my colleagues. I was a part of greater research project, while in Kilpisjärvi my role was more individual.

The case of the Helsinki teachers is interesting. They all are teacher trainers, in other words, they supervise the practice periods of student teachers. They are also used to being observed when they teach, although the observers are usually less competent than they are, i.e. students. In this case, the observers, including myself, were equal in competency, or as doctoral students perhaps even more advanced in the educational field than the teachers. We were often called 'researchers' by them. However, it is worth noting that, in the Finnish context, there are some aspects of the relationship between the researcher and the teacher which might affect in classroom research. In the US context, for example, Westheimer and Boorman (1995) together with Galen and Eaker (1995), point to the unequal relationship between researchers and teachers in school ethnography, and to the distance and the barriers between these two counterparts. The status and power of an academic researcher is superior to that of teachers who usually have a working-class

background and, in most cases, are female. Another element which affects the unequal power position is the tradition of the academic language. Those who might criticise the research on the grounds of direct experience, i.e. teachers, are discouraged from doing so because of language, which is unfamiliar to the them.

The above is of interest to my research in which the researcher- teacher as subject relationships both resemble and differ from those criticised by the ethnographers mentioned. The teachers in Kilpisjärvi were informants and evaluators for me. Their work as teachers was not the essential focus of my study, but I was interested in their experiences and opinions about distance education in the school. Their part in my research was important, but their role was more that of an expert informant and local evaluator than a teacher who does the work. The teachers at the Teacher Training School, on the other hand, were those who actually did the teaching work in distance education. Thus, in addition to their experiences and opinions, what they did in the distance lessons fell within my research interests, although my intention was not to judge them in the pedagogical sense.

As I stated before, my colleagues and I were often called 'researchers' by the teachers at the training school. Individually we were like people: 'Heikki', 'Jari', and so on. Collectively we were more or less impersonal 'researchers'. In this way the relationship between a person with an academic status and a person doing a job became apparent. However, the situation was very different from that described above by the American researchers. The teachers in the Teacher Training School are qualified specialists, with some kind of elite status among the Finnish teachers. They have an academic background themselves (as teachers usually have in Finland nowadays) and they are used to discussing pedagogical matters. Many of them have written text books and produced other learning material. Thus, they are used to the tradition of academic educational language. However, as I mentioned before, I believe that they do not feel very comfortable when they are judged (or when they feel that they are being judged) by educational researchers. One of them unburdened his feelings:

> ***Teacher:*** *I have found it rather heavy sometimes. Well, not as such, but this situation is a bit strange anyway and then this whole hassle that comes with it so …*
> ***Interviewer:*** *A lot of visitors?*
> ***Teacher:*** *A lot of visitors, a lot of researchers and you feel that you are an object of research. (In95/Ja/HeTe1)*
>
> *(Interview by Jari Salminen)*

> ***Opettaja**: Aika rankkana mä oon sen välillä kokenut. Että ei sinänsä että tää tilanne on kuitenkin vähän outo ja sitten myös tähän liittyvä tää muu hässäkkä, mikä tässä on, että …*
> ***Haastattelija**: Paljon vieraita?*
> ***Opettaja**: Paljon vieraita, paljon tutkijoita ja tuntee olevansa tällasena tutkimuskohteena.*

In spring 1996 when the project had been going for about two years Ken Stevens, Jari Salminen and I wrote an article (Stevens & al. 1996) which was published in the Finnish Journal of Education. We presented some ideas about the Kilpisjärvi project and about distance education in schools in general. One of the teachers at the Teacher Training School reacted rather angrily. Most of his criticism was justified, as I see it now, but some of it perhaps was not. In any case, this incident indicated the teachers' ability to take part in discussion at an academic level, and their sensitivity to criticism of their performance.

I was free to observe the lessons. However, I informed the teachers before I appeared at the school, which I thought was a polite thing to do. By the end of the project I no longer followed this custom. The teachers did not seem to mind. Similarly, when I was in Kilpisjärvi the teachers in Helsinki often did not know that I was observing because I was not in the picture. I did not notice any major changes in the behaviour of the teachers in the lessons when they knew I was observing and when they did not. Some comments by the teachers, I believe, where directed more at me than at the pupils. Here is one example from a distance lesson when I was in the Helsinki classroom:

> ***Teacher**: Because the audiographics is not working [right now] I'll have to use this dull document camera. (Fn 32/96)*

There had been criticisms before this incident among the researchers and the teachers that audiographics is a more interactive tool than the document camera, although the latter is much easier to use. I sensed that the teacher wanted to tell me that he was very conscious of the pedagogical superiority of audiographics, and thus to apologise for not using it.

My role as a listener

One of my roles during the fieldwork in Kilpisjärvi was to be a listener to people's opinions and frustrations concerning the school. In other words, people, both parents and teachers, told me what they thought about other people. The topic was mostly education. Some of my informants delivered

their views on schooling in Kilpisjärvi in a very open and critical way. The most frequent target for criticism was the flexibility of the schoolwork. The critics claimed that the organisation of schoolwork in the local school was not strict enough and that time was wasted on nonsense. This meant that the pupils did not learn effectively. My purpose here, however, is not to list the opinions of different people, but describe how, after the field periods, I now see myself in the different roles I took. As I stated before, I did not feel that any of the teachers or parents tried to make me side with them and. Some 'advising' was done, however. Hitchcock (1984) carried out an ethnographic research in a primary school, Cedars Junior (somewhere in Great Britain, I guess). He was interested in the social interaction and the social organisation of the school.

> During my months of fieldwork in Cedars Junior, much of what the staff said to me can be understood as a series of 'advisings', given my relative newness to the world of Cedars Junior, as to how I might find that world, and events and people in that world. (Hitchcock 1984, 24)

The advisors, according to Hichcock, assumed that he would understand the meaning of their statements: 'You know what I mean', 'You see', 'I mean' etc. (Hitchcock 1984, 25). He would get the picture, so to say, or more precisely, the picture the speaker had about things in that school. Some of my informants showed similar concerns that I would get the picture of Kilpisjärvi and its school, using 'you know' type of talk, expressed by the Finnish suffix *-han*/*-hän*: 'Kilpisjärven kouluhan on ...' (You know, the Kilpisjärvi school is ...), 'Eihän Kilpisjärven koulussa koskaan ...' (You know, in the Kilpisjärvi school, there is never ...). Accordingly, although they did not persuade me to side with them, they wanted to ensure that I understood their (critical) views and the reasons for these views. Hitchcock (1984, 30–32) continues on the subject of problems of trust and confidence. His informants were concerned about whether he would keep to himself what they said to him about other teachers. They assumed that he would. My informants mostly did not seem to be worried by these kinds of problems. On the contrary, I sometimes even felt that the critics would have preferred me to tell the people they had criticised what I had heard.

My situation somewhat resembled the experiences which some ethnographers have reported when they have worked in their home environment. It concerns a feature which has been called the ethnographer as research tool. I will give an example from Graham (1981). She investigated two small mining towns in the United States. Her husband became an employee of the

mining company so that she could study the small-town society. Her position as the wife of an employee gave her a suitable role in the community and enabled her to conduct anthropological research. It was a key to the daily life of the people, although they found her a little bit funny . '… because the residents perceived me merely as a distraught housewife rather than as a threatening outsider, they did hesitate to answer my questions; indeed, they seemed quite willing to humour me' (Graham 1981, 110). Because she was regarded as a community member, people took her strange actions seriously, and gossip flourished. This was something which she could benefit from in her investigation. In my situation in Kilpisjärvi, I did not intend to elicit people's opinions about the pedagogy of the local school, or their attitudes towards certain teachers. They just came to tell me these things. I think that this happened largely because of my pedagogical expertise as a teacher and researcher. The role of teacher-researcher-ethnographer was an advantage in this sense.

Note

[1] Active participation is what could be called learning by doing in ethnography. Nelson studied the Alaska Kutchin hunters by joining them as a fellow hunter (Jarvenpa 1989). Jarvenpa has used a similar style of fieldwork in Canada and in Finland. He became a trapper and a fisherman in a Chippewyan community in north-central Canada, and a farm-labourer in north-eastern Finland (Jarvenpa 1989). In my case the situation was different. There was no need to attempt to learn to become a member of the school community because I already had a teaching background. However, it was my role in the school context that resembled the active participation style of fieldwork. I joined in several activities of school life as one of the members of staff. Typical of such events were the 10 o'clock coffee breaks in the school kitchen. Although some local gossip was, of course, exchanged on these occasions the discussion mostly concerned practical matters and pedagogical issues. I took part rather actively as if I were one of the teachers and, as I mentioned above, I was used as a substitute teacher when needed. It appears that several ethnographic researchers in schools have had similar experiences. It makes sense that if the researcher is a qualified teacher his or her potential is used when the need arises. From the researcher's point of view, it is a natural and an easy way to pass in the school community.

CHAPTER 6

Validity

In anthropology, the home discipline of ethnography, validity problems involve the notion of 'Other': how can a researcher get valid knowledge of people who belong to a different cultural and historical environment than the researcher himself or herself (Schweizer 1998, 40)? This, however, is not the main difficulty for an ethnographer who works in his or her own society, as those working in education obviously often do, or at least as I have done. In the previous chapter I quoted Hammersley on writing ethnography. He pointed out that ethnographers sometimes seem to imitate, with faint success, quantitative research, which on those occasions appears to be the model of how to do things properly. The same thing happens in the case of validity. Eisenhardt and Howe (1992) question whether experimentalist concepts should be applied to nonexperimental research designs, like the concept of validity in qualitative research. It seems that in this kind of juxtaposition, ethnographers need to defend their research design against the validity requirements of experimental research.

Goetz and LeCompte had answered Eisenhardt and Howe's question Some years earlier. They suggested (Goetz & LeCompte 1884) that ethnographies could be treated in the terms of threats of validity as it is the case in experimental designs (see Campbell & Stanley 1963). However, there are were other responses to the question, too. Hammersley (1992, 124–125) argues that in the validity debate on the qualitative-quantitative nexus, instead of proving the validity of ethnographic research results, ethnographers have raised doubts about that of quantitative research. In their 'Naturalistic Inquiry', Lincoln and Cuba (1985) present standards of trustworthiness, as they call it, of nonexperimental educational research designs. Although their starting point is the notion that nonexperimental research cannot be treated as experimental research in terms of validity, the standards they rely on are, according to Eisenhardt and Howe (1992, 650–651), analogous to Campbell and Stanley's ideas. Discussions, like that above, about the relationship between validity and experimental and nonexperimental research design indicate that the question of validity is, to some extent, problematic in qualitative research, and that, therefore it should be given particular attention in qualitative research designs.

The work of Eisenhardt and Howe may be useful here for at least three reasons. First, they provide us with a review of the validity debate in qualitative educational research. Thus, we can locate their own views within a wider framework of discussion on how the validity problem has been addressed to resolve by different discussants. Above I have made an effort to benefit from this aspect of their work. Secondly, they speak particularly about educational ethnography. Thirdly, instead of speaking about validity on a general level, they advice us to focus on subareas, which in my case could refer the considerations of the validity of media education. In general, Eisenhardt and Howe emphasise the importance of tradition in specific research designs: 'What counts as valid argument in the context of specific research design and what steps are sensible to take to establish that an argument is valid will depend on the tenets of the specific research design tradition.' (Eisenhardt & Howe 1992, 664). They further suggest that this tradition is a changing phenomenon being affected by ongoing debate, history and norms. In Eisenhardt and Howe's view, the tradition of educational ethnography refers to cultural anthropology and fieldwork sociology. (Their article was published in an American handbook which obviously explains the emphasis on cultural anthropology and the neglect of social anthropology.) I have pointed several times in this publication to the ongoing debate in anthropology and ethnography concerning changes that the intensive presence of information and communication technology in everyday life today may bring about in these academic areas. The words of Eisenhardt and Howe raise the question of the consequences of this debate on the in validity of research in these areas. They not only put weight on the specific research tradition, they also speak about 'paramount importance of identify to specific subarea of work in which a study is located' with which they refer to 'small groups of researchers [who] pursue particular topics in specialized ways' (Eisenhardt & Howe 1992, 665). As examples they use discourse analysis and microethnography. It is difficult to judge if ethnography in the context of media education and virtual environments could join the list, but in any case it may be worthwhile to pose this question.

An ethnographer may find very welcome lists of 'good ethnography', such as Spindlers (1982; 1992, 72–74) present. Following the logic of the importance of specific subarea-based validity, Eisenhardt and Howe reject the significance of such lists as a major guide for solving validity problems. In the Finnish context, Syrjäläinen has presented criteria for ethnographic research which are rather similar those on Spindlers'. Syrjäläinen remarks that these kinds of criteria are not generally applicable. This remark echoes that of

Eisenherdt and Howe. They state that following such a list may be a way to achieve validity, but it does not demonstrate that validity has been achieved.

What, then, are the topics that should be considered in the context of this subarea tradition, that Eisenhardt and Howe call for. They are basically rather simple things. First, the data collection techniques should be suitable for answering the research questions. It is the research questions that should drive the data collection rather than vice versa. Secondly, the data collection and analysis should be correct in the technical sense. In other words, various forms of data collection should have been used in the way that is appropriate in that particular case. This is true of analysis as well. Thirdly, to achieve credible conclusions, a study should be judged against a background of existing theoretical, substantive or explicit practical knowledge. They recommend that these three aspects should be considered together. In addition, they present two further standards. The first of them is value constraints. Referring to external value constraints they require that valid research must be worthwhile. This is rather near to the notion of Erickson (1986) who proposes that validity deals with the usefulness of research for potential audiences. My interpretation of Eisenhart and Howe's view is that the focus of research should be sensible regarding what could be called educational reality. In other words, it should make sense that a particular piece of research has been conducted in a particular educational situation, e.g. a virtual classroom is studied in an era when virtual classrooms are emerging as a new educational phenomenon. Internal value constraints, in turn, deal with ethics. A researcher engaged in qualitative inquiry faces the problems of confidentiality, privacy, and truth-telling when he or she reports the results. The principles of confidentiality and privacy may hinder truth-telling. The final standard of validity, according to Eisenhart and Howe, is comprehensiveness, which means a holistic perspective. They summarise:

> All instances of valid research-based arguments in educational research, regardless of design-specific peculiarities, take the same general form—that is, important educational issues must serve as the basis for formulating important research questions and an appropriate and ethical research design; research questions and methods must be completely linked, methods must be competently applied, prior commitments must be exposed; the potential worth of the results must be weighed against the risks associated with the study; and, overall, a comprehensiveness must be achieved that balances design quality and importance against risks and permist the robustness of conclusions to be assessed. (Eisenhart & Howe 1992, 662–663).

Accordingly, they treat validity as a unitary construct.

I will first estimate the validity of my research on the basis of the points listed by Spindlers (1992) and Syrjäläinen (1994), fom example. In terms of the special perspective which Eisenhardt and Howe introduced, this point of view may be described as judging the validity of my ethnographic research at the general level. I will judge my ethnographic inquiry against the aspects which Syrjäläinen (1994) proposed as indicators of good ethnography. As a Finnish school ethnographer, she is evidently nearer the 'tradition' which Eisenhardt and Howe call for. According to her, good ethnography includes the following aspects:

1. Observation has been conducted properly in relation to concepts.
2. The research has been focused further during the research process.
3. Observation has been repetitive.
4. The original context in which research has been conducted has been respected.
5. Techniques of data gathering have been elaborated during the research process.
6. The researcher has paid attention to different comparative views in approaching his or her research target.
7. The implicit knowledge of the people under study has been made in an explicit for the benefits of the readers.
8. The implicit knowledge of the people under study has not been transformed in a form which the prejudices of the researcher has brought about.
9. The researcher has used technical equipment in data gathering.
10. The researcher describes his or her roles in relation to the people under study paying attention to the possible impact they have had on the research.

(modified from Syrjäläinen 1994, 103–104)

I will consider my own research in terms of Syrjäläinen's criteria. The numbers in the following refer to the corresponding numbers in Syrjäläinen's list.

1. As I have emphasised on several occasions on these pages, my research was characterised by an intensive relationship between theory elaboration theory and fieldwork. The need to develop further the concept of the virtual classroom, on the one hand, and my fieldwork

observations on how a virtual classroom appears, on the other, is an example of this relationship.

2. I have reported how the research progressed and how the research problems developed and were focused.
3. I conducted my fieldwork over a period of three years by visiting Kilpisjärvi and repeatedly attending online lessons.
4. As far as the Kilpisjärvi context is concerned I have made efforts to bring it onto the pages of this volume. The question of the virtual classroom is a trickier one. What is the 'original context' of the virtual classroom I investigated? At the start of the project there was no precedent for this virtual classroom. I have tried to take into account the different backgrounds of the participants of the virtual classroom, and thus construct what could be called its context. I am sure that the role of the researcher in this case was more deterministic than in ethnographies which concern contexts with which people have been familiar all their lives.
5. I cannot say that the elaboration of data-gathering techniques has been my main interest. However, I made some changes when I felt the need to do so. The questionnaire which I sent to the Kilpisjärvi homes in the second year of the project is one example of this.
6. I have used several ways to approach the phenomena which I have investigated, and several techniques for gathering data. I conducted the research bearing in mind the perspectives of both Kilpisjärvi and, to a lesser extent, Helsinki, and the levels of the community, the school, the pupils and the online lessons. The data which was gathered by other researchers in the project also benefited my research. The Kilpisjärvi project has been a research process in which the distinct views of the different researchers and other parties involved have been expressed and discussed. In this sense, I suggest that opportunities for triangulation have been realised.
7. Have I been able to express the implicit knowledge of the people I studied to my readers? Although the answer is probably 'Yes', I have some reservations. Because of my different roles in the field, people did not necessarily always express their 'implicit knowledge' to me, but told me what they thought was suitable on that occasion. However, generally I experienced their attitudes towards me as open and honest. I took the criticism which some of my Kilpisjärvi informants expressed as an indication of this kind of openness.

8. The question of the researcher's prejudices relates in my research to the relationship between theory and fieldwork. Although theory is not the same as prejudice, theoretical development may, to some extent, have affected my fieldwork in a way which could be called prejudicial. I will use the virtual classroom as an example again. I went to the field to find out if there was a virtual classroom to be found. From the researcher's point of view, it would have been very ideal to come back with one. On the other hand, my research mainly dealt with features which were largely unexplored, as I have indicated in Chapters 1 to 4. This nourished a certain openness in research approach.
9. I assume that Syrjäläinen refers to the recording of happenings and interviews with her notion of technical equipment. In this sense I had some problems, as I already mentioned.
10. I have described my different roles in the field at length and have assessed their possible impact on my the research.

Judged against the above criteria my research seems to do rather well in terms of validity. Although, as I already mentioned, complying with this kind of lists is not in itself an answer to the tricky question of validity, it does provide a basis on which to make judgements.

There is one special feature iof my research which is not mentioned in the methodological writings I have read. It is recommended that an ethnographer brings pieces of the reality of the people he or she has studied onto the pages of the research report (on ethnography of education, see e.g. Erickson 1986). In practice this means including extracts from field notes and quotations from interviews for the audience to read. This also makes it possible for readers to follow and assess the researcher's interpretation. As I have already mentioned, I faced serious problems with the quotations from the interviews, which were transcribed. When translated into English, these pieces of people's talk in a Finnish dialect or other everyday language lose their authenticity. The important aspect of the perspective of the people under study all but disappears. I did my analysis with the Finnish version of the data and translated pieces of it for this publication. In that sense I have worked with the original data. However, in the form in which those quotations appear on the pages of Chapters 5 to 9, their trustwortheness as authentic examples of interviewees' points of view is questionable. For my Finnish readers I have compesated this weakness by giving the original versions in Finnish. From the perspective of validity, my decision not to record all the interviews but,

instead, to make notes during them and give my interpretation in situ, as it were, is interesting. Since they are easier to translate accurately, these notes are also more trustworthy, by which I mean that the English version is closer to the reality, as it appears in the data, than the English version of the transcribed interviews. This is a dilemma I never managed to solve, and which still exists in my research.

Not being content with the validity judgements that lists of 'good ethnography' provide, I will continue with the validity perspective that Eisenhardt and Howe (1992) presented. How can I judge the validity of my research on those grounds? I should estimate the validity paying attention to the tradition of the subarea to which it belongs. This subarea is media education, a subdiscipline of education, as I explained in Chapter one. The question now is, is there any tradition of ethnography in the field of media education? In more precise terms, is there this kind of tradition in media education, as defined at the beginning of this volume, referring mostly to Tella. This was discussed throughout Chapter four. I proposed that environments which have been created with the help of information and communication technologies call for a new kind of ethnography. In the field of education, this is very near to saying that media education calls for a new kind of ethnography. From this perspective, the ideas of Eisenhardt and Howe appear challenging. I am proposing that we need a new ethnography, ethnography which is special for media education, while at the same time I am saying that my research should be judged against this special tradition which has not yet emerged.

In the following I attempt to estimate the validity of my research on the basis of Eisenhardt and Howe's views. They declared that the data-collection techniques should be suitable for answering the research questions. As already mentioned, I had some problems with this. Originally I was interested in investigating the community of Kilpisjärvi in a wider sense than I finally did. The reason I abandoned this was that my data-collection techniques were not sufficient to provide valid knowledge about the impact of distance education in the community. In addressing the other research problems I have used several data collection techniques, each of them giving some supplementary information about the issues I have investigated. Participant observation, interviews, the utilisation of documents, and questionnaires still seem to me as an ethnographer, now after that the investigation has ended, suitable. There is also the question whether the data collection was correct in the technical sense. I have already mentioned the problems with recording interviews. The special problem regarding participant observation and the virtual classroom has been described as well: what was my field, where was the vir-

tual classroom located? I tried to strengthen the trustworthness of my research in this area by elaborating on the theory of the virtual classroom and the ethnographical approach tovirtual environments, and by paying attention to the operational consequences which may follow from these theoretical considerations, such as the idea of translocal fields. Finally, Eisenhardt and Howe propose that research should be judged against a background of existing theoretical, substantive or explicit practical knowledge. It is appropriate to note here, that media education (as defined in my research) is a rather new sub-area of education. Its essentially theoretical nature is rapidly developing and under discussion (e.g. Tella 1998; Kasvatus 30 [3]), and methodological questions are just emerging. On the other hand, virtual phenomena have received a lot of attention in the literature. What is of interest here are the studies which investigate virtual communities and various issues with the suffix 'cyber', in other words the areas which I have discussed in the first chapters of this volume. Existing knowledge of the subarea and the potentiality it provides to judge the inquiry are in this sense present in my research.

Does my research meet the requirements of external value constraints? Is it worthwhile in today's Finnish information society and in the educational reality in which we are living? I claim that it is. Both the level of educational practice and the level of theoretical development of media education call for the kind of research of which my work is a part. I have emphasised this point of view on several occasions. In the matter of internal value constraints, in turn, I have faced problems. This is the case particularly when I report the critical attitude which some parents in Kilpisjärvi had towards the local school, or towards some teachers in that school. (There was a similar debate in the school as well. Some teachers critically expressed their opinions about other teachers' pedagogy to me.) As far as these parents were concrned, this issue was an essential element in the relationship between the school and the community, and it also dealt with the role of distance education in that relationship. On the other hand, to emphasise this critical attitude may be unfair to those who were criticised. I never suggested to the local teachers that I would judge the pedagogy of the school, and I still do not consider that a target of my research. The aspect of judging came from the parents, and partly from inside the school as well. However, I feel that I may have invaded the privacy of the school life and the teachers' work when I report what was said in areas that I did not tell the local teachers that I was investigating.

Finally, there is the issue of comprehensiveness. I leave this matter open. I have analysed the validity of my research from several points of view on the grounds of methodological tradition and literature. I leave it to my audience

to judge how well I have managed in this task when all the various aspects are put together. Even with its weaknesses, I naturally consider my research to be sufficiently valid, otherwise I would not have published it.

CHAPTER 7

Community, School and Distance Education

The aim of this chapter

In this chapter I will discuss the relationship between the community of Kilpisjärvi and the local school. My main interest here is to consider what new aspects the use of distance education brought to this relationship. Five elements emerged from the data: 1) meeting the educational needs of the community, 2) guaranteeing the quality of education, 3) preparing for the information society, 4) community action and 5) the changing character of school. The topic of school-community relations is, of course, wide and complex. My intention here is not to try to cover it in its entirety. There is Finnish literature about school-community relations in rural education (Kalaoja 1988) to be found. What I will do in this chapter is to focus this on distance education as an element in the relationship between the school and the community.

The school and the community in Kilpisjärvi

In the previous chapter I reported in detail how struggling for enhanced educational conditions had been a united effort for the people in Kilpisjärvi. This apparently created a good basis for a successful relationship between the school and the community.

I asked the parents what they thought about the relationship between the Kilpisjärvi community and the school:

> *It [the relationship] is very good. Casual. The school takes part in the life of the village and the parents take part in the activities of the school. All of the parents are actively involved. In this small village everybody knows each other, which makes parents' involvement easier. (In97/Pa3)*

This statement by one of the parents reflects the general view. The parents commented that the relationship between the school and the community was close and informal. Parents are involved in many school activities and all of

them regarded the relationship between the school and the community as successful. The teachers had similar views. Here is what one them said:

> *The relationship is successful. People talk about things in a straightforward manner. There are no barriers. Bad things and good things can be carried over the school threshold. This is usually the situation. All of the parents are not used to handling things this way. There are differences in people. There is no home in the village which can't be contacted. It's easy for parents to come into the school building because people are used enter to it due to other activities which take place there. There have also been many joint activities with parents. Collaboration between teachers and parents is a familiar thing. (In97/KiTe5)*

Parents' sometimes show some initiative:

> *One of teachers was ill and there was a substitute teacher with the pupils. Some of the pupils were very hostile towards her and she left the school crying before the end of the school day. [Parent] happened to see this and found out the reason. She then went immediately to the school and reprimanded the pupils. After that everything went fine, she said. (Fn 11.4.97)*

On the other hand, school takes part in the life of the village, which is dependent on the tourism business. One of the major events is the ice-fishing competition in the beginning of May. This is a famous happening which brings masses of people to the village. Pupils and teachers help in the arrangements. The pupils' reward is time off school. The school building is used as accommodation by tourists on this occasion. The school also contributes in the local tourist business in other ways. At Easter 1997, when I was in Kilpisjärvi, the pupils gave a small show in the restaurants of the local hotel and the camping centre. They also made products of various kinds, such as scarves and T-shirts with Lappish decorations, which they sold to tourists. All these activities were organised by the teachers and, to some extent, by the parents. During my fourth trip to Kilpisjärvi I wrote in my notebook:

> *[Teacher] has been saving pillowcases with the pupils the whole of the Easter holidays to sell to tourists. How about this for local education! (Fn 18/96)*

When I interviewed this teacher, at the same time as answering my questions, she was ironing the pillowcases. It was the high season for selling!

One of the main motives for these activities was, of course, to get money for the school for various purposes, including funding for excursions (in spring 1995 the ninth-graders visited London, and earlier the whole school had travelled to the Mediterranean). We could say that the Kilpisjärvi school

is involved in various ways in the economic development of the community. For example, at a parents' evening in 1997 an excursion was discussed and planned. The whole school and a group of parents intended to make a trip to Norway and Sweden. One of the sites they planned visit was Abisko in Sweden because they wanted to see how the tourist business was organised in that skiing resort. The excursion was a study trip for the parents as well as for the pupils.

Fulfilling the educational needs of the community

One of the starting points for the project was the movement started by the Kilpisjärvi people concerning the lack of secondary-level education. It was a critical question for the Kilpisjärvi school whether it could or could not answer the call of the parents. This aspect was also crucial for the relationship between these two parties. An OECD report (1994) points out that people in developing rural areas expect and demand more from local schools. Schools are required to be capable of fulfilling the needs of the local community. Ljoså (1992) likewise implies that there is a conflict between the needs of a the rural community and the capability of the school to meet them. Kilpisjärvi is such a developing community inhabited by relatively young and active people. On the other hand, it has been argued (Sherwood 1989) that in rural education in particular there is a great variety of local needs which 'modern mass education' cannot address, and which require alternative educational solutions.

Kalaoja (1988) points to the dualistic role of the rural school. On the one hand it should support the local community and the future well being of rural areas. It must not alienate the pupils from their environment, but introduce the possibilities that a rural way of life offers young people and give relevant vocational information for successful future. Thus it should take into account the local needs and circumstances. The rural school also has another role. In Finnish society (as well as in many other societies), education is regarded as an equal right for every citizen. This does not only concern equity of access, and equality in terms of the curriculum has traditionally been paramount in the delivery of education. Pupils in rural schools must have the same opportunities for further education and the same variety of vocational choices as pupils in urban regions. In Finland we have a national curriculum framework that schools must follow, with some possibilities for local variation. Accordingly a rural school should give pupils skills and knowledge both for a life in

the local community and for further education and a future in another kind of (urban) environment.

According to Kalaoja (1988, 63–69), this dualistic view has been under lively debate among rural educators. In my research, the dualistic role of rural school was evident. I will replace the word 'role' by 'task', which perhaps better describes the school's attempts to achieve these contradictory goals:

Table 6. The task of the rural school.

Task of rural school	
To educate pupils for future life in local community	To give pupils skills and knowledge for further education and future life outside of community

Corwin (1965, 380–390) analysed the school-community relationship with respect to the orientation of the school and the community, looking at two aspects: local orientation and cosmopolitan orientation. Although schools and communities have changed since 1965 when Corwin published his typology, the terms local and cosmopolitan (especially when replaced with the word global) sound familiar to us who live in a world of networks.

The Kilpisjärvi people set educational goals which they wanted to reach. They wanted to fulfil their needs for educational services locally. The way they set about this indicated the kind of approach which I highlighted in Chapter one when I discussed globalisation and people in their localities. The people in Kilpisjärvi were anxious to enhance local educational services. Non-local educational flows were later taken into use to satisfy their demands and needs in the form of distance education. During the first parental evening in which I participated in December 1994, one of the parents described the events which preceded the establishment of the new school:

> *It was the boys who said one day: "We won't go to Hetta (the municipal centre in which a boarding school was situated) !" (Fn 12/12/94)*

The importance of staying at home was emphasised on numerous occasions when I discussed the project with local people. They had various reasons for this, as the responses in the questionnaire I sent to the parents in the second year of the project, indicate:

It's nice to see teenagers growing up in the safety of their own home village. (Qu/Ho3)

Young people of 14 to 16 are a great help both in the home and in our business. Many big projects have been undertaken by the whole school. (Qu/Ho3)

The school answered this call of the parents. Indeed, one of the main results of the Kilpisjärvi project was that the children were able to continue their compulsory education in the local community and stay at home. This is an essential point in terms of the relationship between the school and the community regarding the project.

I heard several comments by parents suggesting that the village is 'becoming normal', as they put it. By this they meant that it is normal in Finland that teenagers live with their parents. Before the project started, young people from 12 to 15 years of age were absent from the village most of the time. Now parents can see their teenage children grow up in the village. A significant aspect of this 'normalisation' process is that life has become more permanent in the village. The lack of secondary school pushed people away from Kilpisjärvi. One of the parents told me that if the secondary school had not been established 1994, her family would have moved away. On the other hand, one family moved back to Kilpisjärvi at the beginning of the project as a result of this new educational service. Establishing the secondary school seemed to have implications for how people saw the future of the village and their own future in the community. In general, parents as well as teachers had trust in the future of the village which, depends to a extent on developing the tourism business. A broader range of educational services also supported its development.

I asked for the Kilpisjärvi parents' opinions about the project in its second and again in its final year. In the first case I used a questionnaire and in the latter case an interview. Basically, I wanted to find out what they thought about the education from outside in the mode of online lessons, which in the parents' vocabulary was expressed with the term 'distance education'. In the questionnaire I asked them what was good and what was bad things about it from the perspectives of the community, the school and the pupils. Questionnaires were returned from three homes. The responses are given below (Some of the parents wrote brief notes. I have modified these notes to make whole sentences):

Good things:

Home 1

It has not been necessary for the children to move to the boarding school. Distance education has developed the pupils' skills to use computers, it has developed their concentration and self-development skills, their abilities to listen and speak, and their computer skills.

The school and the village were in a special position when distance education started and this has also benefited other sectors.

The pupils now have the opportunity to become familiar with pupils and learning in the capital area, and with highly-competent teachers.

Home 2

The young people are able to go to school in their home community.

Knowledge about other schools is handy.

There are teenagers in the village.

Home 3

For the first time, in the history of the village there are people of every age group in the village, which is a very good thing. It is nice to see teenagers growing up in the safety of their own community.

Young people of 14 to 16 are a great help both in the home and in our business. Many big projects have been undertaken by the whole school.

Distance education necessitates a lot of attentiveness and concentration which, in a way, is a good thing.

Distance education has imported knowledge in subjects which, perhaps, could not have, been taught using only local resources.

We have had many visitors to the village who have been interested in distance education, and this has livened it up in the off-season periods, too. This distance education has given the village a lot of free publicity.

Bad things

Home 1

What was bad was the technical problems with the equipment and the breaks in the link in the beginning.

Home 2

There are only a few hobbies that can be pursued in the village.

The young people in the village have a narrow choice of friends their own age.

Home 3

(No mentions of bad things)

These comments indicate that the parents associated the possibility of getting a secondary school with the use of distance education in the delivery of secondary-level education. It is thanks to distance education that they now have their own secondary school in the village. The numerous discussions and chats I had with the parents during the project confirm this finding. The truth is somewhat different, however. A municipal school official who I interviewed at the beginning of the project stated that the secondary school would have started anyway, even without a distance-education link. The decision concerning the new school had already been made before the decision makers knew about the opportunity to link it with the Helsinki school. Whatever the situation really was, in the minds of the villagers distance education was the key to getting a local secondary school. This was the way they saw the situation, at least. Accordingly, the school responded to their call for lower-secondary education, and this response was enabled by the use of information and communication technology.

However, the parents were aware of the disadvantages of a small rural school and the remote location of the village. They were worried that the children would become too isolated in the village, lacking contacts with other children of their age and with outside world, and they had little experience of different kinds of environments and lifestyles. The months out of the tourist season are quiet in the lives of the villagers and contacts with other people are few. One of the parents described Kilpisjärvi in the following way:

> *Kilpisjärvi is a place on its own, far away from other places. This is apparent in the everyday life here. It is something you have to accept. For some of the year Kilpisjärvi is a very closed community, at other times it is a very open and international community. (In97/Pa3)*

Some people thought it would be difficult to get competent teachers. One teacher would have to teach many subjects, and the number of personal in the school would be limited.

Hence, the needs and interests of the parents were partially contradictory. Distance education provided an opportunity to try to resolve this problem. The pupils of Kilpisjärvi had their education from outside of the community, and they made new contacts with teachers and children of their own age in a

different environment. In Chapter nine I will describe how well these contacts succeeded. In any case, the Kilpisjärvi pupils became, in a sense, border-crossers between boundaries: small school—big school, small village—city, rural environment—urban environment, and geographically isolated area—metropolitan area. The school became a mediator between the local and non-local realms of life. This is one aspect of an impact on the relationship between school and community. Stevens (1992) suggests that when the use of information and communication technology increasingly links rural pupils to people in urban areas, rural schools and teachers will become mediators between these two distinct ways of life. Accordingly, the dualism of rural education seems to become just more essential along the new possibilities provided by developed distance education technologies. Danaher and Wyer (1995; 1998) approach the use of distance education in school from the theoretical perspective of border pedagogy, which is explicated by Giroux (1990). Border pedagogy offers with a critical view to cultural and social practices that are based on dominant models of culture and the respect of Other often associated with margins and the periphery (Giroux 1992, 28–36). Here '...students should engage knowledge as border-crossers, as people moving in and out of borders constructed around coordinates of difference and power.' (Giroux 1992, 29). Danaher and Wyer operate with border pedagogy in their study of itinerant education for the children of Australian show people. The educational program (using distance education) designed for them affirms the value and validity of the itinerant lifestyle for the children and at the same time they are introduced to the life of non-itinerant people in various settings. Thus children become border-crossers. Danaher and Wyer suggest that their case is one example of globalisation interacting with localisation. Thus, their approach resembles the one I have used in my research.

The educational services of the Kilpisjärvi village have increased as a consequence which may be significant for the future of the community. The cases of the two families to which I referred earlier concerning moving out of and into the village indicate that when people decide where to live, the availability of educational services a community can offer is not a trivial consideration. The community of Kilpisjärvi can now offer more equal educational services (in terms of the communities in more privileged areas). It has a lower-secondary school in the village where the children receive some education in common with the pupils in the Teacher Training School of Helsinki University. Distance education makes it possible for the pupils to participate in the same teaching as the pupils in the most metropolitan area in Finland. It is an example of educational equality. Distance education has had an essen-

tial role in improving educational services in Kilpisjärvi to equal those in more privileged areas. It could be said that, thanks to distance education, the local school is able to realise educational equality better than before. Teledemocracy has been a hot topic in discussions about the information society (Dutton 1996). In the Kilpisjärvi case it is a question of certain kinds of 'tele-equality'. Here, distance education, through information and communication technologies, facilitates the process of enhancing equality. Lehtinen (1996) reports similar results in another Finnish distance-education project. She argues that the Turku archipelago small island school involved in a distance-education project has become more competitive with bigger schools, giving as an example the alternative courses pupils are able to take, such as German as a foreign language. In North America educational opportunities have, indeed, increased through the sharing of resources in electronic networks of educational organisations, as like numerous examples indicate (e.g. Townsend 1997).

One aspect of educational equality concerns opportunities for further education and vocational choice. There is a degree of concern about the local vocational opportunities by some teachers in the Kilpisjärvi school. They think that the pupils will not stay in the village in the future. Connections to the outside world such as the distance-education link, prepare young people for a different kind of life in a different kind of environment. It seems that this is also in the interests of some parents as well as some pupils. Thus distance education helps to prepare young people to move out of the community if they need or wish to. It eases the restrictions that living and growing up in a small geographically-isolated community might put on their future. Stevens (1994a) points out that one of the effects of distance education was to widen the vocational choices of young people in rural areas in Australia to include vocations which were not typical of their home communities. The aspect of vocational choice came up in my discussions with parents and pupils. The lessons on vocational guidance that I happened to attend did not give much attention to the Kilpisjärvi pupils, but they and their parents still thought that vocational guidance through the distance-education link was useful. At the end of the project I asked the pupils about their vocational plans. Two of them wanted to continue their education in upper-secondary school and while the other two in vocational school. The vocational choices they mentioned were hiking guide, shopkeeper and the computer industry. Two of these four pupils aimed to live in Kilpisjärvi in the future. Although vocational guidance was as regarded useful, three of the pupils commented that the use of distance education in the school did not affect their vocational choice. There was one

exception. One of them planned to move to Helsinki to continue education in the upper-secondary level of the Teacher Training School. The distance education link has made this school, people in Helsinki and Helsinki in general familiar to her, and this helped her to make decision about the school in which she would continue her education. She stated that:

> *It is easier to go to Norssi [Teacher Training School] than to some totally unfamiliar school. (In97/KiPu4)*

This particular pupil did move to Helsinki and continued her school career in the Teacher Training School.

When we think about the relation between the community and the school in Kilpisjärvi we must remember that the village and its inhabitants are very special for a small rural community. People there are relatively young, the adults have moved to the village from some other place and many of them work in the tourist business. They are cosmopolitan rather than provincial. On the other hand, a community, even a small community, is not a homogeneous whole, but consists of different kinds of persons with different kinds of interests—the liberal, the conservative, the cosmopolitan and the local, for example. In Kilpisjärvi, one discriminative factor in this sense is orientation towards the future. Some families thinks that they will move away in the future, and some that they will stay, hoping, too, that their children will also live in the village in the future. The hopes and expectations regarding the school have been rather similar. The main point for all the parents was the very existence of a local school.

I would like to sum up some points here. The distance-education link created a link to the outside world and connected the Kilpisjärvi pupils with other children of their own age who live in different environments and function in a different realm of life. The pupils in Kilpisjärvi were exposed to new teachers and a wider variety of teacher personalities. Thus the school fulfilled local demands which were non-local in nature. The use of distance education through information and communication technology gave the school new potential to answer the needs and demands of the community. It increased the school's preparedness to answer local educational needs, both those which were locally-oriented and those which pointed to contacts with the outside world. Edwards stresses the 'importance given to distance education as an expression of the call to "think globally, act locally" ' (Edwards, 1994). The parents in Kilpisjärvi wanted their children to have a wider perspective on the world outside. They had two alternatives: either the children moved out of

the isolated community or the big world was brought to the village. They chose the latter. They thought (from the point of view of the theoretical framework of my research) 'translocally' and acted locally.

The community expressed its educational needs to the local school. Firstly, they wanted to have a lower-secondary school in the village. Secondly, they wanted the school to do something to ease the isolation of the pupils if a local secondary school were to be provided. The Kilpisjärvi school answered both of these two needs. Distance education was a decisive element in this. It has helped the school to serve the educational needs of local people, even if these needs were not easily met and even somewhat contradictory. This state of affairs has had an impact on the relationship between the community of Kilpisjärvi and the local school. Distance education enabled the school to serve the local community better than before. The community, in turn, has supported the school more than before, as will be seen later when community action is discussed.

Guaranteeing the quality of education

Another thing the parents were worried about, in addition to the isolation factor, was the quality of education in the new secondary school. The Kilpisjärvi school is a small school with very restricted resources. The remote location of the village makes it difficult to use teachers from outside of the community. The nearest qualified teachers are to be found about 200 kilometres away, and there is not the funding to employ permanent qualified teachers exclusively for the 4 to 6 secondary-school pupils. In any case, it might be difficult to get competent teachers. One teacher has to teach many subjects, which limits the choice. Accordingly, it was not surprising that the parents were concerned about the quality of education in the new lower-secondary school.

One of the main reasons why distance education was used in the Kilpisjärvi school was to ensure the provision of competent teaching. I will discuss the characteristics of this aspect of distance education in more detail in Chapter eight. Both parents, pupils and teachers in Kilpisjärvi thought that, without distance education, the quality of secondary education in the local school would be questionable. According to the parents:

> *The pupils have an opportunity to get know pupils and to experience learning in the capital area with highly-competent teachers. (Qu/Ho1)*

Distance education has delivered teaching in subjects which could not, perhaps, have been offered with the local resources. (Qu/Ho3)

The parents appreciated and trusted the competency of the distance teachers. This was apparent from the formal investigations such as the questionnaire responses quoted above, and in everyday situations when I met the parents. Distance education ensured an adequate quality of education and competent teaching in several subjects at secondary level, including English, history and mathematics.

This effect also seems to hold in some other Finnish distance-education projects. The delivery of competent teaching seems to be an essential reason for the use of distance education. For example, in the Korpilahti case, the learning of foreign languages in a network of small schools is supported by teachers from Jyväskylä through information and communication technologies (http://www.norssi.jyu.fi/yaste/projekti/etaproje.html). The teacher-training school of the Oulu University has been linked to several lower- and upper-secondary schools, situated mostly in the rural areas of the northern part of Finland. In this telematics project (http://www.norssi.oulu.fi/~pkemppai/9798/index.htm), student teachers have taught several subjects through the link. Most of the student teachers were mathematics and science teachers, however. These subjects appear to be critical in education in remote areas.

Distance education brings one school into constant interaction with one or more schools. negotiating with them on several matters, both practical and pedagogical. These contacts are likely to make the teachers reflect on their own pedagogical styles. The impact from outside may be both refreshing and renovating. Interaction between the local teachers and other people in the field of education has the potential to prevent the education in a small, geographically-isolated school from stagnating and becoming old-fashioned, taught in a repetitious way by the same teachers year after year. Distance education helps a school to promise the local community that it is in contact with pedagogical development in other schools and in the field of education in general.

In the Kilpisjärvi project, distance education provided the local community with an opportunity to compare local education and local teachers to education and teachers in other schools. A look back at the questionnaire responses shows that the parents seemed to appreciate the connection with other schools:

Knowledge about other schools is handy. (Qu/Ho2)

> *The pupils were given the opportunity to become familiar with pupils and learning in the capital area and with highly-qualified teachers. (Qu/Ho1)*

This broadens parents' pedagogical perspectives so that they are able to judge the educational activities of the school against non-local pedagogical solutions. One of the parents commented in the interview:

> *There was contradiction between the quality of [a local teacher] and distance education. Thanks to the distance education, the parents in Kilpisjärvi have been able to feel secure about the quality of teaching. It's good that the Kilpisjärvi pupils have the same homework and tests as the Helsinki pupils. The tests of [the local teacher] had been of distinct quality. (In97/Pa2)*

I was told that some of the parents claimed that one of the teachers in the Kilpisjärvi school gave too low marks to the pupils. They compared this teacher to a distance teacher of the same subject who gave better marks. They suggested that the difference between these two teachers proved that there was something wrong with the education at the local school. Accordingly, their argumentation of local education was based on outside impact.

Here is an examples from my field notes:

> *I go to a parents' evening. All the mothers are present. Distance education is praised. The mother of [pupils' name] states frankly that [because of distance education] teaching is better than earlier. (Fn 7/94)*

Here the argumentation based on comparison between the two schools. This particular parent preferred the more strict approach of the teacher-training school to school work than that of the local school. I had several discussions with this parent later. She stated that she had already expressed some critical opinions about the school before the project, but that it was the outside link which finally 'opened her eyes', as she put it. Some of my informants delivered their views on the schooling in Kilpisjärvi in a very open and critical way. The most frequent target for criticism was the flexibility of schoolwork. The critics claimed that the organisation of the schoolwork in the local school was not strict enough and that time was wasted. The pupils thus did not learn effectively.

From the perspective of the local community, the opportunity to judge local education in a new way, using comparison, is one of the characteristics of distance education. There is some kind of increased control that the local community can exercise. There is also the question of educational equality.

Increased opportunities for comparison between different schools mean that the community is better able to find out the quality of education in the local school. In other words, distance education gives the community a chance to compare if the quality of education is on the same level as the national average, or whether it falls below. It might be supposed that this kind of opportunity could increase parents' curiosity about the school, especially if there are concerned. Parents are rather powerless in their relation to experts of education, but if they can support their own views with evidence based on the expertise of other professionals in education (as was the case in those two above examples), it might give them some confidence in their criticism. Comparison has a certain stimulating impact on the relationship between a school and a community. The distance-education link opened up the Kilpisjärvi school not only to the outside world, but in a sense to the local community as well. A school that participates in distance education becomes more public and more open to the world outside (Stevens 1994b; Kynäslahti & Stevens 1996). Distance education may work as a guarantee of the quality of the education in the local school in that the distance link certifies certain level of equality with the education in other schools. Choosing distance education courses of good quality gives a small school the opportunity to improve its teaching and lessen the disadvantages of inadequate resources such as the lack of competent teachers. In other words, distance education helps the local school to promise the community that the education in their school parallels the education in more privileged schools.

Summing up, distance education provided the Kilpisjärvi school with the means to guarantee an adequate quality of education to the local community in different ways. One thing was the delivery of teaching by competent teachers, and another was the opportunity for parents to compare education in the local school with that in other schools. The following chapter will show that distance education also worked as in-service training for the teachers in Kilpisjärvi, enabling them to update their knowledge and pedagogy, and providing a forum for pedagogical discussions.

Community action

With the above subheading I refer to a concept which has been used in rural sociology (Wilkinson 1986). Before I define it more precisely I will describe some of the action in the community that the start of the Kilpisjärvi project triggered.

According to parents and teachers, there were many difficulties at the beginning of the project:

> *There were many arguments before we got distance education here. Community members were suspicious of distance education. Now many of them have changed their opinions about distance education. Attitudes both towards distance education and towards the school have become more positive than they were. Actually, it was not the parents of the secondary-level pupils who were critical, but other parents and other members of the community. There was some scepticism about the quality of teaching and concerns about isolation. (In97/Pa4)*
>
> *The first autumn was a challenging time with difficult situations. There were many parents' evenings at the beginning of the project. We tried to get to familiar with this new situation together. This brought us closer together. (In97/KiTe5)*
>
> *Parents came to observe lessons at the beginning of the project. They've probably been worried about negative aspects of distance education. (In97/KiTe4)*

Distance education was a new thing for the pupils, for the parents and for the school. There was scepticism about the rationale behind it. In fact, distance education and the technology involved was then, in 1994, a new thing for Finnish schools in general. The Kilpisjärvi people were pioneers in this respect. The school needed the support of the parents in this demanding situation and, therefore, the parents continued their 'community action' even after the new school had been established. They wanted to support the school in its endeavours to secure its future through distance education. A municipal educational official told me at the beginning of the project:

> *The parents have adopted a waiting attitude. If teaching from the teacher training school will not succeed there will be support by local people. (In95)*

The situation concerned not only the village of Kilpisjärvi, but also the wider municipality of Enontekiö. I was told by Kilpisjärvi people that decision making at the municipal level was rather controversial and that people from other parts of Enontekiö, perhaps, did not feel positive about the promotion of the advancement of educational services in Kilpisjärvi. Whether this was true or not, I do not know, but this is how people in Kilpisjärvi appeared to think. I happened to witness the visit of the municipal council of Enontekiö to the school at the beginning of the project. A group of 20 to 30 persons rumbled into the classroom when a distance lessons in English was going on. The

comments I heard were negative. One of the council members just said that the teacher's voice through the link sounded like Donald Duck, and then he went away.

Rural communities traditionally try to keep their school active (Kalaoja 1988). In the case of Kilpisjärvi, distance education became a new weapon for parents in their efforts to ensure the continued functioning of the school. Parents expressed their support for distance education to me several times. At a parents' evening at the beginning of the project there was the general feeling that the parents would be there to help if there were difficulties with the distance education. Their comments had a pedagogical aspect: they would facilitate the learning of their children. In practice, this facilitating might have been rather difficult, but the attitude was very supportive. On the other hand, they used expression such as 'we here in Kilpisjärvi'. I interpreted of 'we' on this occasion to include parents and local teachers. Accordingly, the parents and the local school were together building up the new distance-education dimension.

The relationship between the Kilpisjärvi school and the local community was good before the project, and the establishing of the secondary school made it even more intense. The present school of Kilpisjärvi is a result of the efforts of by local people. The many struggles over local education have been fought in a mutual campaign by the Kilpisjärvi community and the school and each has needed the support of the other. This brings a certain intimacy and familiarity to the relationship between school and community: it is *our school*—the result of our struggle. These movements have represented certain kind of community action, i.e. 'collective efforts to solve local problems and collective expressions of local identity and solidarity' (Wilkinson 1986, 3), which is called for in special situations. In Kilpisjärvi village this special situation evolved from the request for a local school in the 1980s and the lack of secondary education in the 1990s. Collective efforts brought the local people and the school together which fostered an intimate and working relationship between the school and the parents. My interpretation of the parents' comments is that they sensed that the school needed their support more than before in this new situation. Secondary-level education was a new thing for Kilpisjärvi, and distance education made the situation even more challenging. Previously in this chapter I argued that distance education helped the Kilpisjärvi school to serve the needs of the local community better. The community, in turn, supported the school more eagerly than before because of distance education.

Preparing for the information society

Literature on issues of rural education has suggested that the use of information and communication technology in school may cause a gap between school and a community that is not familiar with the potential of the technology (Stevens 1994b; Kynäslahti & Stevens 1996). 'High-tech school' may be a strange phenomenon for parents who are familiar with a more traditional school. When information and communication technologies become more and more integral to the function of schools, school will become a place that parents find difficult to comprehend. Parents might not understand the environment in which their they children are being educated if they, in Stevens' words (1994, 323), 'are not introduced to [the use of technology] or made aware of its educational and vocational potential.'. Does this apply to the parents in Kilpisjärvi? As I suggested earlier, the community of Kilpisjärvi is characterised more by futurism and dynamism than by conservatism. This is also how Urponen and Vesterinen saw the community in the 1980s (Urponen & Vesterinen 1986). Two of the four parents I interviewed used computers in their work. One of the parents commented:

> *People in the village are used to living with media and technology. There's a lot of futurist spirit in the village. (In97/Pa4)*

I asked the parents if the use of advanced technology in the school would make them feel estranged.

> *It might happen if parents do not take part [in school-community activities] and if they aren't at all interested [in what is going on in the school]. (In97/Pa3)*

This particular parent thought that if she had not been used to computers in her work, she might have became isolated from the school. However, the parents did not generally see any danger of estrangement. One of the parents expressed her feelings in the following way:

> *Videoconferencing is not such a special thing. (In97/Pa3)*

The parents had the opportunity to experience videoconferencing in learning themselves. In addition to the adult education which the local open-learning institute provides, people in the village also wanted to benefit from the new distance-education link. For example, they joined courses in which educa-

tional topics such as bringing up of teenagers were discussed. These courses were run by student teachers in Helsinki using videoconferencing.

> *I was nervous in case somebody asked me something, but it was because of the subject. I should have had more basic knowledge of it. I've been used to these equipment because I have seen it so much in my job. I tried to get in-service training through the video link from Tornion ammattien edistämiskeskus, but they were not interested if there was only one person. (In97/Pa2)*

The videoconferencing courses were popular among the villagers, and the parents of the pupils in the project group joined them. The results of the Kilpisjärvi project do not support Stevens' speculations. The parents did not regard the increased technical character of the school as a negative phenomenon, but rather as a very positive. Some of the parents used computers in their work, which naturally affected their relationship with technology. They did not see it as anything special or unfamiliar and mysterious. Their attitudes towards technology were rather practical: they regarded it as useful. It is thus obvious that, in the Kilpisjärvi case, according to the parents' views, technology did not create a gap between the parents and the school. On the contrary, the parents were introduced to it and made aware of its educational and vocational potential, echoing the words of Stevens.

Over the three years of the project, the parents' great appreciation of the high standard of technology used in the project has been obvious. They felt that what was happening in the Kilpisjärvi school is something special and highly advanced. The project, on the other hand, was introduced to them as an experiment with unique technical solutions which, at least at the beginning, was mostly true. The parents were also aware that visitors were coming to Kilpisjärvi to get the know what was going on in the local school. There were several people from foreign countries among them which apparently gave the impression that the project was important and an interesting educational experiment. On the other hand, as one of the parents commented, the villagers were used to guests of high rank: presidents, kings and queens. (People still told me stories about President Kekkonen and about the antics of his delegations.) The parents as well as the pupils thought that this project would give the pupils valuable knowledge of and practice in communication and information technologies which they would need in the future, and which would give them certain advantages over other pupils as future citizens of the information society. The Finnish media have encouraged this view. News and articles about this project, as well as about other similar experiments, presented pupils as forerunners of a new kind of world.

Great trust in technology in this context relates to wider developments in society. Bromley comments that the 'computer-based curriculum serves as a *symbol* of the quality of the education children are receiving' (Bromley 1997, 52; emphasis original). According to him, to place computers in schools is in the interests of both the business world and professional educators, as well as of parents. Lamb (1996) speaks about 'informational imperatives'. These are rational arguments for achieving efficient and productive use of information and communication technology. For educators, such an informational imperative is digitised curricula which promises to prepare students for future technology as well as to educate tomorrow's information workforce (Lamb 1996, 20). As pointed out in the first chapter of this volume, change in Finland towards an ever more apparent information society has the general approval of policy makers, and it is an effective use of information and communication technologies. Thus it is not surprising that pupils' involvement in the use of information and communication technologies is regarded as valuable and useful by parents as well in Kilpisjärvi as well as elsewhere. This seems like an answer to the call which Varis (1995, 61–63) made for proactive education for a Finnish information society.

Whatever the actual relevance of the technical expertise that pupils gain in the Kilpisjärvi school, its new high-tech status has evidently had a significant effect on the relationship between the school and the community. As I mentioned before, for the people in the village the school is *our school*. Now it is *our high-tech, innovative, famous, pilot project …school*.

The changed character of the Kilpisjärvi school

The school has networked outside and it mediates education from flows in the eduscape. The school building contains a wealth of technical equipment, the use of which is an essential part of the everyday life of the pupils and teachers. In the terms of Goldberg & Richards (1995, 8), school, for the Kilpisjärvi parents, is no longer only a physical manifestation of buildings, people, rooms and other such concrete things. These features are a part of it, a part which is very important for them because it is 'there'. It is easy for them to relate to this aspect of school. They can go inside the building where they can talk with teachers. I will consider this aspect in more detail in the following chapter.

There is another dimension of school, however. In the Kilpisjärvi project, it is simultaneously in many places, which means that it exists in the

form of buildings, bodies, technology and mediated interaction in an electronic sphere. The presence of human participants is also becoming increasingly 'electronic' and virtual. This kind of school, with its diminished significance of place and its flow of educational activities between different places, also parallels the processes of deterritorialisation and translocalism which are going on in the world today. It is difficult to give the number of teachers at the Kilpisjärvi school: does it comprise those who are to be found physically in the school building, or those who regularly teach there, in flesh and blood and through the videoconference link? The same applies to the also pupils (and parents). Physical presence has not lost it significance. The teachers and pupils meet each other face-to-face in the course of the school day, thus building up a shared physical community. In addition to this, the teachers and pupils who are involved in distance education share another kind of school with their net colleagues and classmates. These teachers do not chatter in the coffee room with other teachers in the school, neither do these net classmates play with other pupils in the school yard (Tella & Kynäslahti 1997). Haughey and Fenwick (1996) argue that this feature may cause some confusion among teachers and administrators. According to their research on school consortia in Alberta, principals experienced this kind of change in enrolment as disruptive and undesirable. Indeed, the virtual dimension of school causes changes in how we see administration.

We could look at the changed relationship between the community and the school using the framework of the eduscape. Parents have become aware of opportunities that educational flows offer their children. They expect these opportunities to be exploited. When parents associate the use of distance education with the successful function of a secondary school, they implicitly impose the requirement that it should be used in the local school. They expect a new dimension in the Kilpisjärvi school. This dimension is based on the use of educational flows. The parents were aware of the potential which technology provides to loosen the restrictions which the remote location of the village causes.

> *Technology annihilates geographical isolation. Every location can be regarded as near. (In97/Pa3)*

This was the answer one of the parents gave me when I asked her about the impact of distance education in Kilpisjärvi. This comment mirrors the characteristics of the eduscape; people can reach the educational flows of the eduscape regardless of the geographical location in which they live. Through

distance education the Kilpisjärvi school is involved in activities which annihilate the dominance of location. In this sense, part of it has become placeless. The parents saw not only a local school, but also something which functions as a school without engagement to location. The relationship between the community of Kilpisjärvi and the school from the parents' point of view not only refers to the local 'physical' school, but also includes the outside world *through* the school. It has thus widened, and the local school is only a part of it. An interesting question is *where* the rest is. Is the virtual dimension of the school (tele)present in Kilpisjärvi or does it exist elsewhere and, in that case, is it only mediated to the school? The virtual 'part' of the school is not something physical and concrete, something you as a parent can walk into to talk with the teachers. The concrete part of the Kilpisjärvi school has became an interface between the parents and this virtual dimension.

The previous lines suggest that the Kilpisjärvi school has changed. This is also one of the aspects of the relationship between the school and the community of Kilpisjärvi. If the school has changed, then obviously the relationship has changed too. School, both as an organisation and as a building, has been entrusted by society with the education of new generations. A school may be said to include a piece of land, a building, the personnel dedicated to their specific task, and the pupils. In other words, school education has been concentrated on a place, on a building and a location. From this perspective a school appears to be an organisation that is delineated both functionally and physically. When discussing the development of the school and classroom, Reid (1990) reveals how they as organisational settings have been 'inventions' of their time reflecting larger social developments. As an invention

> ... [i]t has to fit with theories of practice and with social relations and conventions. More than this, if it is an educational invention it has to mesh with the meanings which the world outside schools projects upon it. (Reid 1990, 210).

In the first four chapters of this volume I discussed what our 'time' is from the perspective of view of media education. We could say that online lessons of the Kilpisjärvi project took place in a school which does not have any specific physical manifestation. In my view, school in this sense is not a differentiated institution separated physically, temporally and functionally from its environment (Kynäslahti 1998). 'School', then, is the interaction which takes place (mostly in real time) between the participants. Its walls become more and more permeable. The border between the physical and the virtual be-

comes blurred. The ordinary physical school is only part of a greater complex. Blystone's (1989) distinction between traditional school and virtual school no longer seems accurate. This is also true of Paulsen's definition of virtual school which followed the same lines. I argued earlier that Tella treats the symbiosis of ordinary school and virtual school as an either-or situation, virtual and ordinary separated temporally but complementing each other. I went further to speculate with cyborgs. Could we bravely use the cyborg metaphor, then, when we consider the character of the Kilpisjärvi school nowadays? It has become, to some extent, a novel creature, of the kind I referred in Chapter three. It is a mixture of physical elements (the local pupils, the local teachers, the building and the class*room*) and non-physical elements (the virtual classroom, the virtual dimension of school). There is an alliance between these two, as Haraway (1991) discusses in relation to cyborgs. It is not a question of either-or (physical or virtual school) but both-and, with a shifting composition of these two parts.

One aspect of deterritorialisation is also to be found in school development when information and communication technology is used intensively, as it has been in the school of Kilpisjärvi. Some of the education in the school transcends spatial/physical elements, and more or less leaves a particular territory. In the Kilpisjärvi, case we could consider 'territory' as the local village, the school or the classroom. The school has a new deterritorialised dimension. The Kilpisjärvi project is a combination of the local actions of pupil groups or individuals at different sites and the mediated interaction between them. Accordingly, educational activities take place translocally. It involves with a combination of people in diverse localities and interaction between them on the grounds of sufficiently common educational interests.

Conclusion

I have emphasised several times the importance of the possibility for pupils to stay in their home community during their years of compulsory education, which was one of the main ideas behind the Kilpisjärvi project. It is important to the community that the children can stay in the village and get their secondary-school education locally. Thus educational process does not necessitate a move away from the village and alienation from the community. Reports from different countries emphasise this point. The consolidation program of rural schools in the USA has worried rural educators because it takes children away from their home society (DeYoung & Lawrence, 1995; Seal &

Harmon, 1995). According to McGreal and Simand (1992), native people in Canada have expressed their interest in the Contact North network. Distance education permits their young people to continue their education while remaining in their home communities. MacGibbon reports on a Canadian network in which students in Creek communities in northern Quebec take preparatory college-level courses using videoconferencing, without leaving their home communities (MacGibbon, 1997). Similar research has been reported by Gruber and Coldevin (1995). They also point to the potential of distance education for Canadian aboriginal communities in providing the opportunity for young people to be educated in their home community.

In the Kilpisjärvi project, information and communication technologies played a major role in making this opportunity to stay in the home community possible. Technology also provided a link between the local way of life and the way of life outside of the local community, mainly that of Helsinki pupils. Two localities, Kilpisjärvi and Helsinki, became linked together. In the (slightly twisted) words of the famous slogan: people in Kilpisjärvi acted locally and linked translocally. The outside contact even provided an opportunity to think translocally. In the educational literature, several authors indicate the potential of communication and information technology to provide an opportunity for students to straddle their community and wider society. MacGibbon's work was mentioned in the previous paragraph, for example. This Canadian network enables the pupils to become orientated for the unfamiliar Euro-Canadian environment they will face in post-secondary studies in southern Canada (MacGibbon, 1997). The research of McGreal and Simand (1992) and Gruber and Coldevin (1995) deal with the same kind of situation. Accordingly, the role of the school as a mediator of mainstream culture and the local culture or cultures is not new. It is the way in which distance education is realised, its real-time interaction, its with virtual reality, its intense cooperation between parties, that gives it a new dimensions. The outside world, the strange element discussed above, is there in the everyday life of the school—virtually. I will discuss this aspect more in detail in Chapter eight.

DeYoung (1995) speaks about the relationship between local rural education and mainstream culture. For him, a school building is a manifestation of the outside world. He has conducted research on rural education in Apalachia. DeYoung states that Appalachian rural schools gives special attention to mainstream culture because pupils do not necessarily experience it in the local way of life. He regards these schools in rural Appalachia as cultural bridges between the local way of life and the mainstream national American culture (DeYoung, 1995). Seal and Harmon (1995, 123) call rural schools a

major link between the community and the world. As mentioned before, the needs of the Kilpisjärvi people concerned similarly bipolar interests. The new local lower-secondary school was seen as a way of forcing a connection with the outside world introducing their children to other kinds of lifestyles.

Children's close contact with technology is something that people seem to appreciate in today's information society. This was evident in the Kilpisjärvi project, which mirrors the findings of other researches. Warschauer (1998, 74) investigated a computer-based English as a Second Language writing course in a Hawaian college. He also found out that students who came from different parts of the South Pacific saw working with computers in their studies as important for their careers and academic success. Arnold reports on changes in the Australian schooling system, with schools moving closer to what they perceive as relevant to the changing work practices of a new economic ethos and new technologies. These are trends which suggest that school's task is to educate students for the workplace of the next century (Arnold 1996). McGreal, in turn, emphasises the role of distance education through information and communication technologies, used in small remote schools in North America in preparing young people for the future information age (McGreal 1994).

At the end of the project, in spring 1997, the parents were worried about whether distance education would continue in the school. As a representative of the project I was questioned on several occasion about this matter when I was on my field trip. As far as the parents were concerned, distance education was not a fascinating experiment, conducted together by the university and the school, but it had become an important and necessary part of schooling. The fact that distance education went on to become a stable part of education in Kilpisjärvi after the project had ended verifies the above. This is a significant outcome of the project.

CHAPTER 8

A Comparison of Some Salient Features of Local Education and Distance Education

Introduction

In this chapter I will discuss the character of local education and the character of distance education in the symbiosis of these two elements in the Kilpisjärvi school. By *local education* I mean education which was delivered on site, in a school building, by the teachers of the local school. Thus, local does not (necessarily) point to the content of the teaching, but to the mode of delivery. By *distance education* I refer to education which was mediated through information and communication technologies from the network. In practice, this means the education taught by the teachers of the Secondary Teacher Training School of Helsinki University.

Secondary-level education started in Kilpisjärvi in 1994. It was a beginning both for local secondary education and for secondary education as distance education. The aim of this chapter is to investigate how these two educational dimensions have developed in the Kilpisjärvi school which has become a combination of physical and electronic schooling. It might be assumed that distance education includes elements which traditionally belong to the local school, and that it has brought new elements to local education. There is something 'more' than there would have been if the Kilpisjärvi secondary school had started without the distance-education link. In other words, distance education has 'taken away' some elements from the local education and, at the same time, brought some new elements to it. The preliminary project results (Meisalo 1996) indicated this.

My perspective here is that of the Kilpisjärvi school. It is worth mentioning, that my aim is not to report all its tasks here. As Blystone (1989) remarks in his work on virtual school, schools have many kinds of goals, duties and activities which research on virtual school may ignore. The aim of my research is not to list all the tasks of a Finnish lower-secondary school, in this case, the Kilpisjärvi lower-secondary school. I will concentrate on the elements which are relevant to my analysis of these two educational dimensions:

local and distance, and ignore things like medical care and school catering. They did not have any specific relevance to the Kilpisjärvi project.

The local context

By local context I mean the real environment in which people live. 'Real' may sound a little strange here, but I use it as a counterpart for virtual. In Jones' (1995) terminology, we could speak about an offline and online environment. To put it more simply, the local context in my research points to the village of Kilpisjärvi, comprising the geographical area with its unique nature, the local people and their special way of living, as well as the local school with its own characteristics, which I have already discussed to some extent in the previous chapters.

When we consider the local context in education, we should take into account the developments in recent years. The curriculum policy in Finland has been moving towards the local level instead of the former strictly-centralised system. Local circumstances, needs, possibilities and limitations should be recognised in the curriculum. According to some theorists, this is a especially significant in rural education. Education, in the form of a the local school, is a resource which should benefit the development of the community. This is also the message in Kalaoja's respected research on Finnish rural education (Kalaoja 1988; 1990a; 1990b). In addition to carrying out his own research, he reviews research and projects in several countries in which special attention has been paid to the local context of the rural school. Kalaoja speaks about integrated teaching, and integration refers to the relationship between a local community and the teaching that the local school delivers. The direct translation of 'yhteisöön integroitunut opetus' would be 'community integrated teaching'. In educational praxis this means that the everyday life of the community, and local needs and interests, including those of the pupils, are taken into account in curriculum and in teaching in general. This, in turn, supports the development of the community (Kalaoja 1990b, 78–93). Later he refers to the idea of local community as curriculum. A school should not only pay attention to the local needs, but also use the local community as a resource and benefit from it in education.

The role of distance education is interesting in the Kilpisjärvi project when we look at how the local context came into view in education. How was the local community used as an educational resource in online lessons, and how did the everyday life in Kilpisjärvi feature in them? In other words,

how did the local context of Kilpisjärvi come into the distance-education picture? The project concerns a small rural school where part of education comes from outside of the community. We are getting to the nexus of local and non-local. This belongs to the mega-discussions about the relationship between local and global, as well as to the phenomenon which has been called localisation, among others things. Localisation on this occasion could refer to processes in which knowledge of local circumstances is used to benefit the relationship between the local and the non-local. Although the link may be somewhat weak, it is also reminiscent of processes of reterritorialisation. Phenomena which are not local in character are taken and adjusted to suit the local circumstances: metaphorically speaking, they are tamed for use in the territory. To a great extent this is what happened in the Kilpisjärvi project concerning the local context and, particularly, knowledge about the local context.

By way of introduction to the local context in distance education, I will give an account of what happened in the distance lessons concerning the local context.

> *[Teacher] shows some pictures he has taken during his holiday in Pallas [a holidays resort in Lapland]. There is a picture of a reindeer safari. [Teacher] asks the Kilpisjärvi pupils: 'Do any of you know how to throw a "suopunki" [a certain kind of lasso used in reindeer husbandry]?' [Pupil] answers: 'No!'. 'You can always throw suopunki, whether you can catch a reindeer with it is another thing!', comments [pupil] sarcastically.*
>
> *Then comes a picture of a snowmobile. [Teacher] asks if that particular model is suitable for snowmobile racing. The boys, especially [pupil], become interested at once.*
>
> *'Is there anything special in Kilpisjärvi that we can't see in these pictures of Pallas?', asks [teacher]. 'Norwegian mountains', answer the boys. The discussion moves on to deal with hiking to Halti [a mountain near Kilpisjärvi].*
>
> *[Teacher] continues questioning: 'When will you show us the best way to set a willow-grouse trap?'*
>
> *There is talk about the possibility that the European Union will stop the trapping of willow grouse. There is even more talk about willow grouse. Typical of [teacher].*
>
> *[Teacher] tells about Erälehti [A magazine of hunting and fishing] and says something about fishing. The boys in Kilpisjärvi get interested and let the others know, that people in the South do not know the fishing business as well as they do.*

[Helsinki pupil] asks the teacher to ask the Kilpisjärvi pupils... [Teacher] interrupts: 'Ask yourself!' [Helsinki pupil] comments: 'But they won't hear, anyway.' But she asks: 'Does anybody live in cottages there any more?' The answer: 'Hell, no! This is no Sami village!'

And then the boys begin to explain how to slaughter a reindeer.

The Lappi interests of [teacher] evidently brings him near to the boys of Kilpisjärvi. As a result, the Kilpisjärvi pupils get at least as much attention as the Helsinki pupils. (Fn 37/96)

•••

At the end [of the lesson] [teacher] asks: 'Are you going to ski?' And then there is talk about ice fishing, and so on...

[Teacher]: 'What do you take with you when you travel?'
[Pupil]:'A gun, money, a rifle'
[Teacher]: 'Why a riffle?'
[Pupil]: 'I will shoot bears'

Such small cultural differences. Helsinki pupils take tooth brushes, credit cards, ... (Fn 52/97)

•••

There is talk about native people. [Pupil] has written a story with the title: 'The Snowmobile Revolution.' 'It is a great thing!', [pupil] says. (Fn 55/97)

•••

There is some chat and [teacher] says: 'It is like the first rule of fell walker ['tunturiinmenijä'] ...' And he asks: 'Isn't it?' 'Yeah!' somebody comments. (Fn 40/97)

•••

There is talk about the northern lights and the polar night. ... [Helsinki pupil] asks: 'How do you know when the sun is back again?' ... [Kilpisjärvi pupils] are eager to answer. (Fn 38/97)

There were several features in the distance education which pointed links with the local context. The distance teachers paid attention to the special circumstances of the Kilpisjärvi people, circumstances which were different from those of the Helsinki pupils. The distance teachers tried to localise their teaching in this way to concern the reality in which the Kilpisjärvi pupils live. I presented above numerous extracts from my field notes to give a picture of the ways in which the local context of Kilpisjärvi were given attention. The teachers expressed their knowledge about Kilpisjärvi and asked the Kilpisjärvi pupils to tell about living in the village, the Helsinki pupils asked about life there, and the Kilpisjärvi pupils had other opportunities to talk about their village. However, we could question the role of the local context on those

educational occasions. The local context was discussed, but not included very much in learning itself.

Talk about local matters in the distance lessons was evidently rewarding for the Kilpisjärvi pupils, especially for the boys. Questions about fishing and hunting always aroused their interests. The snowmobile was another hot topic. However, I do not see this content element of distance education as the kind of emphasising of the local context in rural education to which I referred above. It was not 'community integrated teaching'. The Kilpisjärvi pupils had the opportunity to tell the pupils and teachers in Helsinki about their living conditions. This often involved special knowledge about issues which are significant for people living in the Lappish conditions. Talk about fishing, hunting, reindeer slaughtering, for example, was an opportunity for the Kilpisjärvi pupils to show their expertise and provide the other side of the virtual classroom with some special knowledge. At the very beginning of the project, one of the Kilpisjärvi pupils gave a presentation on the topic of the snowmobile. Thus, knowledge about the local context flowed from Kilpisjärvi to Helsinki rather than vice versa.

There were, however, occasions when also distance education were related to the local context of Kilpisjärvi:

> *There is talk about Parliament. The Kilpisjärvi pupils are active and the teacher says that they should raise their hands. The talk is about deputies. [Teacher] asks about the representatives of Lapland and the representatives of Helsinki. Here comparing between these two sites works. (Fn 54/97)*
>
> *Homework, which concerns parents' occupations, is checked. First the Kilpisjärvi pupils. The special economic structure of Kilpisjärvi is brought out. (Fn 37/96)*
>
> *[A teacher] compares the way of life of the Kilpisjärvi pupils and the Helsinki pupils regarding the freedom to stay out in the evenings. He states that when he was in Kilpisjärvi he had the impression that the Kilpisjärvi pupils were very independent regarding their personal life. (Fn 34/96)*
>
> *[A teacher] chats for a long time with the Helsinki pupils about the way of life in Helsinki: how people meet each other, in cafés, etc. Then she asks about how the Kilpisjärvi people meet each other and what common things they talk about. (Fn 55/97)*
>
> *[A teacher] told me about the biology lessons which were taught by student teachers in the primary school last January. … [The teacher] told me that the pupils, and other Kilpisjärvi people as well, fish in the summer in the Atlantic on the Norwegian side of the border. Therefore they had compared brackish water and ocean water in those lessons. (Fn 31.3.97)*

It became obvious that it was difficult for the distance teachers to relate their teaching to the reality in which the Kilpisjärvi pupils lived. It was even more difficult for them to see how their teaching would serve any special local needs that the Kilpisjärvi people had due to their living environment. They could give attention to some characteristic of Kilpisjärvi, depending on how well they knew the local context. However, as the above examples reveal, the relationship between the content of the lessons and the small localisation tactics was not profound. It was often question of chatting between a distance teacher and the Kilpisjärvi pupils, which focused more on the teacher-pupil relationships than on the content of learning.

Putting this altogether, distance education in the Kilpisjärvi project was not characterised by contextualisation to the local reality of Kilpisjärvi. Nor was this expected by the Kilpisjärvi people. What they wanted from it was (according to the questionnaire responses):

> *Education in mathematics and in foreign languages. Also some periods of biology and geography. (Qu/Ho 1)*
>
> *Finnish, history and religion. (Qu/Ho 2)*
>
> *Lessons from experts with special knowledge. (Qu/Ho 3)*

The parents' wishes indicate the non-local character of distance education: special knowledge outside of the community. Where does the special expertise of the local teachers fit in?

One of the principles of inter-institutional networking is the sharing of resources and expertise. The expertise of one participant is delivered to other parts of the network. Whatever special knowledge in a certain field there is at one location can be mediated to other participants through the net, or it can just be used for local purposes at the site.

In the following I will investigate what kind of local special knowledge in Kilpisjärvi was used in the education, and how this expertise related to local education and to distance education. As the above examples reveal, the Kilpisjärvi pupils' special knowledge was often used in the distance lessons. Was the same true of the Kilpisjärvi teachers and community members? One of the teachers at the Kilpisjärvi school was a competent teacher of the Sami language. The village itself is populated by people who have moved from other parts of Finland. It is not a Sami community. However, the village is situated in a traditional Sami area and there are pupils in the school who have Sami background. This particular teacher was also a skilled artist whose works featured Lappish motives. The Sami language and culture was one ex-

ample of local expertise in the school. Another teacher worked in the biological research station which is situated in the village and was specialised in investigating arctic biology. This particular teacher had completed licenciate degree, thus making her academically more highly qualified than teachers usually are in secondary schools in Finland. Knowledge in arctic biology is one speciality of the school. This expertise, however, was not exploited in the distance education. The teacher with the arctic-biology background taught through the link, but the topics did not deal with her area of expertise. The Sami teacher did not have distance lessons at all. Further, one of the teachers taught music through the video conferencing to a school in Utsjoki, a municipality in northernmost Finland, because there was no qualified music teacher available in the school. Accordingly , the Kilpisjärvi teachers had special expertise, but this was not used to a great extent in the project. It is worth noting here that networks operate in this way. As I claimed in Chapter two, network collaboration between two partners may benefit only one counterpart while the other counterpart benefits from collaboration with a third party in the network, and I referred to Lehtinen and Palonen's (1997) terms of contract and negotiation. However, what was used in the Kilpisjärvi project, to a small extent, was the special knowledge of other community members. A researcher from the biological station gave some lessons in her special field, arctic mammals. In fact, she had expertise in two areas: knowledge of arctic biology, and she was a native English speaker.

There were signs that the parents in Kilpisjärvi were aware of the expertise of the local teachers. According to the biology teacher, the parents had asked her to teach everything she know about local biology. She said:

> *The parents have regarded this thing as important. Parents have also been very satisfied that there is a teacher like [teacher], in the school, who is an experienced teacher in special education and, as a skilful artist, a good teacher of handicrafts and art. (In96/KiTe 2)*

Although the expertise of the Kilpisjärvi teachers did not shine out in the distance-education element of the Kilpisjärvi project, one local teacher used the link because of his competency in music education. When a school becomes a part of a network the sphere of its activities widens. Teachers at small schools may use this for their own benefit, to share their special competency with other participants in the net, as was the case with the music-education link between Kilpisjärvi and Utsjoki.

Knowledge about the pupils

The aspect of knowledge of the local context began to feature in my results. This included knowledge of the local way of life and the surrounding environments, and others things as well:

> *The[distance] teacher obviously has problems with technology. She talks endlesly. She asks the Helsinki pupils about the Kilpisjärvi pupils' names: 'Who is that on the left?' 'It's [pupil].' (Fn 7/94)*
>
> *[Pupil] has written a fan letter to Sean Connery. A funny one. [Teacher] cannot recognise who is reading when [pupil] reads. (Fn 46/97)*

The distance teachers sometimes had difficulties recognising the Kilpisjärvi pupils through the link. One of the teachers told the interviewer (Tor Kronlund):

> ***Teache**r: ... I have rather poor sight, so, that when I squint at them there side by side on the screen, I hardly know who is who.*
> ***Interviewe**r: Yeah.*
> ***Teache**r: ... or what kind of personality he has. (In96/To/HeTe 5)*

> ***Opettaja**: … kun mulla on aika huonot silmätkin vielä, että kun mä tihrustelen niitä siitä viereisestä ruudusta, niin suunnilleen edes tiedän kuka kukin on.*
> ***Haastattelija**: Joo.*
> ***Opettaja**: …ja minkä tyyppinen luonne sillä on.*

One of the pupils in Kilpisjärvi commented to me:

> *Distance teachers do not know the pupils well. In a small school the teachers know the background of their pupils. (In96/KiPu 3)*

According to a teacher in Kilpisjärvi:

> *If they've had been distance lessons in mathematics the pupils fall back on [teacher]. Still, they've learned well a lot in distance education. Because they don't get immediate feedback [in the distance lessons], they don't trust themselves as well as in local education. The pupils have been used to independent study. This is not a problem. (Fn 15.4.96)*

Further, from my field notes:

> *During the break [Kilpisjärvi teacher] and [distance teacher] discuss about pupils' learning. They are worried about [pupil] who has been absent a long time. (Fn 10.4.96)*

Here is a comment from a parent:

> *School is involved in the life of the village and parents are involved in the activities of the school. All the parents are part of this collaboration. In a small village everybody knows everybody, which makes the participation by parents easier. (In97/Pa 3)*

As one of the pupils comments above, the distance teachers cannot know the pupils in Kilpisjärvi very well. What is more, they do not know their backgrounds very well. Comments by the distance teachers in the end of the first school year of the project confirms this:

> ***Teache**r: …these pupils have, indeed, remained rather unknown to me. I must say that I don't have a very personal relationship with them, so I … I don't know, well, a little bit, their background, to me actually they are rather much more unfamiliar than my own pupils. My own pupils, who you see more and know a bit better. So the've followed the lessons but I don't know what they've written on their papers. I don't know what they think about things other than these exercises. (In95/To/HeTe 1)*
>
> *Interview by Tor Kronlund*

> ***Opettaja**... kyllähän ne oppilaat mulle vähän vieraaksi on jäänyt. Täytyy sanoa, etten mä niihin selast kovin henkilökohtaista kontaktii oo saanut, et ... et en mä kauheesti, vaikka jonkun verran, tiedän niiden taustoja niin, en mää tota kyl mä pidän niitä paljonkin vieraampina, kuin mitä mun omia oppilaita. Omia oppilaita, joita nyt vähän enemmän näkee ja tuntee. Että kyllä ne siinä mukana on kulkenut, mutta en mä tiedä minkälaiset vihot niillä on. Mä en tiedä, mitä ne ajattelee kauheesti mistään muista asioista kuin näistä tehtävistä.*

***Teacher**: I don't have a clear picture of those pupils, what they have on their minds. If I'm honest.*
Interviewer: Oh yes.
***Teacher**: There, they don't necessarily notice the same things as people here do.*
Interviewer: Yes. Of course they're …so you don't …they sit there in the lesson and you don't know what they're thinking about, so …
***Teacher**: Yeah. (In95/To/HeTe 1)*

Interview by Tor Kronlund

> ***Opettaja**: Mullahan kauheesti, niistä oppilaista, kamalasti oo käsitystä siitä, että mitä ne niinku, mitä niiden päässä liikkuu. Sanotaan suoraan näin.*
> ***Haastattelija**: Joo, joo.*
> ***Opettaja**: Siellä suunnalla, välttämättä ihan noteerata mitä täällä.*
> ***Haastattelija**: Nii'in. Kyllä ne on tietysti ... joo ettei ... ne istuu siellä tunnilla ja ei oikein tiedä, että mitä funtsaa, että ...*
> ***Opettaja**: Joo.*

> ***Teacher**: … this aspect of knowledge about the pupils was a very important thing here. As it is in all teaching. So you should have as much as possible. (In95/To/HeTe5)*
>
> *Interview by Tor Kronlund*

> ***Opettaja**... siis tää oppilaantuntemuksen osuus oli yks kauheen tärkeä asia. Kaikessakin opetuksessa. Että tässä sitä pitäis olla mahdollisimman paljon.*

The relationship between the Kilpisjärvi pupils and the distance teachers became rather intimate and casual during the project (Salonen & Kynäslahti 1996), when looked from the perspective of Kilpisjärvi. As an observer, I wrote several notes in my field book about how the pupils seemed to enjoy their company. Comments by the parents and local teachers confirmed my view. Therefore the experiences of the teachers themselves were a bit surprising to me. I would not have guessed that they felt that the Kilpisjärvi pupils were unfamiliar, as their interview responses indicate. Apparently, the Helsinki teachers' opportunities to get to know the Kilpisjärvi pupils better through the link were restricted. Relationship between the Kilpisjärvi pupils and their home backgrounds, also remained unclair, which may have increased the feelings of estrangement.

A special feature which followed on from this was illustrated in the following interview when a Helsinki teacher recalled his experiences of the online lessons and the relationship with the Kilpisjärvi pupils:

> ***Teacher**: …perhaps there's been neglect of the social side with these pupils, so there's not been so much …chatting which sometimes takes a lot of time, it's true, but it's still, rather important for pupils …you know, general views, and then discussions on some topics which concern things which the pupils have on their minds, they've perhaps been given less attention. So I've concentrated more on the subject to be taught. (In95/To/HeTe 1)*
>
> *Interview by Tor Kronlund*

> ***Opettaja**… ehkä siinä jäänyt tietty sosiaalisuus puuttumaan näiden oppilaiden kanssa, että siinä on jäänyt sellaset … joskus kauankin aikaa vievät löpinät, jotka on kuitenkin aika tärkeitä oppilaalle …ett tollasii … ajankohtaiskatsaukset, sit keskustelut joistakin teemoista, jotka liitty näihin just oppilaiden mielessä paljon liikkuviin asioihin, niin tota ne on ehkä jääneet tässä. Että enemmänkin on keskittynyt siihen opetettavaan aineeseen,*

This comment makes it seem as if teaching through videoconferencing had been 'pure teaching'. The teacher had concentrated on the subject and had eliminated other things from the lessons. I observed many lesson given by this teacher, and it seems to me that the teacher is too critical here. There was

some chatting in those lessons. In any case, the teacher himself felt that he should concentrate on the basics of the subject and not on the social side.

A special feature of the project was that the Helsinki school is a teacher-training school. A lot of teaching carried out here is done by student teachers who teach only for short periods. Their knowledge about the pupils is, naturally, even poorer than that of the permanent teachers. Here is one example from my field notes of what happened in an English lesson which was given by a student teacher:

> *The student teacher pays rather a lot of attention to Kilpisjärvi. This is going to be rather a strange lesson. [A pupil] is grilled all the time. … The pupils in Helsinki laugh for some reason. [The pupil's] answer is wrong. Even the teacher laughs. …*
>
> *The teacher keeps asking [the pupil] all the time. [The pupil] answers: 'I don't know.' The teacher starts to laugh and repeats: 'I don't know.' Not very smart. [Another pupil] comes from a medical examination and [the pupil] rush out:' I will quit this lesson.' (Fn 50/97)*

This particular pupil had had learning problems in English before the project started, and his attitude towards this language was negative. The situation changed during the project and he progressed rather well in his English studies. Still, this kind of pushing was not a wise thing to do, and indicated poor knowledge about the pupils, their skills and personal characteristics on the part of the teacher.

This leads us to one of the characteristics of local education: knowledge about the pupils. The knowledge the local school had about the pupils and about their parents and homes was part of the local context, as was the general knowledge about the environment in which the Kilpisjärvi people live. The local teachers knew the parents very well and they used this knowledge to their benefit. They also have information about pupils' possible learning problems, their attitudes towards school and different subjects, their skills and abilities, and other things which might affect learning in school.

Knowledge about pupils is not, of course, a new thing for teachers. It is one of the main elements in their work. However, it is given new meaning in the symbiosis of local education and distance education. In the Kilpisjärvi project, the local teachers' knowledge about pupils, their backgrounds and the local context in general, became part of *local expertise*. This is knowledge which only they, the teachers in Kilpisjärvi, have and which the other party in this symbiosis, distance education and distant teachers, need in order to succeed in their task to teach the pupils. This special local expertise en-

abled the Kilpisjärvi teachers to localise the education coming into the school. In this case, the localisation process concerned how distance education was made to work for just these particular few pupils in Kilpisjärvi.

Local expertise takes in different forms in my results. The teachers and the pupils in Kilpisjärvi had special knowledge in terms of the context where they live. This special knowledge was used in local education and, as far as pupils concerned, it was also used in distance education. The teachers' local expertise also appeared as knowledge about the pupils and about the everyday reality in which the Kilpisjärvi people live.

Local education as an infrastructure for distance education

From the community's point of view, local education means that there *is* a school in the village. Educational activities take place in the village, there is a building in which they happen and which is a manifestation of the educational status of the village, there are teachers with whom parents can go to talk about the education of their children. I will continue here the discussion which I started in the previous chapter.

When the headmaster of the Kilpisjärvi school described the character of local education, he pointed to the interface between the village and the society outside, saying that the school provides the first touch to children of seven years with the Finnish society in general. Although this is not altogether true (There are many other public services in the village, including the Customs, The Frontier Guard, and the Forest Research Station) we can see the point. Local education is a local manifestation of the Finnish education system. Moreover, as I will attempt to show later, not only a manifestation of the Finnish system, but also a concrete form of educational flows in general; some kind of eduscape terminal. Local education, from this perspective, means that education is to be found in the village in a concrete form. It is the physical aspect of school, in the blending of the electronic and the physical, which is emphasised here. It is not something which transcends location, deterritorialised. It simply *is there* in the same location as the people around it.

Local education creates an infrastructure on which distance education largely based. This includes both the material things with which we usually associate infrastructure with, such as buildings, staff and equipment, and immaterial things such as customs, social roles and school culture in general.

Local education introduces the school culture for young children who enter the school system at the age of seven (in Finland). They get to know how they are expected to behave in school, what their role as a pupil is, how lessons work, what a 'teacher' and 'classroom' are. When we say that a virtual classroom is regarded as if it were a real classroom, we imply that participants of the virtual classroom have some idea of what a real one is. The accepted idea of a real classroom then helps to create a virtual one. Local education provides pupils with what they need in everyday school life. When the pupils of the Kilpisjärvi Lower Secondary School were introduced to distance education they had already adopted a school culture. This was the case for the Helsinki pupils as well. The school cultures of these groups certainly differ from each other, but the crucial elements are the same, including the role of the pupil, the role of the teacher, and interaction patterns (including the 'raise your hand culture'). The comment about school's role as a guide to the Finnish school system, provided by the principal of the Kilpisjärvi school, seems to imply that the growing phenomenon of virtual school (if we use this version of the terminology of *virtual*) needs conventional school as a basis. This follows Tella's ideas about symbiosis of virtual and traditional school. He suggested that 'at this stage [about 1995] it may be wise to consider the school of the future particularly as a symbiosis of virtual and physical school' (Tella 1995, 15). Further, pupils' knowledge about everyday school practice not only helps their participation, but also facilitates the work of the whole virtual classroom and the distance-education project.

In the Kilpisjärvi case, local education has also educated pupils in technical skills. This training has been focused on their personal needs to use educational technology on the one hand, and on facilitating the technical side of distance education, on the other hand. Local education has been responsible for training pupils (and teachers, as will be seen later) in the use of technology to ensure the success of distance education. A 'distance monitor' system was taken in use at the very beginning of the project. Each pupil in turn took responsibility for the technical side for one week. The main task of the monitor was to switch the videoconference equipment on before the lesson. The pupils' enthusiasm for this technical responsibility fluctuated. In April 1996, I wrote the following notes in my fieldbook:

> *It's 10.03. The civics lesson should already have started, but nobody has switched the equipment on. [Pupil] is the distance monitor. Finally, [local teacher] takes the initiative. [distance teacher] calls and [local teacher] apologises. (Fn 54/97)*

At the beginning of the lesson, the pupils argue about who is on duty to take care of the technology. (Fn 23/96)

However, the pupils in Kilpisjärvi had rather good technical skills. These skills were often needed:

The video link broke down. The bridge broke down as well. The pupils quickly establish the connection again. [Pupil] is busy with the technology although he is not the distance monitor this week. (Fn 30/96)

•••

Suddenly, one of the pupils calibrates the equipment. There had been some echo. (Fn 37/96)

•••

[Pupil] adjusts the volume.

[Pupil] changes the camera angle. (Fn 54/97)

•••

The technology does not work. [Distance teacher] has been away on a business trip and the situation comes as a surprise to him. [Distance teacher] uses the sound station to call Kilpisjärvi, and explains the situation to [pupil] and the other pupils who are present. [Distance teacher] tells to the pupils that he will fax instructions to Kilpisjärvi. The Kilpisjärvi pupils yell: 'Yeah!'. [Distance teacher] sends the fax and cheeks that it has been received by phoning. [Pupil] works as the tutor.

•••

[Local teacher] told me about the biology lessons in January taught by student teachers. They had had problems in their distance teaching, but [pupil] took care of everything in Kilpisjärvi, and the lessons succeeded. Fn 31.3.97)

It is clear that a need for the skills to use of information and communication technologies has been caused by distance education, which indeed necessites these skills. However, the training does not happen through distance education, but through local education. It is a new task of local education which distance education has brought about. In Kilpisjärvi, the teachers have self-educated themselves and taught each other to use information and communication technologies. They have also trained the pupils. In the Kilpisjärvi case, participation in distance education adds the acquisition of technical expertise to the character of local education. Expertise in the use of information and communication technologies is also part of the infrastructure which the local school provides. It is not only the buildings, people, equipments, cables and so on that are needed to make distance education possible at the local level. The ability to use these resources and how organise distance education within this infrastructure is also a prerequisite

There were different views of how well local education had succeeded in its task to train pupils to handle distance education technology. One of the Kilpisjärvi teachers made the following criticism in the second year of the project:

> *Pupils have not had enough training in the use of technology, especially the girls. Their technological skills depend on their own orientation. Pupils are skilful in the use of their personal computers. Skills easily get forgotten during breaks like summer holidays. (In96/KiTe 2)*

The training of the pupils (and teachers) was perhaps not as systematic in the beginning of the project as it should have been but, on the other hand, according to my own observations and to the distance teachers the Kilpisjärvi pupils were good in their use of technology. Here are some comments by the distance teachers:

> *There were some technical problems that were corrected. The [Kilpisjärvi] pupils have no difficulties with the technology (the teacher has more problems than the pupils). (In96/To/HeTe 4)*
>
> *The pupils know a lot about technology and the Kilpisjärvi pupils know more than the teacher. (In96/To/HeTe 8)*
>
> *In Kilpisjärvi they have no problems, in Helsinki the pupils don't use the equipment so much. (In96/To/HeTe 2)*
>
> *In Kilpisjärvi the pupils have learned to use the technology and in Helsinki there are a couple of boys who can use it. (In96/To/HeTe3)*
>
> *The Helsinki pupils don't use the technology very much but in Kilpisjärvi they do. (In96/To/HeTe 1)*
>
> *(Interview by Tor Kronlund)*

It was suggested in Chapter seven that only the local school could take care of the relationship between the parents and the school. Distance education gave this task new dimension. In other words, its introduction in the school has shed new light on some aspects of local education and emphasised their importance. An intensive relationship between the school and the community is one of the characteristics of local education. Community members cannot easily get a grip on education which is delivered through the electronic link. Distance education is, indeed, more distant than local education from the perspective of the local community. This also applies to the relationships between the parents and the distance teachers. These relationships seemed to be surprisingly close. I use the word 'surprisingly' to refer to the actual situa-

tion: the distance teachers lived over 1000 kilometres away from the Kilpisjärvi village. The parents did not have the kind of contact with these teachers that parents usually have with teachers and school, for instance through school boards or home-school co-operation. This did not mean, however, that the distance teachers were total strangers to the parents in Kilpisjärvi. There were some common parents' evenings attended through the link by the parents of both Helsinki and Kilpisjärvi pupils. Some of the Kilpisjärvi parents also visited the Helsinki school at the beginning of the project. Further, four distance teachers visited Kilpisjärvi during the project. The parents talked about the distance teachers in the same familiar way as they talked about the local teachers. Thus, as persons, the distance-education teachers were not 'distant' to the parents. Mutual face-to-face meetings between the two in Kilpisjärvi and in Helsinki obviously had something to do with this.

However, there is another side of the coin as far as the everyday school life is concerned, as was mentioned earlier. The local teachers have become mediators between the distance teachers and parents (in both directions). Local education interacts with the surrounding reality of the school in a way which distance education cannot. It falls within the task of local education to discuss with the community the educational needs of its people, the curriculum and the numerous practical matters of schooling. Local teachers are the ones who get feedback. They have the local expertise which distance education needs.

The superiority of distance education

In Chapter two, I discussed distance education from the perspective of post-Fordism. I focused on the role of local teachers in an educational organisation which participates in distance education, and on the impact this participation has on the competency requirement of local teachers and their responsibility in their work. In the following I will consider the mixture of local and distance education from this point of view.

The main reason for the Kilpisjärvi school to engage in distance education is to ensure the quality of education by acquiring competent teaching from outside the school. The most essential and important characteristic of distance education is the delivery of resources from outside to make the small school educationally and economically viable. Distance education means access to qualified educational professionals. In this composition, distance teachers appear as masters of their field and the local teachers, inevitably,

somewhat like novices, even if they are in fact formally qualified. Indeed, they were novices in the sense that lower-secondary education was a new thing for the Kilpisjärvi school, and the local teachers did not have a long experience of this level.

All the parties in Kilpisjärvi, the pupils, the parents and the teachers, regarded the distance teachers as more competent than the local teachers. I reported the parents' view, in the form of questionnaire answers, earlier in this chapter. The teachers and the principal of the Kilpisjärvi school thought that, without distance education, the quality of secondary education in the local school would be questionable. One of the teachers staid:

> *Without the help of distance education there is no sense to maintain the secondary school in the village. The competency of the local teachers is so poor that the pupils would not get appropriate education. (In96/KiTe 2)*

It is apparent from the teacher interviews that the Kilpisjärvi school could not maintain secondary-level education without the support of distance education. Thus, from the perspective of the school distance education appears fundamental. It is a means by which to compensate for the restrictions imposed by small size and remote location cause for the school (Stevens 1994). The parents, the teachers and the pupils in Kilpisjärvi sensed that the main task of distance education was to help in the areas in which there is no sufficient local competence. The distance teachers are expert in the subjects for which there is no a local teacher available, or when the local teacher needs the support by a more qualified and experienced specialist.

Here is an example from my field notes from a local mathematics lesson:

> *There is a debate on whether some properties are directly or inversely proportional. The boys disagree with [teacher] who looks a bit hesitant. [Pupil] suggests: 'Call [the mathematics teacher in Helsinki]!'*
>
> *Does [pupil] suppose that [mathematics teacher] is more competent than [local teacher]? (Fn 15.4.96)*

The Kilpisjärvi pupils described the teaching in the online lessons in the following way:

> *Distance education is more strict teaching [than local teaching].*
> *The timetables are kept. (In96/KiPu 7)*
>
> *Etäopetus on tiukempaa opetusta kuin (paikallinen opetus) ennen.*
> *Aikataulut pitää.*

The Helsinki teachers know how to teach in a more clear way. It is not as unstructured as with the local teachers. It'is more systematic. (In96/KiPu 7)

Helsingin opettajat osaavat opettaa selkeämmin. Ei niin hajamielisesti kuin omat (paikalliset) opettajat. Järjestelmällisempää.

The distance teachers are more 'official'. (In96/KiPu 1)

Etäopettajat ovat virallisempia.

Here the pupils opinions' echo those of their parents. Distance education is more strict than local education, and they appreciated this strictness. One thing they pointed out was that the timetables are sometimes too flexible in local education, and lessons do not start when they are supposed to. The pupils criticised this as well. However, they seemed to get used to it. Very often they came in late to the distance lessons, while the Helsinki pupils followed the timetables more strictly. Accordingly, the distance education was not only more qualified than local education, it was also more systematic and better organised, according to the pupils and the parents and, to some extent, according to the local teachers themselves.

Here are some extracts from my field notes in Kilpisjärvi:

The pupils stated straight out that [local teacher] teaches in an incoherent way: 'S/he teaches the same things that s/he has taught for many years.' (Fn 16.4.96)

I chatted again with [local teacher]. I asked what the parents thought about the business-like spirit of the school. [Local teacher] said that many of the parents were irritated about all the nonsense that goes on there. … According to [the local teacher], the pupils should carry out this kind of activity outside of the school day, and they should not be rewarded with holidays for it. [The local teacher] is annoyed when the plans cannot be followed when the pupils have other things to do or are on holiday. According to [the local teacher], the foreign language teacher share this opinion. (Fn 28.3.97)

[A local teacher] emphasised again that following the courses of the Teacher Training School is not an encumbrance but an insurance that schooling is keeping pace and that there is order in it. (Fn 31.3.97)

The parents informed me:

[A local teacher] should get some training for lower secondary education. [A parent] wondered why [local teacher] is teaching at the lower-secondary level at all. (In97/Pa 2)

[Parent] emphasised the important role of the Teacher Training School as the backbone of the activities in the Kilpisjärvi School. [Parent] has obviously ex-

pressed his/her opinion about this in a direct manner to [local teacher]. (Fn 5.4.97)

In this juxtaposition, the local teachers tend to come off badly against the teachers in the more privileged school. It seems that the local education is in the hands of less qualified teachers in terms of secondary-level expertise. It is interesting to speculate, how the role of local teachers in rural schools might change when inter-institutional networking becomes more common in the delivery of education. It might be expected that there will be a tendency towards reduced needs for local teachers when a substantial proportion of the education is organised through external specialists. This is in accordance with some visions of the use of information and communication technologies in education. I refer here to Chapter three, in which I discussed the issue of virtual school. Tiffin and Rajasingham (1995) argue that the functions of conventional school (here: local education) and electronic-mode school (here: distance education) differ. The traditional school deals with the learning of social and interpersonal skills, learning of practical skills and cultural inheritance, for example. The electronic mode covers with cognitive learning (cf. Tiffin & Rajasingham 1995, 177). Blystone (1989) also distinguishes between conventional school and school which is based on the use of information and communication technologies. Traditional schools deal with buildings and with bodies that are transported to these buildings, and fed there, and so on. Blystone seems to suggest that conventional school is for body, while the electronic mode is for the mind.

The aspect Tiffin and Rajasingham presents is not irrelevant. I asked in the questionnaire I sent to the parents in spring 1996 what kind of education should be given by the local teachers, not by the distance teachers. They answered:

Many subjects can be taught through distance education, but we also have competent teachers here. The teachers can negotiate with pupils and with parents about the details. (Qu/Ho 1)

Foreign languages. Home economics, sports, craft, arts. Tutoring.
Biology, geography. Chemistry, physics. (Qu/Ho 2)

All kinds of education can be given locally. You must just take care that everybody is able to follow the course. The connection can be switched off. (Qu/Ho 3)

I also asked what kind of education the parents wanted from distance education. They wanted (as reported earlier in this chapter) education in mathe-

matics, foreign languages, Finnish, history, religion and some periods of biology and geography. In general, lessons by experts with special knowledge. The parents' wishes mirror what happened in the Kilpisjärvi project. Mathematics and foreign languages were taught through distance education, biology, geography, chemistry and physics were taught locally. Subjects such as art, sports and music came under the wing of local education, apparently because of the practical difficulties in organising these subjects through technology.

So far it seems that schools networking in the Kilpisjärvi project shows more of a neo-Fordist than a post-Fordist tendency. The Kilpisjärvi school is part of a federation in which expertise and resources are mediated from a bigger and more resourceful participant to a less privileged member of the net. The status of expertise has diminished in the local school. Expertise has been transferred to experts in Helsinki. Is this really so? Before I answer the question, I will take a look at the development of responsibility in a school network.

Total responsibility

Chapter two contained some discussion about the teacher as a facilitator who helps learners in their learning efforts. In the context of school networks, local teachers seem to become facilitators of distance teachers. The local teachers in Kilpisjärvi have taken a role of tutor in the subjects that involve distance teaching. In the following I will report what the local teachers actually did, what was their contribution to the organising of distance education in the everyday life of the school.

The most concrete form of their contribution here was assistance in practical matters and technical support. In on-line situations, the local teachers checked that the connection through the link was established, that the technical equipment worked and that the material sent beforehand had been delivered to the pupils, and they generally tried to ensure that the video lesson would succeed. Typical situations when their assistance was needed were when technical problems arose:

> *A distance lesson in mathematics. The audiographics does not work. A mechanic from the software company is in the classroom trying to solve the technical problems. Before the distance lesson starts, [a local teacher] is teaching. She explains the problematic situation to the pupils and gives instructions. She tells them to go to their computers to work in pairs. (Fn 3/94)*

> *A distance lesson in mathematics. The sound connection does not work. The people in Helsinki can hear sound from Kilpisjärvi, but not vice versa. The Kilpisjärvi pupils sit quietly. [Local teacher] is in the classroom. [Distance teacher] calls [a local teacher] on the phone and they negotiate what to do. [Another local teacher] has come to the classroom. The teacher's computer does not work. Because the link is not working, [the local teacher] begins to teach the Kilpisjärvi pupils. [The distance teacher] and [the local teacher] negotiate by phone. They decide that this lesson will be an audioconference lesson through the sound station. (Fn 25/96)*

Many of these tasks were shifted to the pupils gradually during the first years of the project, but the main responsibility seemed to remain with the teachers. The teachers' assistance was required the at beginning of the project. I witnessed several occasions on which pupils' low enthusiasm to take responsibility for the technical side surfaced, as the following example from my field notes illustrates:

> *It is almost ten o'clock. The distance lesson in religion should start soon. The pupils are playing with the computers. The videoconference equipment has not been switched on. The pupils say that it is good that [a local teacher] is talking on the telephone. This means that some of the distance lesson will be lost. [Local teacher] notices the situation and switches the equipment on. (The distance lesson gets started.) The beginning of the lesson is all hustle and bustle. [Local teacher] stays in the classroom. He is irritable. [Pupil] plays with the computer. [The local teacher] asks to stop that. (Fn 6/94)*

These examples give us a picture of local teachers as technical assistants to distance teachers. In fact, this is what they actually were. Again the picture of low-qualified, although technically highly-skilled, local tutor-teachers appears. The contributions of the local teachers were a part of that infrastructure I spoke about at the beginning of this chapter. Their work provided a framework on which the success of distance education was, in practice, largely based. Their responsibility in this sense concerned practical matters.

The role of the local teacher is not only to assist distance teachers, however. There are certainly some new tutorial features in the work which distance education has brought about, but, generally speaking, the work of a local teacher has not become narrower in scope in the light of the new distance-education resource from outside. What has happened is actually just opposite. There are no any signs that the responsibility of local teachers for the wholeness of secondary education has lessened. The main responsibility for the delivery of education has remained in the local school despite the outside im-

pact. The local teachers are in charge of the wholeness of teaching and they are responsible for the pupils' learning, even in the lessons which were given by teachers in the network. It is the local authority that has the main responsibility for education, and it is the local teachers who make sure that the pupils learn what they are expected to learn.

Here are some examples from the field which highlight this aspect. In the second year of the project I discussed how it was going on with the English teacher in the Helsinki school:

> *[Teacher] is worried about the pronunciation of the Kilpisjärvi pupils. He wonders if it is his job to make it better. His answer is: 'No!'. (Fn 26.11.96)*

One year earlier this particular teacher had the following conversation with my colleague:

> ***Interviewer**: How do you evaluate through this equipment, and how problematic or how easy is it?*
> ***Teacher**: Well, the written work of these pupils, it's sort of anybody's guess. And I heard that there was, this time, in this system, a local teacher.*
> ***Interviewer**: Hm.*
> ***Teacher**: Yes, who you can use as a help. Yes, and then I heard that, for example, they hadn't done their exercises there or that there were many mistakes.*
> ***Teacher**: I should have known a bit more about the independent working of these distant pupils. (In95/Ja/HeTe 2)*
>
> *(Interview by Jari Salminen)*

> ***Haastattelija**: Miten sä arvioit tän laitteiston avulla, kuinka ongelmallista tai helppoa se on?*
> ***Opettaja**: No, just näitten oppilaitten kirjallisia töitä niin, nehän jäi vähän niinkun arvattavaks. Ja sittenhän mä kuulin, koska täss systeemissä oli nyt tällä kertaa mukana se ett siellä oli tämmönen oma opettaja.*
> ***Haastattelija**: Hm.*
> ***Opettaja**: Niin, jota voi käyttää avuks. Niin sithän mä kuulin, että esimerkiksi ei ollut tehtäviä siellä tehnykkään tai siellä oli paljon virheitä*
> ***Opettaja**: … mulla olis pitäny olla vähän tarkempaa tietoa ehkä näitten etäoppilaitten siit itsenäisestä työstä …*

Another Helsinki teacher evaluated videoconferencing as a pedagogical tool in the following way:

> ***Interviewer**: What can you judge from the picture or what uses is it?*
> ***Teacher**: Well, actually I see a lot of things in it. So if I take the trouble now and again to look very carefully I do see if they are nodding or rocking back*

and forth or whatever. But of course I can't see exactly if they're writing everything down.
***Interviewer**: Hm.*
***Teacher**: But it's at that end where the control and the supervision is, in [a teacher]. (In95/Ja/Hete 1)*

(Interview by Jari Salminen)

***Haastattelija**: Mitä sä voit siitä kuvasta päätellä tai mitä hyötyä siitä on?*
***Opettaja**: No, kyllä mä itse asiassa aika paljon siitä nään. Että jos viitsin välillä katsoa oikein tarkasti, että kyllä mä nään koska siellä nuokutaan tai koska keinutaan tai muuta vastaavaa. Mutta tietenkään en ihan tarkkaan pysty näkemään kirjoitetaanko kaikki ylös.*
***Haastattelija**: HM.*
***Opettaja**: Mutta sehän on sieltä suunnasta sitt se valvonta tai kontrolli, [paikallinen opettaja] kautta.*

These thoughts were echoed by a Kilpisjärvi teacher who was concerned about the pupils' learning and how it was evaluated:

***Teacher**: … I'm a bit concerned about that as well, how it is controlled, that they've learned something. A test, for example, doesn't say anything about that in itself. (In95/Ja/KiTe 3)*

(Interview by Jari Salminen)

***Opettaja**: … kyllä mua vähän huolestuttaa myös se, että miten se kontrolloidaan, että ne on oppinut. Eihän se pelkkä koe, esimerkiksi ei se sano yhtään mitään siitä*

The responsibility of the local teacher is, in fact, broadened because it was he or she who was in charge of the pupils' success in their studies, not only in terms of his or her personal work as a teacher, but also as far as their success in distance education was concerned. If a pupil had not learned from the distance lessons, a local teacher was there to help. The mathematics teacher in Kilpisjärvi said that teaching had became a common feature for her and her colleague in distance education. She thought of the distance lessons in mathematics as if they were her own lessons.

The local mathematics teacher commented further to me that when there were distance education periods in mathematics, the pupils asked for a lot of help from her in the local lessons. She thought that this was because the pupils did not get enough straight feedback in the distance lessons and they therefore did not trust themselves.

A distance lesson is a rather hectic event which moves forward at a rapid pace and which does not permit disruptions. It seems that pupils experience these lessons as short-distance running: they sprint trough a course of 45 min-

utes with their classmates in the big school in Helsinki guided by an expert coach. When they reach the finishing line end they rest and reflect on what they picked up during the run, then they continue along the long-distance track of local education. The pupils in Kilpisjärvi said that they usually do not interrupt the course of a distance lesson even if they have something to ask. They felt that the distance lesson was sensitive to such disruptions and they did not feel comfortable constantly asking for help even if they had not understood what was going on. (On the other hand, the distance teachers often asked if the pupils in Kilpisjärvi needed help.) The pupils tried to prevent this problem by preparing for the coming distance lessons. They said that they had to prepare themselves better for the distance lessons than for the local lessons. One of them commented:

> *I have do more preparation at in home for the distance lessons than for the conventional lessons. You can't catch everything in the actual distance lesson. (In96/KiPu 4)*

There were also occasions when the local teacher checked if the pupils had learnt the things that had come up in the distance lessons. Sometimes they complained to him or her that they had difficulties with their learning and asked for help. In short, it could be said that a distance lesson is an effective learning event, guided by an expert teacher, involving a risk of problems with the learning or, in the worst case, of dropping out.

If a pupil had difficulties in learning from the distance lessons, or dropped out due the rapid pace, it was the local teacher who took care of the individual guidance of the pupil. This element of local education was highly appreciated among the pupils in Kilpisjärvi. They thought it was important that they could ask for help from their teachers. When I interviewed them in 1996 they all told me about situations in which they had not understood what had been taught in the distance lessons. They had asked for help from the local teacher. As mentioned before, local education is the basis of schooling, while distance education might act as an elementary resource to improve the quality of teaching and learning in a small school. Both the teachers and the pupils as well as the parents in Kilpisjärvi stressed that the local education helped if a pupil dropped out of a distance lesson.

This kind of trust in the capabilities of the local teachers as tutors in case of learning difficulties has interesting implications in terms of the judgements about the competence of local teachers. Although this might appear controversial, it deals with the individual character of local education. A distance

teacher, as strikingly competent as he or she might be, is not able to take care of the learning of every pupil, at least not every distance pupil, in the distance lessons. Accordingly, the individuality of local education rivals the competence of distance education in this case. The teachers in Kilpisjärvi felt that distance education is not good for pupils who need a lot of teachers' attention, who are introvert, or who have problems in learning. The distance teachers, in turn, mentioned that distance education is not appropriate for pupils who have difficulties with concentration.

> *Pupils must have the motivation and strength to concentrate. There must also be some independence, and this is also a question of age. (In96/To/HeTe 3)*
>
> *(Interview by Tor Kronlund)*

In the teachers' opinions, distance education suits pupils who can take responsibility for their own learning and who work independently. There are echoes of the voices of Wedemeyer and Moore here: independent study and student autonomy. However, at the same time, both the local and the distance teachers, complained about the lack of individuality in distance education. The distance teachers experienced difficulties giving personal guidance to the Kilpisjärvi pupils. It was a problem for them to evaluate the progress of a single pupil, as well as to control his or her work. When I was about to leave for my first field trip to Kilpisjärvi, one of the Helsinki teachers asked me to try to find out if the pupils there do their school work as they are expected to do, for example, if they do their homework. He was concerned about his inability to control this kind of thing through the link. His colleagues in Kilpisjärvi agreed when they considered the problems with distance education:

> ***Teacher**: I'm sure that [a teacher] has thought of that, how he could check the worksheets of these pupils. He suggested using the telefax. … or you could also use the camera. So, you could bring the worksheet to the teacher's camera and ask for to be shown. (In95/To/KiTe 2)*
>
> *(Interview by Tor Kronlund)*

> ***Opettaja**: ... Että varmaan [etäopettaja] on miettiny sitä, että miten se vois tarkistaa näiden vihkoja. Eli hän esitti varmaan sitä telefaksia. ... tai kameraakin siinä ois voinu käyttää. Eli sille open kameralle vie vihon ja pyytää näyttään niin.*

> ***Teacher**: I have the feeling that they've dropped out. They don't dare to say to [distance teacher] directly: 'Sorry, I don't understand this.'*
> ***Interviewer**: Hm. Hehheh.*
> ***Teacher**: They just keep quiet and don't understand how to ask for help. So we have decided that I'll have a lesson here. So we have separate lessons and I can*

keep track of of them, so that they can ask me where the problems are and where have they failed.
***Interviewer**: I see.*
***Teacher**: So they might have dropped out at some point, but it has been too much for them to ask. So maybe [pupil] will ask but not [another pupil]. (In95/Ja/KiTe 2)*

(Interview by Jari Salminen)

***Opettaja**: ... mulla oli sellanen tunne, että ne ovat tippuneet kärryltä. Ne eivät uskalla [etäopettaja] kysyä suoraan: Sorry vaan, en ymmärrä tätä.*
***Haastattelija**: Hm ... hehheh*
***Opettaja**: Ne ovat vaan hiljaa seillä ja eivät tajua pyytää neuvoa. Eli on päätetty niin, että minä picän tunnin täällä. Eli pidetään tunnit erikseen ja mä pystyn niinkuin haarukoimaan siinä, että ne niinkun pystyy kysymään multa, että missä niin klikkaa ja katotaan missä niinkun on heittänyt.*
***Haastattelija**: Just.*
***Opettaja**: Että ne on tippunut kärryltä jossain vaiheessa, mutta sitten etäopettajalta niillä on ollut liian suuri kynnys kysyä. Että joku [oppilas] voi kysyä, mutta ei siellä [toinen oppilas].*

The local teachers had been worried about the pupils' learning and there had been local lessons instead of distance lessons.

The pupils in Kilpisjärvi had similar experiences. They also felt that distance education lacks individual attention from the teachers.

If you lose track, there you are. (In96/KiPu 2)

You can't catch on, if you loose the track. You can't ask for help from the teacher. (In96/KiPu 1)

The pupils commented that if they dropped out of a distance lesson, they asked help from each other, or later from a local teacher. It was their experience that in a distance lesson where the teacher has two pupil groups located at different sites, he or she is unable to take into account every single person. One of the pupils in Kilpisjärvi compared the local lessons and distance lessons in the following way:

Well, perhaps they [online lessons] are not as effective as when you are [face-to-face] with the teacher which may be caused by technical reasons. However, the same content is learned. Although there is the point, that if you have troubles with some thing you can not discuss it [with the distance teacher] after the lessons or during the school day. (In95/KiPu 6)

Kyllä, ehkei niissä [distance lessons] ole ihan sitä sammaa tehokkuutta kuin sitten opettajan kanssa, mikä saattaa olla ihan teknisistä syistä johtua. Mutta kyllä se kuitenkin aivan sama asia tullee niinku tiethoon. Paitsi siinä on se, että jos niin jos

jotakin asiaa jää vaivaamaan, niin sitä ei ole niin tunhin jälkheen josta vois puhua tai kesken päivän.

Both teachers and pupils stated that distance education could not be very individual because the distance teachers could not properly evaluate and support pupils' learning. Thus, the lack of individuality in the relationship between a distance teacher and the pupils in a remote site became apparent. Indeed, I started to pay attention to how distance teachers addressed their pupils in Kilpisjärvi. The usual way was to treat them as a group with expressions, such as: 'What about Kilpisjärvi ...', 'Good morning, Kilpisjärvi!'.

Being conscious of the risk of insufficient personal guidance and of a restricted capability to control distant pupils' learning, the distance teachers developed different ways of alleviating this danger. The usual method was to pose an unexpected question to the Kilpisjärvi pupils and 'wake them up'. Thus the distance teacher connected a single pupil in an intense way to the instructional process. The presence of the teacher in the classroom at the distant site was very real in such moments: a TV character speaks only to you. It could be said that, because of the complicated management of a distance lesson, there emerge issues which nourish the feeling of lacking individuality (the fear of asking help, the teachers divided attention to pupils in two sites, the restrictions on interaction caused by technology, for example).

To sum up, local education was in charge of the pupils' success in their studies, regardless of whether they had been taught by local teachers or distance teachers. On the other hand, the teachers in the Kilpisjärvi school commented to me that they regarded the distance teachers more as competent they were. Thus, the professional requirements of the local teachers have increased rather than decreased. In addition to their own work, they must take responsibility for the work of other, more competent, teachers. The local teachers were expected to take care of the pupils' learning in areas in which is the distance teacher was expert and which may well have been unfamiliar. In this regard, the role of the local school and the character of local education has not become less academic, but the nature of local the teacher's work has widened. Thus, it is not surprising that the teachers in Kilpisjärvi experienced the project as in-service training.

Technical aspects

In the previous chapter I discussed the parents' appreciation of the use of technology in the Kilpisjärvi school. The parents felt that what was happening in the local school is something special and highly advanced, and gave technical expertise to their children. On various occasion when I met parents they expressed their satisfaction with this technical side. Their comments, however, were rather general. The pupils also considered technical skills important. I asked the Kilpisjärvi pupils what kind of positive things they had found in distance education. Three of the five mentioned technical skills in their answers. They had learned to use technology during the project, and they found technological knowledge useful.

The new technical-expertise dimension of local education is an interesting issue. As the above comments of the distance teachers suggest, for the pupils this expertise concerns Kilpisjärvi, not Helsinki. The teachers have somewhat similar views. During the first year, there was a technical facilitator in the Helsinki classroom who helped the distance teachers on the technical side. There was no such a person in Kilpisjärvi. The teachers and pupils there were on their own with the technology. This meant that they had to find out how to use it. Here are some experiences of a teacher in Kilpisjärvi, at the beginning of the project:

> ***Interviewer**: About your previous experience and use of educational technology, accordingly, what kind of equipment have you used in your work before?*
> ***Teacher**: Before? I've previously only used computer for my master thesis and that was with WP 5.1. …in that sense this is really new thing to me. Really new thing almost the whole thing, I did even not know, as you noticed, what is a modem and …*
> ***Interviewer**: Hehheh.*
> ***Teacher**: Hehheh …and what is a multi. Accoringly, you've all the time tried to find out…*
> ***Interviewer**: Yeah.*
> ***Teacher**: …that what are they for. (In95/Ja/KiTe 3)*
>
> *(Interview by Jari Salminen)*

> ***Haastattelija**: Sinun aikaisemmista kokemuksista ja käytöstä opetusteknologian osalta, eli mitä, minkälaisia välineitä olet työssäsi käyttänyt aikaisemmin?*
> ***Opettaja**: Aikaisemmin? En aikasemmin oo tehnyt mitään muuta ku gradun tietokoneella ja senki WP 5.1:llä ..., että kyllä tää ole mulle ihan uutta. Ihan uutta melkein koko homma ehän ma tienny ees et niinku huomasit ehän mä tienny mikä näistä on modeemi ja ...*
> ***Haastattelija**: Hehheh*

***Opettaja**: Hehheh .. ja mikä on multi, että tässä on niinku hakemalla haettu aina sitä, että*
***Haastattelija**: Joo*
***Opettaja**: Kuvaillu aina ett mitä ne on.*

***Interviewer**: Well, how well have you get familiar with the distance education equipment so far?*
***Teacher**: The equipment? Well, I think that rather well nowadays, I am rather satisfied with how I can use it. I don't always need to go to get help as I did in the beginning when I went to get [teacher] to help.*
***Interviewer**: Yeah.*
***Teacher**: I didn't know at all that what I should do. But then when I tried myself, and I had to try myself if [teacher] wasn't there,, I found out that it isn't so difficult. (In95/Ja/KiTe 3)*

(Interview by Jari Salminen)

***Haastattelija**: No kuinka hyvin olet tähän mennessä perehtynyt etäopetuslaitteistoon?*
***Opettaja**: Tähän laitteistoon. No minun mielestä nyt tällä hetkellä jo suht hyvin, että kyllä mä nyt oon ihan tyytyväinen siihen mitä mä osaan täällä tehä. Ei mun aina tartte lähtee hakeen apua jostain muualta niinku silloi alussahan mä hain vaan aina [opettaja].*
***Haastattelija**: Joo.*
***Opettaja**: Mä en tiennyt mistään mitään et mitä mun pitää tehä. Mut sitte ku mä sain itse ja mun pitikin itse ruveta jos [opettaja] ei ollu paikalla niin kyll mä huomasin et ei se niin vaikeeta oo.*

***Teacher**: I suppose [teacher] has told you that we are here together on ourselves.*
***Interviewer**: I see.*
***Teacher**: We have sat down to train [ourselves] …*
***Interviewer**: Help [each other].*
***Teacher**: Yes, stopped to think what is going wrong and what I did in right way and we have helped each other really much. (In95/Ja/KiTe 3)*

(Interview by Jari Salminen)

***Opettaja**: Et sen että [opettaja] varmaan kertokin et me ollaan täällä yksin yhdessä.*
***Haastattelija**: Jahah*
***Opettaja**: Istuttu ja opeteltu ja ...*
***Haastattelija**: Autettu.*
***Opettaja**: Niin, ett mietitty mikä menee pieleen ja missä mä onnistuin ja neuvottu toisiamme hirveen paljon.*

In this process, the acquisition of technical expertise became a part of local education. When I discussed the impact of distance education on their work with Kilpisjärvi teachers, one of them stated that

The equipment has made it possible for me to diversify my teaching. (In96/KiTe 2)

She had used the technologies which distance education had brought to the school in her own local lessons.

What was involved in the technical skills that the Kilpisjärvi pupils technical acquired? They knew how to switch on the videoconferencing and audiographics equipment, they knew the main things about the software. They sent faxes and were able to write and draw using audiographics. In other words, the technical skills which the pupils had learned mostly concerned the areas of videoconferencing and audiographics, and the use of computers in general.

The Kilpisjärvi school has indeed become a more technical. Technology is more visible there than it has been before. The lower-secondary pupils at Kilpisjärvi spent most of their school day in a classroom full of equipment: computers, cables, microphones, cameras and so on. Distance education and the associated technology is present in the school life of Kilpisjärvi even when there are no lessons online. This is also very visible to visitors of the school. Technology has become part of the local education, as well characterising distance education. In distance education information and communication technologies appear through use, they are functional in nature. The same technology is also used, to a small extent, also in local education but in a different way. Here, however, the technical aspect covers areas such as like technical skills, equipment and, obviously, the status of the school.

Some examples from everyday life

I would like to complete this picture of local education with a look at the everyday reality of the local lessons. Further analysis of the online lessons is given in the following chapter. The pupils' experiences, as well as my observations, indicate that the local lessons were more lively, more casual and contained more humour than the distance lessons. The presence of humour in the local education was particularly emphasised in many statements by the pupils.

The pupil's behaviour in the local lessons was different from that in the online lessons. When I attended a local lesson for the first time on the 2nd of November 1994, after having observed several online lessons, I wrote the following notes in my field book:

English

This is a totally different world! There are also pupils from of the 8th grade present. The pupils are much more lively. [Pupil] is much more active than in the distance lessons. The pupils [English] pronunciation is worse than in the distance lessons. I wonder if they are used to rising their hands in these lessons. (Fn 2.11.94)

There was a similar atmosphere in another local lessons as well:

Finnish

Not all of the secondary-level pupils are present, which is what I expected, but only the 7th and 8th grades. [Teacher]changes the topics of the lessons according to what text books the pupils have with them.

The pupil in the 7th grade has her own programme.

The atmosphere is relaxed. The general tone seems to be cheeky and teasing. This is sometimes also true in the distance lessons.

The pupils do not raise their hands. Neither do they wait for the teacher to finish his sentences, they just shout when something comes to their mind. Rather different from the distance lessons.

In both [Finnish] lessons, yesterday and today, there has been spontaneous discussion, which has immediately benefited the teaching. And they have been good discussions.

Apparently the teacher is not very competent in the teaching of mood. He is a bit hesitant. Supposedly partly because he has not planned this kind of lesson.

The 7th grade pupil asks for help. The teacher interrupts the 8th grade lesson and all the pupils begin to discuss the question.

The interaction style in this lesson has been rather masculine, the communication being between the teacher and the boys.

The conversation turns to the local volleyball matches. [Pupil] complains and suggests that she and [another pupil] could take a break because: 'You're just chatting again!' The teacher argues that it is not chatting but discussing. 'Oh yeah, really smart!', quips [pupil]. (Fn 11.4.96)

Mathematics

All the secondary-level pupils are present.

The lesson has been going on for 5 minutes. The pupils have been spontaneous. [Teacher] guides [pupil] (the only pupil at 7th grade). The aim of the lesson is

to practice for the test on Wednesday. [Teacher] circulates among the pupils. [Pupil] is boisterous— He is not boisterous in the distance lessons.

The pupils are working intensively. In this lesson (as in the distance lessons) there is much teacher talk.

[Pupil] raises his hand and shouts simultaneously. [Pupil] is more active (than on distance lessons).

[Pupil] complains that the teacher does not pay attention enough to her. [Pupil] helps [another pupil] who has also been rather quiet in this lesson.

[Teacher]'s teaching style is conversational—rather pupil-centred—and very flexible.

The pupils are very active in asking for help and [teacher] is always ready to help them. (Fn 15.4.96)

The pupils acted in a different way than in the online lessons. They were much more lively and active, chatting and joking with the teacher and with each other. The lesson was rather noisy, some of the noise being related to the studying and some being caused by jokes and amusing remarks by the pupils. The lesson style was informal. The pupils usually did not raise their hands and wait for permission to speak, but asked or commented spontaneously. There were also some personal differences in how the pupils' behaviour changed between the distance lessons and the conventional lesson. One pupil who had been very quiet in the distance lessons was very active and talkative, while another who was diligent in the distance lessons did not change her style a lot. I observed several local lessons in Kilpisjärvi, and the picture I took away with me from these first two lessons did not change much.

The Kilpisjärvi school as a participant of the inter-institutional electronic network of schools

In Chapter seven I discussed how the character of the school has changed towards a cyborg-like creation. On that occasion I was looking at the relationship between the school and the community. However, the nature of schooling in Kilpisjärvi has also changed inside the school. The previous pages have demonstrated two elements of the education in the current Kilpisjärvi school. The first shows it as a traditional school, the other, in turn, as an electronic dimension of the inter-institutional network of schools. In the fol-

lowing I will consider the themes of vertical fragmentation and horizontal integration. This was an issue which emerged from my data during the field work, and which was somewhat broadened in the theoretical elaboration.

Collaboration with the other network participants, mainly the Lower Secondary Teacher Training School, mostly concerned only part of the Kilpisjärvi School, the class which started in the 7th grade in 1994. I have already pointed out how this collaboration was an essential part of the school day in Kilpisjärvi and how the local people thought it would comprise the life of the school. One part of the school was engaged in co-operation which, in turn, might separate it from the rest. I will give a small example. According to a Kilpisjärvi teacher, in spring 1997, the 9th grade did not join the other pupils in the school when they went to a swimming hall on the Norwegian side of the border. This was because they would have missed their online lessons. The teachers in Helsinki were also sometimes concerned about keeping the course timetables. On a more general level, I was informed that the relationship with the Hetta Lower Secondary School (at the centre of the municipality) was distant, although the Kilpisjärvi Lower Secondary School was officially only an affiliate of that school. One of the Kilpisjärvi teachers told me that when she had administrative difficulties with her secondary-level lessons, she had contacted the principal of the Helsinki School rather than Hetta. Intensive integration (horizontally) among the schools in the network took some, a fragment, of the Kilpisjärvi school farther away from the entire school and from the administrative hierarchy. This could be called vertical fragmentation (see Chapter two) which appears beside horizontal integration. It is related to the phenomenon of vertical disintegration which I expressed in Webster's words: 'instead of that producing as much as is possible within the single organisation (and hence endeavouring to be vertically integrated), there is trend towards contracting with outsiders' (Webster 1995, 148), as well as in accordance with Rumbles' notion that participants in collaboration networks have to pay attention to each others' local educational needs and interests, which in turn modifies the educational activities of the network (Rumble 1995b, 35).

In Chapter two I argued on a theoretical level that integration outwards may regulate curricula, planning, time-tabling and evaluation, and that it may cause the juxtapositioning of different pedagogical views. As was seen in the previous chapter, some signs of this appeared in the Kilpisjärvi project when part of the school followed a pedagogical style which differed somewhat from that of the rest. In this sense, we could also speak about some kind of fragmentation of pedagogy. Not all of the teachers in Kilpisjärvi were satis-

fied with the pedagogical style of the Helsinki school. According to these comments, that style was old-fashioned and therefore the collaboration between these two parties was a step backwards in the pedagogical sense.

Typical of the distance education in the Kilpisjärvi school was its connection to time: it was divided to periods. The timetables were delivered to the pupils several months beforehand. The lessons followed an exact rhythm in sessions of 45 minutes. They had to start and end strictly according to this timetable. Any changes had to be negotiated early enough. Of course, there were immediate changes but, in general, the timetable of another school, the Second Teacher Training School in Helsinki, became part of the daily life of the school in Kilpisjärvi. Distance education is typically described as education independent of time and space. That was not the case in the Kilpisjärvi project. Such strict dependence upon time is not typical of the normal school days in a small school where life is characterised by flexible timetabling and an easygoing approach to lesson times. The Kilpisjärvi school which was used to treating timetables flexibly was now bound to a new, strict approach, fostered by its participation in schools networks and the synchronous distance education. This contradictory finding is one example of how traditional education and distance education approach come closer together, here because of the synchronous information and communication technology. As a result of networking with the distance-education partner, Kilpisjärvi became connected to the temporal reality of the Helsinki school. This feature was an indication of time-space distantion (Giddens 1990), where distant happenings break the local time-space connection. On the other hand, the synchronous link between these two sites verifies time-space compression (Harvey 1989) when the pupils and teacher in two geographical localities are brought together in one virtual site in which educational activities take place without any delay due to the distance between these localities. (Indeed, we could argue that, in theory, a Kilpisjärvi pupil near the videoconferencing set hears the teacher's voice from Helsinki sooner than a pupil who is sitting in the back of the Helsinki classroom.) However, this feature did not concern the whole Kilpisjärvi school, but merely that part of it was in the network. Again a slice, in this case a temporal (-spatial) slice, parted the entire school.

Conclusion

Flows of education are flows of special knowledge of experts. The Kilpisjärvi School has tried to take in this expertise for local benefit. In this process, it

uses its own special knowledge of local needs, capabilities and limitations. The task of local education is to judge how to use these educational flows of expertise. The school 'reterritorialises' these flows. The local teachers know the pupils, their background and the context in which they live. This is the expertise of local education. This is also, in part, its character.

Local education is the base to which we can add the use of distance education. It has a certain kind of infrastructure into which the new dimensions distance education provides can be built. This infrastructure consists of patterns such as buildings, technical equipment, personnel, relationships with the local community and local knowledge. Local education introduces the role of the pupil to the children.

Local education is real. People can see that there is a school in the village. This is true especially for the community members who do not have children of school age and whose contacts with the school thus might be minimal. Parents are able to meet and to talk to their children's teachers. In the Kilpisjärvi case, people see young people around taking part in the life of the village. The local education is a manifestation of the school system of the Finnish society, and an indication of belonging to a wider society. The people can see and feel that the school and education are 'there'; They are present. Local education keeps the members of the community in touch with the school institution and the institutional education of their children. It has the duty to maintain the relationships between the school and the community, and to discuss educational concepts with parents which includes the educational needs of the adult people. It is the way for local people to access the education that is delivered to their children. I use the word access here in a rather physical and concrete sense. They can go to the school and meet the teachers there. The members of the community can also participate in school life in many ways. This was the case in Kilpisjärvi, as I reported in Chapter six.

Let us now to look at the results presented above from the post-Fordist perspective I discussed in Chapter two. Do the characters of local education and distance education indicate a post-Fordist strategy in inter-institutional schools networking, or do they indicate something else? Let us again take a look at the words of the theorists of post-Fordism who have investigated distance-education organisations. Campion (1995, 194) stated that: 'The post-Fordist strategy is characterised by high levels of three variables: product innovation, process variability and labour responsibility.' while the neo-Fordist strategy 'has an overall deskilling effect on academic staff'. According Renner (1995, 289), in turn, 'a core of specialised and highly skilled curriculum

developers would be supported by a larger pool of dedicated tutor-grade staff, responsible for delivery and student liaison. The division of labour would thus be a characteristic feature, supported by numerical labour flexibility achieved by "hiring and firing" peripheral workers.'. Campion claims further that post-Fordism in distance education fosters: 'a skilled and responsible workforce. A post-Fordist model of distance education would be decentralised and retain integration between the study modes. Academic staff would, however, retain autonomous control of their administered courses, and in so doing, would be able rapidly to adjust course curriculum and delivery to the changing needs of students.' (Campion 1995, 194). Although these lines concern distance-education organisations, I will interpret them in the context of distance education in schools and apply them to the Kilpisjärvi project. Did starting distance education have a deskilling effect on the academic staff in the Kilpisjärvi school? The answer is, yes and no. In juxtaposition with the distance teachers, their competency appeared inferior. Expertise had, in this sense, escaped from them to others. The answer is thus, 'Yes'. However, described above, in fact the demands on their competency increased due to the distance-education effect, and this was a call they tried to answer. There were no signs that the local teachers were becoming 'tutor-grade staff', as Renner put it above. Local education became characterised rather by the renovate effect of in-service training than by the effect of deskilling. Thus the answer is mainly: 'No'. Another aspect Campion pointed out was the responsibility of the workforce. My results show that the responsibility of the local teachers did not weaken but rather it increased. On the whole, the local teachers' were 'autonomous [to] control ... their administered courses'. Local education was also 'able rapidly to adjust course curriculum and delivery to the changing needs of students.'. Accordingly, there are signs of post-Fordist tendencies in the development of local education and distance education in the Kilpisjärvi school.

Finally in this chapter, I will summarise some of the main points about the characteristics of local education and distance education from the perspective of Kilpisjärvi. Local education provides an infrastructure which distance education can build on. The former is real and physical. Local education is responsible for the wholeness of the education pupils receive, and for pupils learning. Distance education is a new addition to this responsibility. Another new feature in local education, which distance education has brought about, is the recontextualisation of the deterritorialised education which flows to the school through distance education. Knowledge of the local context, of the local community, of local educational needs and, especially, of pupils and

their backgrounds, appears as local expertise which has gained new significance in the symbiosis of local and distance education. Teachers in the Kilpisjärvi school have a new role. They have become assistants of distance teachers. The assistant function in local education includes technical support, assistance with practical matters of organising of lessons, and evaluation. Local education has also become a mediator between distance education and the local community.

Distance education is characterised by high competency and quality of teaching. It is an extra resource for the school, and adds to its educational performance in terms of the basic infrastructure that local education provides. Distance education is also characterised also by deterritorialisation. It mostly lacks a context. It fosters technical expertise and has also brought such expertise to local education. Through distance education local special knowledge of pupils and, to a certain extent, of local teachers has been used and has benefited.

CHAPTER 9

Life in the Virtual Classroom

Introduction

In the previous chapters I discussed the Kilpisjärvi project at the levels of the community and the school. In this chapter, with its 'Jacksonian' (Jackson 1968) title, I will investigate the actual situations of distance education: the lessons. While my perspective so far has mostly been that of parents and teachers, here my focus is mainly on the of pupils in Kilpisjärvi. My intention is to report what happened there in those lessons, and how the pupils experienced distance education. Although my main interest was not to investigate the teachers' actions, I will say something about them also because the teachers' contributions, naturally, were an essential part of the lessons. Another focus here is the virtual classroom. My aim is to consider if a virtual classroom emerged in the Kilpisjärvi project, and if so, what kind of virtual classroom it was.

What is a virtual classroom, and was one created by the pupils and teachers in Kilpisjärvi and Helsinki during the years from 1994 to 1997? Did I perhaps invent this particular virtual classroom myself? Does the Kilpisjärvi-Helsinki virtual classroom exist only in my text? Was, as Anderson would say, an 'imagined community' just my imagination, not imagined by those who were involved? I begin this chapter with these critical questions because they are questions that occurred to me several times during the research work. It could be called reflection. The background for this criticism goes back to the very roots of ethnography: Malinowski in the Trobriands. Siikala questions where there really are any *ethnos*es. He refers to Malinowski's comment on how he (Malinowski) created the Trobrianders, those Argonauts of the Pacific, in his ethnography (Siikala 1997, 24). The main interests of Malinowski did not concern the people in these remote islands, but rather his own academic career back home in the Western world. I see a similar danger in my work. I went to my field to see if I would find a virtual classroom there. Now I am coming back, it would suit me and my research if I had found one.

In the following I will first describe the online lessons from the point of view of an observer, and then turn my attention to the Kilpisjärvi pupils' experiences of the lessons and of the project in general. I will give voice to the Helsinki pupils and teachers as well. Finally, I will attempt to weave together the diverse threads to get a more holistic look at the virtual classroom of the Kilpisjärvi project.

The classrooms

When the new lower-secondary school started in Kilpisjärvi in August 1994, the first thing pupils and teachers had to do was to open up the packages of furniture. There was only an empty room which was going to become both the distance-education classroom of the school, and the classroom of the secondary-school pupils for (at least) the three next years. Accordingly, the pupils in Kilpisjärvi started with an empty room.

When I first entered the room on the 1st of November, 1994, the video-conferencing set was situated in a corner. Pupils sat in two rows at long tables, with two PCs on each one. One of the cameras was above the screen. When the pupils watched the picture which came from Helsinki, it appeared to the people in Helsinki that they were looking directly at them. The room also included normal desks which were used in the local lessons. The setting stayed mainly like this throughout the three years of the project.

The classroom in Helsinki was formerly part of a foreign-language studio. It was furnished with the standard desks which were used throughout the school. Some extra attention was paid the lighting which subsequently was brighter than in other classrooms. The room was too small for the large pupil group at the beginning of the project. Once the group became smaller, this problem disappeared.

General views

I asked the Kilpisjärvi pupils a few months after the project had started how online lessons differ from other lessons. They answered:

***Pupil**: The teacher isn't there in front of you. (In95/KiPu5)*

***Oppilas**: Opettaja ei ole ihan siinä nokan eessä.*

***Pupil**: Well … it varies from day to day and from teacher to teacher. So, if there's, say, the kind of teacher at the other end of the link who is able to keep discipline and that, the lessons can be very nice. But it depends on what kind of day it is and on the teachers, if they can keep the pupils quiet and lessen the noise from there, a lot of extra noise, so the teaching will work okay. (I95/KiPu6)*

> ***Oppilas:** No jaa ... tota niin se vähän riippuu päivästä ja opettajasta. Että jos esimerkiksi toisessa päässä on semmonen opettaja, joka saapi niinkun luokan kurhiin ja näin, niin sitten tunnit voi olla ihan mukaviakin. Mut se nyt riippuu välillä päivistä ja opettajasta, jos se saapi niinku paikalla hiljaseks tai vähentää ainakin sitä melua sieltä, niinku semmosta ylimäärästä, niin kyllä se sitten ihan hyvin opetus mennee.*

***Pupil**: Well, of course, it's that the teacher and your other classmates are in Helsinki.*
***Me**: Yeah, what does it mean for you in practice?*
***Pupil**: Well, I don't know. It's pretty much the same [as traditional lessons]. (In95/KiPu1)*

> ***Oppilas**: No, onhan se tietenkin kun Helsingissä on opettaja ja muut luokkatoverit.*
> ***Minä**: Joo, mitäs se käytännössä tarkoittaa sulle?*
> ***Oppilas**: No, en mie nyt tiiä. Melkein se on samanlaista.*

***Pupil**: You have to check the television and listen what they're saying. (In95/KiPu2)*

> ***Oppilas**: Pitää tsekata televisiosta ja kuunnella siitä, mitä ne sanoo.*

***Pupil:** Well, how to say … Of course you have to concentrate a bit more, in a way. I mean because there's such noise that you can't always hear everything, and hm … Then there's teaching through computers, so that we also sometimes type with our computers. And … then the teacher is, of course, in sort of a different place, so you can't ask her for whatever help you happen to need. Not like you could if she was here in the classroom. I can't think of anything else. (In95/KiPu4)*

> ***Oppilas**: No ... miten sen nyt sanois. Tietysti niihin täytyy vähän enemmän keskittyä sillälailla. Että ku siellä on semmonen häly, että siellä ei aina kaikkea kuule, ja hmmm ... Sitten siinähän on tietokoneopetusta tietokoneitten kautta, elikkä sitten mekin joskus aina kirjotellaan sillä tietokoneella. Ja ... sitten se opettaja on tietysti vähän eri paikassa, että siltä ei ninku sillälailla voi kysyä iham mihin saattu tuota neuvoja. Että niinku jos olis esimerkiks täällä luokassa. Ja en mä oikeestaan muuta keksi.*

From the point of view Kilpisjärvi, it was essential, naturally, that the teacher was not physically present in the same room. They had to watch TV, con-

centrate and try to catch what was going on in the videoconferencing. Generally, they did not say that the online lessons were very different from or more special than their other lessons

One year later I asked the pupils about their experiences of online lessons at that time. The general attitude was not very enthusiastic. Here are two comments from the more pessimistic side:

> *Ordinary teaching is better than distance education. Distance education doesn't work very well. Audibility and the picture are sometimes bad. Sometimes there are good lessons, sometimes bad lessons. (In96/KiPu1)*
>
> *Tavallinen opetus voittaa etäopetuksen. Etäopetus ei toimi kovin hyvin. Kuuluvuus ja kuva välillä huono. Joskus on hyviä tunteja, joskus huonoja tunteja.*
>
> *Not so great experiences. Distance education is boring. (In96/KiPu4)*
>
> *Ei nyt niinkään upeita kokemuksia. Etäopetus on tylsää.*

The pupils' behaviour and attitudes towards the online lessons varied during the three years that I visited the Kilpisjärvi school and observed lessons. They were enthusiastic and participated actively in some online lessons, and in some others they seemed bored, just waiting for the session to come to an end. I sometimes heard them whining before online lessons: 'Oh no, distance education again!'. On the other hand, they liked their teachers online, as I have pointed out. Accordingly, there is no single answer to the question of how the Kilpisjärvi pupils experienced the online lessons. A closer look at those lessons might give a clearer picture.

What did the Kilpisjärvi pupils do in the online lessons?

I will describe the distance lessons according to my fieldwork experiences. I will try to show, what the pupils actually did when they attended the lessons, in other words, what kinds of activities they carried out. Later in this chapter, I will analyse how these activities constructed, or perhaps deconstructed, the virtual classroom of the project.

The most striking feature of these lessons was the level of concentration of the pupils. They sat quietly and followed what was going on the screen, even though there was no teacher physically in the room. This certainly is not very typical of pupils in Finnish lower-secondary schools. I was often asked

how the pupils behaved when they did not have a teacher in the same room: 'Don't they climb the walls?'. No, they did not. Even when they dropped out of a lesson or when there were technical problems, they acted very calmly.

My main interest here is not to focus on, echoing Hiltz' definition of the virtual classroom, normal activities 'that usually occur in a classroom including discussions as well as lectures and tests' (Hiltz 1986, 95). For the great part of the distance lessons the Kilpisjärvi pupils responded to the moves of the distance teacher. They listened, they answered questions, they did exercises and so on. Roughly speaking, they managed in 'discussions as well as lectures and tests'. At the beginning of the project, Salonen and Falck analysed classroom interaction in distance lessons. They concluded that the pupils had a responding role (Salonen & Falck 1996). Using a verbal-interaction analysis system which was developed by Bellack et al. (1966), they found out that the Kilpisjärvi pupils mostly fulfilled the expectations of pedagogical moves which were conducted mainly by the teacher. In terms of this classroom-interaction analysis, the pupils in Kilpisjärvi acted as they were expected to act by the teacher. They responded to 'questions, commands, imperatives and requests' which were 'designed to elicit a verbal or physical response' (Salonen & Falck 1996, 81; Bellack & al. 1966). To put it more simply, they did what they were told to do. My intention was not to pay attention to the pedagogical side when I observed the online lessons. However, I did get a general view of what was going on. From that point of view I can say that the pupils' and the teachers' doings did not differ to a great extent from those in a traditional classroom. They mostly acted as if they were in a normal classroom with four walls surrounding them. I could hardly argue that any special pedagogy was developed for this virtual classroom. Warschauer obtained similar results in his research about a computer-based second-language course. Computers were not used in terms of the possibilities which they could provide to change studying, but they were used as 'a tool to implement and reinforce the rule-based functions of the class' (Warschauer 1998, 73).

Greeting, talking about the weather

In the following pages I will investigate some minor issues which occurred in the online lessons. By 'minor' I mean to small day-to-day habits (e.g. greeting) and activities (e.g. fostering of humour) which may seem rather unim-

portant features of my research. Despite their seeming triviality, they helped the participants in their effort to construct one common virtual classroom.

I will start with greetings. Greetings, however trivial they might be in school life, became an important feature in this virtual classroom. It was usually the teacher who greeted the Kilpisjärvi pupils and he or she often did this in a collective manner: 'Good morning, Kilpisjärvi!'. One teacher, in particular, used to greet every Kilpisjärvi pupil personally by name. The pupils in Kilpisjärvi responded to these greetings. The greeting ceremony acted as mutual confirmation that the connection had been established, and that the building up of a common lesson in the virtual classroom could begin. It was a sort of agreement that the pupils in Kilpisjärvi and, at least, the teacher in Helsinki had reached, a common synchronic deterritorialised sphere, a corner of the eduscape, so to say. The case of the Helsinki pupils is problematic here. Whether they were really present in this sphere or not was often unclear.

For the Kilpisjärvi pupils, greetings provided an opportunity to express their presence in the virtual classroom. According to my field notes, they were always anxious to respond to greetings from Helsinki and to greet the others. It was also an opportunity for them to make casual contact with the Helsinki pupils. These opportunities in the course of the distance lessons were rather rare. I asked the Kilpisjärvi pupils if they chatted with the pupils in Helsinki. One of them answered:

> ***Pupil**: I don't chat. But when I quit a lesson I sometimes say 'by'. (In95/KiPu2)*
>
> ***Oppilas**: En mä juttele. Mutta kyllä aina kun lähen tunnilta, niin joskus sanon että heippa.*

What usually followed this habit of greeting was another ceremony. This concerned the weather. Talking about the weather was so conspicuous that I started to take notice of this feature at the very start of the project. It is generally accepted that the weather is a normal topic of small talk in Finland. However, I found a deeper significance in the weather talk that went on in the Kilpisjärvi project. It was not only small talk between participants. Small talk, on the other hand, has been described as characteristic of the virtual classroom. Hein (1995) speaks about a 'warming up' phase at the beginning of audio-conference sessions in the virtual classroom she studied. The aim of this phase was to create a positive social atmosphere for successful learning.

I think some pupils in Kilpisjärvi understood when I asked them why teachers talk so much about the weather. Some of them stated that the

weather in Kilpisjärvi, in fact, is different from that in Helsinki. That is why the topic is discussed in the first place. From the observer's point of view, it looked as if, at the very start of a distance lesson, the teachers were stating aloud that the participants of the virtual classroom were located, at the very moment when the weather was being discussed, in a different geographical context. In this way they tried to bring the participants from Kilpisjärvi and from Helsinki together. In sense, they were officially stating that 'we come from a different geographical reality but we are coming together in a common online lesson in our virtual classroom at this moment'. The topic discussed was often how cold it was in Kilpisjärvi, and how relatively warm it is in Helsinki, or if there was already/still snow in Kilpisjärvi. Perhaps I see too much significance in this little weather-comparison ceremony, but I claim that it was not only small talk what was going on. By saying it (differences in the weather) aloud, the teachers, in a way, positioned the Kilpisjärvi pupils in their 'you-there-in-the-middle-of-the-snow' context at the same time as they positioned the Helsinki participants in the 'we-here-in-sunny-Helsinki' context. These two contexts were juxtaposed and, through this juxtaposition, the teachers tried to create an common environment for the virtual classroom.

Repeating, responding

These activities, greeting and weather talk, was the means of the teacher to construct a virtual classroom. I will discuss here some other moves the teachers made which supported this construction. I will first show some field data:

> *Teacher: "And everybody repeat". The pupils in Kilpisjärvi also repeat. (Fn 1/94)*
>
> *A common exercise of repeating aloud. The Kilpisjärvi pupils participate as well. They keep up well with the textbook exercise. (Fn 1/94)*
>
> *The boys answer spontaneous questions. (Fn 1/95)*
>
> *They all say it together. The Kilpisjärvi pupils participate but you can't hear, at least not very well, how they pronounce. (Fn 39/97)*
>
> *Repeating. First the teacher, and then the pupils. This does not work very well. The Kilpisjärvi pupils actually participate but it sounds like a roar. This is rather formal. The teacher cannot hear how the Kilpisjärvi pupils pronounce the words but he/she does not mind. (Fn 43/97)*

These extracts from my field notes are from English lessons and history lessons given by three different teachers. They show two methods which teachers in other disciplines also often used: general questions to no one in particular and repetition. Again, there is nothing special in these two methods. They are obviously frequently used in teaching in Finnish schools. But, again, in this virtual classroom project they had special significance.

The pupils in Kilpisjärvi did not hesitate to answer the questions which the teacher has posed to the whole virtual classroom. Actually they were rather eager to do this. From the observer's point of view, i.e. my point of view, these situations appeared as uniting incidents, regardless of whether was observing in the classroom of the Kilpisjärvi School or in Helsinki. A question to everybody created an equal opportunity, independent of location, for the pupils to answer the teacher's question. Repetition was a curious feature of the online lessons. Repetition in the English lessons sounded almost comic. As the above extracts indicate, it was used to practice the pronunciation of a foreign language. However, this practice often sounded more like a bellow than correct English. The video link did not work very well for this kind of activity. Nevertheless, repetition was used on online lessons. These repetitions common simultaneous exercises for the whole virtual classroom. Whatever their original aim (improving of pronunciation), I would argue that their significance was more to do with uniting the virtual classroom. Slightly twisting Tiffin and Rajasingham's (1995, 6; see also Chapter three) definition, we could and say that, in a virtual classroom everybody can talk and be heard and everybody can *repeat* the same words.

I will take another group of extracts from my field notes.

> *People are listening to a tape. Then [the teacher] asks if there are any questions. First somebody in Helsinki and then somebody in Kilpisjärvi responds: 'No!'. (Fn 39/97)*
>
> *[The teacher] asks [the pupil] and [the pupil] if they have anything to ask. [The pupil] responds: 'No!'. (Fn 39/97)*
>
> *There is some text in the document camera. [The teacher] checks with the Kilpisjärvi pupils whether they can see it. Somebody responds: 'Yeah!'. (Fn 39/97)*
>
> *[The teacher] asks if the pupils have understood. [Pupil]: 'Yes, we understand.' (Fn 45/97)*
>
> *[Teacher] asks if the pupils are ready. [Pupil] asks the other pupils if they are ready and informs the teacher that they are. (Fn 45/97)*

The pupils begin to work in pairs, but show some hesitation. [Teacher] notices this and asks if the exercise is too difficult. The Kilpisjärvi pupils answer together: 'Yes, it is.' (Fn 47/97)

As I have argued earlier, the teachers sometimes had difficulties finding out what was going on in Kilpisjärvi. They did not know if the pupils there were following the lessons or not, for example, or whether they had understood the instruction which the teacher had given them. Using the kind of checking procedure that the above extracts display, the teachers were asking the Kilpisjärvi pupils whether they were 'present' in the virtual classroom. The pupils in Kilpisjärvi, in turn, gave a quick respond. Like the greeting or the weather talk, this kind of checking and responding worked as a common declaration that 'we are all here in our common virtual classroom, and we are all sharing the same instructional process right now, we are all aware of what is going on ...'. The virtual classroom appeared, as has been theorised, as a information system and teacher's task was to make sure that this system worked.

Humour

In the previous paragraphs I discussed teacher's way to build up a virtual classroom. By way of contrast, the source of the topic I will discuss in the following lines was the Kilpisjärvi pupils. This topic is humour. As was the case with the weather talk, the presence of humour in the online lessons was another feature that attracted my attention from the very beginning of the project (Kynäslahti 1996). It was usually the Kilpisjärvi pupils who did the joking.

One way in which the pupils acted as jokers was to make their homework or exercises and presentations funny:

[The pupil] presents his/her homework to the document camera. The story is funny and makes the Helsinki pupils laugh. All kinds of funny occurrences and everybody laughs. Nice atmosphere. (Fn 48/97)

[The pupil] has written a fan letter to Sean Connery. A funny one. … [The teacher] takes it as a joke and praises the pupil. (Fn 46/97)

However, a more interesting aspect of humour was the spontaneous jokes which emerged from the actual lesson situations:

[Teacher] asks the Kilpisjärvi pupils: 'Do any of you know how to throw a "suopunki" [a certain kind of lasso used in reindeer husbandry]?' [Pupil] answers: 'No!'. 'You can always throw suopunki, whether you can catch a reindeer with it is another thing!', comments [pupil] sarcastically. (Fn 54/97)

First there's some flute music from Helsinki. The music stops. Somebody continues by whistling in Kilpisjärvi. (Fn 43/97)

These little incidents were often moments when there was a feeling of a common virtual classroom. It is possible that this feeling was as its strongest in these moments. As I have stated before, there was not much opportunity for casual small talk between the pupils in Kilpisjärvi and Helsinki. Funny incidents and humour in general provided such an opportunity. Humour was one of the means by which the Kilpisjärvi pupils played their part in the construction of the virtual classroom. A sense of humour, more precisely, their *own* sense of humour, was their contribution. One of the pupils in Helsinki commented at the end of the first school year of the project, that:

***Pupil**: … you get some understanding of how the pupils somewhere else think about things … as they always joke … it's really refreshing from time to time, they have a different sense of humour and such things.*
***Interviewer**: How is it different?*
***Pupil**: Well, they don't crack any special jokes, but they're somehow just very natural and they don't care if make fools of themselves. And it creates a much nicer feeling …(In95/Ma/HePu1)*

(Interview by Marjo Salonen)

***Oppilas**: ...saa sillä tavalla niiinku vähän käsitystä niinku miten niinku tuolla jossain muualla nää ihmiset ajattelee... niinku ne laskee vitsii koko ajan ... kyll se on ihan piristävää välillä, niill on erilainen huumori ja tällein.*
***Haastattelija**: Millä tavalla se on erilainen?*
***Oppilas**: No ei ne sillä tavalla vedä mitään ihme vitsejä, vaan ne on jotenkin hirveen luonnollisia eikä välitä vaikka nolais ittesä sillä tavalla. Ja siihen tulee semmonen paljon semmonen kivempi tunne...*

At about the same phase of the project during which the interview quoted above was conducted, I asked the pupil who was a sort of 'joker' in Kilpisjärvi at whom he targeted his humour, the pupils in Kilpisjärvi or the people in Helsinki or both. His answer was: 'Both'. Further, at the end of the project I brought the topic of humour up again when I interviewed the Kilpisjärvi pupils in 1997. I asked in what kind of situations they joke and fool about on distance lessons. They did not a have any straight answers to my question. They said things like: 'in many situations' or 'occasionally'.

While greeting was mainly a move by teachers, humour came mainly from of the Kilpisjärvi pupils. (I must add here that there were some jokers in Helsinki as well, but my perspective in this chapter is that of Kilpisjärvi.) Humour provided a way for spontaneous participation in the virtual classroom. Further, it was also a way to liven up the atmosphere in the demanding videoconference lessons. It created 'a much nicer feeling', as the pupil commented above.

The humour that the Kilpisjärvi pupils fostered somewhat differed from the jokes they told outside of the online lessons, in the local lessons for example. Their experiences as well as my observations indicate that the local lessons were more lively, more casual and contained more humour than the online lessons. The presence of humour in the local education context was emphasised in many statements by the Kilpisjärvi pupils. What the distance lessons lacked that the conventional lessons had was the pupils' own humour—their own local jokes (which could be rather graphic). When I observed the local lessons I heard often pupils teasing each other about any special characteristics that everybody in the classroom knew he or she had. They also told funny stories about certain local happenings and people. Accordingly, the presence of humour which the pupils stressed in their comments concerned their own little inside world of the classroom as well as the local world and way of life. On the other hand, inside jokes from the virtual classroom also began to appear during the run of the project. This indicates a shared history. Nicholson investigated the origins of communities in the postmodern era. She remarks, 'A genuine community develops gradually over time and is in an important sense constituted by its past. Having both a common history and a common memory of that history, the members make up a 'community of memory' (Nicholson 1991, 49). According to her, people tell and retell stories, funny or sad, and often they tell them about cult figures that everybody recognises, in order to perpetuate the collective memory. Teachers who, at in the beginning of a school year, meet a new class in which pupils come from different schools, as was the case in the Kilpisjärvi project, recognise this lack of shared history.

The sense of community is not something that emerges automatically. There were high expectations by the researchers at the beginning of the Kilpisjärvi project that the pupils in Kilpisjärvi and Helsinki would be interested in each other when they met through the video link. However, they were not. Looking back now, these expectations seem naive. The classroom super visor of the Helsinki group told me (two and a half a years after the project started) that the class climate of the Helsinki group was not the best possible. It had

not developed in the way which he had wished. It is not surprising that the pupils of Kilpisjärvi and Helsinki had difficulties how to relating to each other at first. The environment of linked classes is more socially complicated than the traditional class.

Pupils at these two sites became familiar with each other to a certain extent, and some people developed certain roles that everyone recognised in the life of the virtual classroom. One of the Kilpisjärvi pupils was identified as a joker. This kind of role is reminiscent of the 'heroes' of the whole virtual classroom in the way that Dahlén et al. (1996) use the word in the context of translocal fields. Jokes between pupils and joking about each other created situations which engendered the feeling of one virtual classroom.

Killing time

Indeed, getting bored and fatigue were features which appeared from time to time during the whole project. I have many notes about the pupils in Kilpisjärvi just doing nothing. These situations arose partly because of their difficulties in following the lessons. Pupils may have become lost during the course of a lesson and reacted by being passive. On other occasions they were just bored.

The atmosphere is sleepy and the pupils have their heads on their desks. (Fn 3/94)

[The pupil] raises his/her hand to ask something. [The teacher] does not notice.

[The pupil] stops—and does not ask anybody else. (Fn 6/94)

[The pupil] asks for help. [The teacher] is too busy to answer. (Fn1/94)

[The pupil] looks out of the window. [The teacher] does not notice. (Fn 24/96)

[The teacher] poses a question to everybody. No reaction. [The teacher] says: 'Say something! Can you hear me?' (Fn 41/97)

Although the tempo was often fast in the on online lessons, the videoconferencing process and the whole composition of the virtual classroom with its two pupil groups caused delays. The pupils in Kilpisjärvi just waited and sat quietly.

During the waiting time the pupils do nothing. (Fn 1/94)

The Kilpisjärvi pupils get their exercise ready and wait in good order. (Fn 2/94)

The Kilpisjärvi pupils just sit quietly and fiddle with something. (Fn 9/94)

When the Kilpisjärvi pupils have their exercises ready they just wait for the Helsinki pupils. (Fn 52/97)

Waiting is nothing unfamiliar for pupils. In fact, it is rather typical of life in schools. There was something special about it in the Kilpisjärvi case, however. It seemed to weaken the feeling of togetherness. The reason for being together, studying, was not valid in those moments from the point of view of Kilpisjärvi, and thus the existence of the virtual classroom became questionable. A pupil who is sitting in a traditional classroom waiting for the others to finish is, at least, sitting *in a classroom*. A pupil in a virtual classroom in the same kind of situation is not necessarily 'sitting in a virtual classroom'.

Those waiting moments or occasions when the pupils became bored never caused any discipline problems in Kilpisjärvi. I saw pupils doing their own thing during online lessons on several occasions. They played computer games, exchanged messages on paper, and crawled about on all fours so that they were not in the view of the camera.

[The pupil] sends a piece of paper to the others. [The pupil] is also busy with something. (Fn 10/94)

[The pupil] moves in the classroom. The others watch him/her but they do not comment. (Fn 5/94)

The local teacher enters the room. The Kilpisjärvi pupils begin to amuse with each other. (Fn 6/94)

[The pupil] plays about with the computer. (Fn 23/96)

[The pupil] and [the pupil] play with computer. The others watch them. (Fn 28/96)

[The pupil] plays with computer. The typing is clearly audible, but [the teacher] does not pay any attention to it. (Fn 39/97)

The Kilpisjärvi pupils sometimes did their own thing as a group. They created their own program when, for some reason, they were encourage to do so. Sometimes they acted individually. In any case, they were usually engaged in silent activity which the teacher did not notice. They used the limitations of videoconferencing for their benefit to amuse themselves, crawling around on all fours out of the view of the camera, for example. This did not disturb the whole virtual classroom.

Local co-operation and technical arrangements

The environment of the online lessons urged the Kilpisjärvi pupils to co-operate, especially at the beginning of the project. There were several occasion on which they simply could not hear what the teacher said. The pupil group in Helsinki was too big for this kind of education. The noise they made disturbed the lessons. On the other hand, the teachers did not always notice that pupils in Kilpisjärvi had something to ask. Consequently, the pupils started to help each other.

> *[The pupil] asks what homework they will have. And asks again. Another pupil answers and [the teacher] confirms it. (Fn 1/94)*
>
> *The girls help the boys and take care of them. (Fn 7/94)*
>
> *[The pupil] does not know what to do. He/she asks [the pupil]. (Fn 12/95)*

Sometimes the technical arrangements were necessary for studying. The Kilpisjärvi pupils had to take the initiative. They asked the teacher to adjust the equipment, or they did it themselves.

> *The teacher uses the document camera. [The pupil] complains that they cannot see the picture. [The teacher] fixes it. (Fn 43/97)*
>
> *[The teacher] is about to begin the lesson in Helsinki. There is some noise in Kilpisjärvi. [The pupil] goes to increase the volume. (Fn 23/96)*
>
> *The connection broke for a moment. The bridge broke as well. The pupils use their skills to build up the connection again. (Fn 27/96)*
>
> *[The pupil] changes the camera angle. (Fn 55/97)*
>
> *[The pupil] goes to turn up the volume.. (Fn 56/97)*

The Kilpisjärvi pupils had a great share of the responsibility for the success of the online lessons. Some of the teacher's work was shifted onto them in term of organising the education. As in distance education and open learning in general, the pupils had to take responsibility due to the context in which they were studying.

What the teachers did in the online lessons

The role of the teacher became very important in this virtual classroom, as we will be shown later. Although their doings were not the main interest of my

research, it is worth considering how their activities came to characterise the online lessons when observed from the point of view of Kilpisjärvi. The perceptions here are those of the observer, i.e. me: what did I see them do and hear them to say?

I will not pay attention to things that teachers normally do in a classroom: lecturing, asking questions, discussing, giving instructions and so on. Nor will I consider pedagogical matters as such. Instead, I will report the things which I found over the three years of the project to be typical and special behaviour for the teachers in this virtual classroom.

First of all, there was talking. Evidently teachers talk a lot in their work. Sometimes in the on online lessons it doubled. They spoke separately to the Helsinki group and to the Kilpisjärvi group. They repeated the pupils' answers so that everybody could hear them. They checked things (as we saw above) and, in general, tried to ensure verbally that everybody knew what was going on. The following is an extract from an interview that my colleague Jari Salminen conducted with a teacher:

> ***Interviewer**: Have you had to stop anything?*
> ***Teacher**: Due to teaching?*
> ***Interviewer**: Yes.*
> ***Teacher**: Due to this distance education?*
> ***Interviewer**: Do you have the feeling that you've lost something here?*
> ***Teacher**: Well, yes, that is, I used to walk around quite a lot there in the classroom. Now I can't have that kind of contact with the distant pupils. I'll have to thinks of a way to get something similar.*
> ***Interviewer**: Hm.*
> ***Teacher**: That's the reason why I keep asking: 'Hey, [the pupil] hey …'*
> ***Interviewer**: Hm.*
> ***Teacher**: I don't usually I ask such questions. (In95/Ja/HeTe2)*
>
> *(Interview by Jari Salminen)*

> ***Haastattelija:** Oletko joutunut luopumaan jostakin?*
> ***Opettaja:** Tän opetuksen takia?*
> ***Haastattelija:** Niin.*
> ***Opettaja:** Etäopetuksen?*
> ***Haastattelija:** Onko sulla semmonen tunne, että tässä menetetään jotakin?*
> ***Opettaja:** No, joo siis sit se, että kun mulla on ollut aika paljon tapana liikkua siellä luokassa. Nythän mä en niin etäoppilaisiin saa semmosta kontaktia. Mun on täytyy miettiä, ett miten sais niinkun vastaavan.*
> ***Haastattelija:** Hm.*
> ***Opettaja:** Ett sen takii mä sinne kysyn sitte ett:'Hei, Mikko hei …'.*
> ***Haastattelija:** Hm.*
> ***Opettaja:** Ja se niinkun, sitähän mä en nyt normaalisti sillei niinkun ääneen kysele.*

Salonen and Falck analysed verbal interaction in the online lessons during the first school year of the project. When they reported (Salonen & Falck 1996) the quantity of teacher talk versus pupil talk they referred to the so-called one-third rule; teachers talk during two thirds of classroom conversations and pupils are left with one third.

Another crucial thing was their handling of the cameras. They shifted from one camera to another. They zoomed, they rotated the moving camera, they arranged the pupils to a particular way to suit for the picture, they sat together with the pupils so that the whole Helsinki group was visible. *They sent a picture.* Indeed, all the time when online, the teachers sent a picture. This statement may sound naïve, but I would like to argue that there are possibilities for further consideration and a number of research paths. In videoconferencing, in addition to the auditive element, teaching is packed into a TV picture. What the teacher chooses to send or not send, is teaching. From the perspective of the remote site, *teaching* is what they see on the screen. *Teaching is picture*. This argument sounds like that of McLuhan, and I admit that I exaggerate. Teaching also includes other elements than the interactive part, such as planning and evaluation. In any case, from the point of view of Kilpisjärvi, the kind of picture the teacher decided to send was crucial because it was such an essential part of the teaching.

The handling of the technology was also a special feature in the teacher's work on online lessons. They adjusted the volume, calibrated the equipment, sent faxes, used audiographics and the document camera, and established and switched off the connection. There was a technical assistant in the Helsinki classroom in the first year of the project. After that the teachers handled the technology by themselves. Some of the them were rather reluctant to touch the technical side and let the pupils take care of that:

> ***Teacher**: I know how to switch on the cameras, but not much else. It's almost the only thing so, and then once when we made connection, it went well, yes …*
> ***Interviewer**: You get connected.*
> ***Teacher**: Yes, we got connected. (In95/Ja/HeTe1)*
>
> *(Interview by Jari Salminen)*

> ***Opettaja**: Että pystyn noita kameroita säätelemään, mutten paljon muuta. Se on melkein ainoo ja sillei, et kyllä mä sillon kerran kun me avattiin näitä niin kyllä siinä ihan hyvin onnistu, kyllä …*
> ***Haastattelija**: Saitte yhteyden?*
> ***Opettaja**: Saatiin yhteys kyllä.*

Some other teachers were competent in use of equipment.

Pupils' experiences of the online lessons

The above showed how the online lessons looked through the eye of an observer. How did the Kilpisjärvi pupils themselves experience those lessons? The interviews I conducted give some information about the pupils' feelings. I reported in the previous chapter findings which relate to the pupils' own experiences, for example what they thought about the competence of online teachers compared to the local teachers. I will not repeat such findings here anymore. What I am looking at in the following is the actual online lesson situations.

The new social format of the classroom

Several comments that the pupils gave about their experiences dealt with the combination of two pupil groups and one teacher, and how well it worked, in other words, the very structure of the virtual classroom. An essential point was that, in addition to a teacher, there was also a group of pupils at the other end of the link.

What did the Kilpisjärvi pupils think of that group? First of all, they did not get very close to the Helsinki pupils. I asked the pupils in Kilpisjärvi in my first interviews how well they knew the pupils in Helsinki.

***Me**: Do you know any of the Helsinki pupils?*
***Pupil**: Yes I know a couple of them.*
***Me**: Do you ever greet them through the camera?*
***Pupil**: Well, actually no. (In95/KiPu1)*

***Minä**: Tunnetko sä ketään sieltä Hesan oppilaista?*
***Oppilas**: Tunnen mie muutaman.*
***Minä**: Moikkailetko sä koskaan ruudussa?*
***Oppilas**: No, enpä juuri.*

***Me**: Do you know any of these Helsinki pupils?*
***Pupil**: Well, not very well.*
***Me**: Do you ever greet them or do you chat with anybody there?*
***Pupil**: I don't chat. But when I leave a lesson I sometimes say 'bye'. (In95/KiPu2)*

***Minä:** Tunnetko sä näitä Helsingin oppilaita?*
***Oppilas:** No, en kovin hyvin.*
***Minä:** Moikkaat sä koskaan tai jutteletko sä kenenkään kanssa siellä?*

> ***Oppilas:*** *En mä juttele. Mutta kyllä aina kun lähen tunnilta, niin joskus sanona että: 'Heippa!'.*

Me*: How well do you know these Helsinki pupils?*
Pupil*: I don't know them. I only recognise one of them. (In95/KiPu3)*

> ***Minä****: Miten hyvin sä tunnet näitä Hesan oppilaita?*
> ***Oppilas****: En mie tunne. Mie tiiän vain yhen sieltä.*

This was the situation a couple of months after pupils had been meeting each other almost daily through the link. I repeated my question the following school year. I asked if the relationship between the Kilpisjärvi pupils and the Helsinki pupils had changed during the project. I was told that it has not basically changed. The pupils in Kilpisjärvi commented that they did not know the pupils in the Helsinki group very well. This was still the case even after the Helsinki group had became smaller than it was in the first year. The Kilpisjärvi pupils argued that online lessons through videoconferencing do not provide a favourable environment for getting to know one another. It does not bring people together in that way. On the other hand: 'Pupils must sit quiet in the lessons. You can't get to know them.', as one of the pupils judged the situation. Important factors in the development of personal contacts had been pupils' trips from Kilpisjärvi to Helsinki and vice versa. The pupils themselves had tried to change the situation by chatting through the video link during the breaks. It has not been a great success. According to a Kilpisjärvi pupil's comments, chatting was stiff.

This is not to say that the pupils were not interested in each other. I asked them, after three years of online lessons, if they would prefer it if there were only a teacher in Helsinki. They answered both 'Yes' and 'No'. On the one hand, without a group in Helsinki the teaching would be more effective. On the other hand, the pupils in Helsinki created an atmosphere 'of a normal classroom', as one of the pupils commented. They also appreciated the Helsinki pupils' opinions and views, which enriched the discussions.

> *Topics being studied are treated from a wider perspective when there are more people involved. (In96/KiPu3)*

> *Tulee laajemmin käsiteltyä asioita, kun on enemmän tekijöitä.*

They also stated that the Helsinki group enlivened lessons, especially in boring subjects. One of the pupils, however, totally challenged my question about the relationship between these two pupil groups. He strongly disagreed with the way I had formulated my question. It was not important whether or

not there was a pupil group at the other end of the link. It was the teaching he was interested in. Further probing suggested that, for him, teaching was more or less equivalent to teacher.

I again asked the Kilpisjärvi pupils about feelings of togetherness when I met them last time in spring, 1997. I wanted to know if there had emerged class spirit during the three years of the project. The pupils were sceptical about this. While one of them thought that there might have emerged something which could be called a feeling of togetherness, the others mostly rejected the idea. They had experienced such a feeling 'from time to time' or 'a little'. One of the them complained that videoconferencing 'does not bring the Helsinki pupils as living persons in front of you'. She blamed technology for this. She did not find any 'cultural' differences that existed between these two pupil groups living in two distinct environments a disabling element for a common feeling of togetherness.

The most common complaint the pupils voiced was that they could not hear what the Helsinki pupils said. How can there be one common virtual classroom if people cannot hear each other? They also wanted to recognise the pupils' faces. This was a problem in the first year when there was a big group of pupils in the Helsinki classroom. One of the reasons why chatting during the breaks had not succeeded was that the pupils could not see facial gestures clearly enough. Obviously, in these kinds of intimate situations it was more important than in the online lessons to see other people's reactions in detail. The atmosphere was apparently more formal in the lessons.

When I interviewed the pupils the first time, the first things they pointed out were the noise and lack of discipline. The teachers had not been strict enough in some lessons, and noise from the Helsinki classroom had disturbed or even ruined the whole online lesson. Another thing, related to noise, was the size of the Helsinki group. It was too big, according to the pupils in Kilpisjärvi, at the beginning of the project. The ideal size would have been 5 or 6 pupils.

> ***Pupil**: … and then there are perhaps too many pupils at the other end, and they make a lot of noise there. So you can't always hear the teacher clearly. (In95/KiPu4)*
>
> > ***Oppilas**: … siellä päässä on näitä oppilaita ehkä vähän liikaa, niin ne niin siellä meluaa aika paljon. Niin siitä opettajasta ei aina saa selvää.*

The noise cut the connection (not in the technical sense, but in essence) between Kilpisjärvi and Helsinki. It was no longer an online lesson, but rather a

broadcast from Helsinki of some irritating sound. I asked the pupils to recall the online lessons which had succeeded and to describe them.

> ***Pupil**: Well, it was an English lesson and then there … they were rather quiet in Helsinki. They then showed them with a computer and otherwise it was quiet. Not so much noise. (In95/KiPu1)*
>
> > ***Oppilas**: No, se oli englannin tunti ja sitten siinä … oli Helsingissä aika hiljaa. Ne sitten tietokonneella näytti niitä ja muuten oli rauhallista. Ei niin paljon meteliä.*
>
> ***Pupil**: … first of all, the classroom should be sort of quiet here and at the other end and the teacher should teach so we can understand. (In95/KiPu6)*
>
> > ***Oppilas**: … ensinnäkin luokka olis niinku suht koht hiljaa täällä ja tuolla päässä ja että opettaja niinku opettais sillai selkeästi*
>
> ***Pupil**: The religion lessons have been [good lessons]. There's something in them, I don't know. The teacher knows sort of to, knows how to plan really good lessons, so. And then she can keep the other end quiet, so there's is not so much a noise there. (In95/KiPu4)*
>
> > ***Oppilas**: Uskonnon tunnit on ollu [hyviä]. Niissä on tota, en mie tiiä. Se opettaja ossaa sillälailla niinku, se ossaa tehä oikein hyvät tunnit sillälailla. Sitten se ossaa pittää siellä päässä niinku kurin, ettei siellä oo semmonen melu.*

Analysis of the pupils' comments shows that feelings of togetherness and close relationship between the two groups of pupils were not easy to achieve through the kind of video link that was used in the Kilpisjärvi project. The conditions at the beginning of the project were not ideal because the Helsinki group was too big for this kind of education. The pupils complained that it was difficult to get to know each other personally when they had to keep quiet during the online lessons. More liberal discipline, on the other hand, might have caused a chaos. The Kilpisjärvi pupils dropped out of the communication process and became isolated in their own group at the other end of the link. What came to the rescue was teacher, as will be shown later.

The teachers had to divide their attention between two pupil groups. In the research group we called this turning. When the teacher had discussed something with the pupils in Helsinki he or she turned to Kilpisjärvi and then again back to the Helsinki pupils. One teacher expressed his feelings about the unity of the classroom in the following way:

> ***Interviewer**: … do the teachers experience this as one common classroom or as two separate classroom, one here and one there in Kilpisjärvi?*

> ***Teacher:*** *Well yes, it's still a bit as if they're two separate classrooms. At least that's my experience. (In95/To/HeTe1)*
>
> *(Interview by Tor Kronlund)*

> ***Haastattelija****: … kokeeko opettajat ikään kuin nää tän niin kuin yhtenäisenä luokkana vai kahtena eri luokkana, sellasena joka on tässä ja sellasena joka on sitte siellä Kilpisjärvellä?*
> ***Opettaja****: Kyllä se kieltämättä vielä on vähän ne on kaks eri luokkaa. Mulla on ainaski sellainen kokemus.*

According to this remark, the teachers themselves also felt that they were criss-crossing between two groups of pupils. It is notable that the teacher used the word 'vielä' (still). This indicates that he thought that the feeling that there were two separate groups would diminish or disappear during the project. This interview was conducted in its first year.

The turning was often real and physical, as the teacher turned towards the camera. What signalled the turning to Kilpisjärvi was often an expression such as: 'What about you, in Kilpisjärvi …'. I asked the Kilpisjärvi pupils:

> ***Me****: Is it easy to notice that the teacher is addressing Kilpisjärvi at certain moments when teaching?*
> ***Pupil****: Yes, it is.*
> ***Me****: What happens?*
> ***Pupil****: Well, he/she always says something like …:'What would [pupil's name] say to this?' (In95/KiPu2)*

> ***Minä****: Huomaaks sen helposti, että opettaja kiinnittää huomion nyt Kilpisjärvelle … opetuksessa?*
> ***Oppilas****: Huomaa sen.*
> ***Minä****: Miten se yleensä tapahtuu?*
> ***Oppilas****: No, se tekkee aina noitten …, 'Mitäkäs [oppilaan nimi] sitten sannoo tähän?'.*

> ***Me****: Is it easy to notice that the teacher is addressing Kilpisjärvi? When she's been talking for a long time with the Helsinki pupils, for example.*
> ***Pupil****: Well, it's not that easy to notice. Anyway, even the angle of the camera is set so you can't see where she's looking. (In95/KiPu4)*

> ***Minä****: Huomaaks sen helposti, että opettaja kiinnittää huomiota Kilpisjärvelle. Esimerkiksi sen jälkeen, kun se on pitkään puhunu helsinkiläisten kanssa?*
> ***Oppilas****: No, ei kyllä tosi helposti huomaakkaan. Sillai se kamerakulmakin on niin sillälailla, ettei siitä nää, mihin päin se kattoo.*

At the beginning of the project, the pupils in Kilpisjärvi felt that they were given enough attention during the online lessons. Some of them thought that

they had been given more attention than the Helsinki pupils, particularly taking into account the number of pupils at these two sites. They also judged their own activity in the lessons.

> ***Me**: Who takes more part in the lessons, the Kilpisjärvi pupils or the Helsinki pupils?*
> ***Pupil**: Well, there are those at the other end who usually always raise their hand. If we look at the quantity, well … I don't know. It's sort of balanced. Anyway, it's at the other end where the teacher is. If we raise our hand here, we get more chance to answer, if you think about the number of pupils, than the Helsinki pupils. (In95/KiPu4)*

> ***Minä**: Kummat osallistuu enemmän opetukseen, kilpisjärvilaiset vai helsinkiläiset?*
> ***Oppilas**: No, siellä päässähän on tietysti joitakin semmosia, jokka yleensä aina viittaa. Jos määrää niinku katotaan, niin … en tiiä. Kyllä se aika tasapainossa on. Mut kuitenkin niin, että siellä päässä opettaja on. Jos täällä viitataan, niin me saamme niinko enemmän vastata siinä suhteessa oppilasmäärään, niinko ne helsinkiläiset.*

My own observations confirm the pupils' impression. In April 1996, about one year later, I counted their responses in some online lessons. Here are the results:

Table 7. Pupils' responses in the online lessons.

		Helsinki	Kilpisjärvi
11.4. 1996	History	10	17
11.4. 1996	Mathematics	9	11
17.4. 1996	History	12	13
18.4. 1996	History	9	10
18.4. 1996	Mathematics	8	10

I do not argue that these frequencies absolutely verify a 'pedagogical balance' between the two sites. It was not a strict systematic observation that I conducted. These numbers do not include small talk at the beginnings and ends of lessons, nor do they show the pupils' spontaneous comments. Salonen and Falck found out in the first year of the project that the role of the pupils in Kilpisjärvi was mainly to respond to the teachers' moves while that of the Helsinki pupils also included structuring and soliciting [1] In any case, the pupils in Kilpisjärvi felt that they had been treated equally with the Helsinki pupils in the lessons. After observing the online lessons for three years,

I agree with them. The previous, more or less reliable, table of responses also verifies this statement.

I also asked the Kilpisjärvi pupils, how the teachers reacted to their answers, in other words, if the teachers treated the two pupil groups equally in this sense: praising them, correcting wrong answers, and reproaching them, for example.

> ***Me**: Is the teacher's attitude similar towards your answers and those of the Helsinki pupils? I mean, if your answer is correct … or if it's wrong, does the teacher give similar comments.*
> ***Pupil**: Yes. I mean it's really equal. 'Okay, well it wasn't quite right, but maybe somebody at this end can answer now.' So, they don't treat us differently or anything, like we were better behaved or something. (In95/KiPu6)*
>
> > ***Minä**: Suhtautuuko ne etäopettajat samalla tavalla teidän vastauksiin ja helsinkiläisten vastauksiin? Tarkotan, että jos te vastaatte oikein … tai vastaaatte väärin, niin onko se opettajan kommentti samanlainen?*
> > ***Oppilas**: On. Että ihan tasapuolisesti. 'Joo, että nyt ei ehkä ihan menny oikein, mutta jos nyt tästä päästä koittais vaikka tuo ja tuo ihminen.' Niin, ei ne sillai nyt niin mitenkää erityisemmin tuota niinku eriarvoisina piä, tai sillälailla, että me oltais niinku jotenki kiltimpiä tai jotain muuta vastaavaa.*

All the of the Kilpisjärvi pupils had similar experiences. However, on the basis of my observations, I would like to take issue with them. The teachers did not treat these two groups in the same way. They were very anxious to let Kilpisjärvi pupils answer questions. They posed a question and looked at the TV. Accordingly, they checked first whether there was someone willing to answer it in Kilpisjärvi. They may or may not have let him or her answer, but this was the order of things. It is also my view, that the Kilpisjärvi pupils received more positive feedback than the pupils in Helsinki. On the other hand, some mistakes made by the Kilpisjärvi pupils were not corrected at all. Bad pronunciation of English was one example. There were apparently several reasons for this. The teacher could not always hear clearly through the link how the Kilpisjärvi pupils pronounced English. Their starting level, after primary school, was also lower than that of the Helsinki pupils. I was informed several times about this by people in Kilpisjärvi. Still, it seemed that the teachers were reluctant to criticise the pupils in Kilpisjärvi and to correct them. This did not only concern foreign languages. A teacher of another subject talked about being able to catch the Kilpisjärvi pupils' answers:

> ***Teacher**: Oh yes, those Kilpisjärvi sounds. Sometimes, of course, it's a question of the dialect. Sometimes the answer may remain indistinct.*

***Interviewer**: Indistinct?*
***Teacher**: Yes. So I guessed pretty often and sometimes asked them to repeat—not always. (In95/Ja/HeTe1)*

(Interview by Jari Salminen)

***Opettaja**: Joo, ne Kilpisjärven äänet. Välillä tietenkin johtuu tosta murteestakin. Välillä se vastaus jää kyllä vähän oudoksi.*
***Haastattelija**: Epäselväksi?*
***Opettaja**: Epäselväksi. Että melkein aika useesti arvuuttelin ja joskus pyydän toistaan – en aina.*

***Teacher**: Honestly speaking, I don't always hear their answer.*
***Interviewer**: Yeah.*
***Teacher**: And I don't necessarily always ask them …*
***Interviewer**: Yeah.*
***Teacher**: .. to repeat it. (In95/To/HeTe1)*

(Interview by Tor Kronlund)

***Opettaja**: Suoraan sanoen mä en aina kuule mitä ne vastaa.*
***Haastattelija**: Joo.*
***Opettaja**: Ja mä en välttämättä aina oo pyytäny…*
***Haastattelija**: Joo.*
***Opettaja**: Toistamaan sitte sitä vastausta.*

It seemed that the settings of the virtual classroom were so fragile that the teachers did not want to risk the success of the online lessons by giving negative feedback. There is some sense in this caution. Feedback through videoconferencing appears very public and official. To correct a pupil in the same room (even if it is heard through the videoconferencing link at the other end) is more gentle.

The presence of technology

The issue of technology came up once again into view in the pupils' experiences. When I asked them what they thought of the online lessons they often mentioned the technology. Some of them said that the use of information and communication technologies was confusing in the beginning but, as I have stated earlier, they still appreciated the knowledge they gained. The main point about the technical side, however, concerned the situation when technical problems occurred. Although the pupils acted very calmly, as I have already stated, they were irritated when the technology did not work, or when it

worked poorly. I asked the Kilpisjärvi pupils the bad sides of online lessons in the second year of the project:

> *Poor quality of sound. The equipment is not yet stable enough. (In96/KiPu2)*
>
> *At the other end there is a large pupil group which causes troubles with the sound quality. (In96/KiPu3)*
>
> *Technology doesn't always work sufficiently. There are breaks in sound. There are breaks in picture. Time is lost. Pupils' computers have also act up. … Teachers have problems with handling of technology. (In96/KiPu1)*

There were breaks in the sound and in the picture, computers were not level, and so on. These were the problems they mentioned. The pupils were annoyed when time was spent on these kinds of incidents. For those in Kilpisjärvi the technical problems were much more serious than for the Helsinki group. Still, even if the connection did not work at all, it did not mean that the lesson was cancelled. I witnessed situations in which the picture was green but the audio channel worked, situations when the teachers continued their lesson with audiographics because the video link did not work, and those in which the teachers used audioconferencing to replace videoconferencing. In any case, the pupils suggested that the technology should be more reliable.

The Kilpisjärvi pupils saw the teachers' technical skills as an essential element of the success of online lessons. They were not satisfied with some teachers' abilities in this regard. Technology was a infrastructure upon which the virtual classroom was built. It was crucial that this side worked because the pupils sensed that success of their lower-secondary education would otherwise be in doubt. Further, technical problems made the online lessons more slow and boring, and when the pupils could not hear or see the picture clearly enough, the lessons also became more demanding.

The pupils' conceptions of the reasons for the Kilpisjärvi project

I have given some information about the background of the Kilpisjärvi project and about the underlying motives of the parties involved. I will continue this analysis at the pupil level here. How did the pupils, both in Helsinki but especially in Kilpisjärvi, see the reasons for the project. Why were they linked together?

It became very apparent in the Kilpisjärvi pupils' comments that they associated 'distance education' with the possibility to stay in the villege, i.e. the establishing of the new lower-secondary school. Thanks to the Kilpisjärvi project they could complete their lower-secondary education locally. To them, the teaching which they received through the link was characterised by competence (see Chapter eight). If there were no competent teachers available locally for certain subjects, teaching could be organised with the help of information and communication technologies. That was why they were linked with the Second Teacher Training School of Helsinki University, they thought. However, it was not so clear to the Kilpisjärvi pupils why there was also a group of pupils at the other end of the link. They appreciated the opportunity to be in contact with the Helsinki pupils, to hear their opinions and views, to have some new classmates, and to peek into lives of people in an environment which differed from their own. However, this connection was not of major importance to them.

The perspective of the Helsinki pupils of the project were very different from their classmates in Lapland. The videoconference link was not necessary for them, but was more like an additional feature of their school days. They were asked, in its first year, what the idea behind the Kilpisjärvi project was and why it had been set up. Most of them supposed that it was 'some kind of experiment':

It's just some experiment, but they haven't told us any more about it. (In95/Ma/HePu2)

Se on vaan joku kokeilu, mutt ei meille oo enempää kerrottu.

They're just experimenting with something new. (In95/Ma/HePu3)

Ne vaan kokeili jotain uutta sillai.

(Interview by Marjo Salonen)

Two of the Helsinki pupils claimed that they did not have the slightest idea why the project was started. One of them, however, did a some more general idea of why the two pupil groups had been linked together:

Well, I guess they want to experiment to see if it can be used, so if there's a lack of good teachers somewhere, or something, so there's no need to transport them. So this can be used then. (In95/Ma/HePu1)

(Interview by Marjo Salonen)

No kai sillä halutaan niinku kokeilla, et voidaanks sillä sitten jotenkin sillei niinku hyödyntää että, ettei tartte sitte jos jossain esimerkiksi on pulaa jostain hyvistä

opettajista tai jotain tällasta, niin ei tartte jostain ruveta rahtaamaan. Voi sitte käyttää tota hyödyntäen.

For the pupils in Helsinki, the linking of the two pupil groups and a teacher together appeared as some kind of experiment. They did not have a full picture of what it was all about, nor did they have any strong personal interests or needs. It should be remembered that the situation which the previous extracts describe concerned the first year of the project. I do not have interview data to show how their attitude and knowledge about the project changed in the following two years. The Helsinki pupils were not my focus in the research on the project.

Teachers as mediators

The interests of the two pupil groups involved in the online lessons, accordingly, and in the whole Kilpisjärvi project differed to a great extent. The online situations did not foster interaction between the pupils in Kilpisjärvi and these in Helsinki. This was partly due to the restrictions of technology. The teacher's role as a uniting element became very important. I have previously described how they tried to ensure that everybody followed what was going on in the online lessons: they repeated the pupils answers, and checked that everybody had heard what had been said. They became a sort of communication channel to guarantee the success of the mediation of information between the two sites.

I have also argued in this research report, that there was not much interaction between the pupils in Kilpisjärvi and those in Helsinki. It is time to be more specific: there was not much interaction which was not organised by the teacher. The teachers favoured a kind of 'inter-site' learning method. For example, a Kilpisjärvi pupil posed a question and a Helsinki pupil answered, and vice versa. There were games between the pupils. They gave short presentations to each other or they read stories they had written. Many such situations, which also occur in a traditional classroom, were organised in such a way that the target of the interaction was the pupil group at the other end of the link.

The teachers admitted that they intentionally tried to bring the separate parties, the pupils in Kilpisjärvi and those in Helsinki, together.

> ***Teacher**: … so this social side, it's just that they get on well, very well actually, together and they listen to each other. A pupil in Kilpisjärvi asks for permission to speak and such things.*
> ***Interviewer**: Yes, yes.*
> ***Teacher**: So that it's, that it really is such a sort of integrated classroom. A classroom where everybody would then considers each other in the interaction. Then, I think, it's reached its goal. (In95/To/HeTe1)*
>
> *(Interview by Tor Kronlund)*

> ***Opettaja**: … et tää sosiaalinen kenttä on sit sellanen aika, et ne siellä sitten hyvin, hyvinkin tulee toimeen keskenään ja kuuntelevat toista. Toinen pyytää puheenvuoroa Kilpisjärveltä ja tällast vastaavaa.*
> ***Haastattelija**: Joo, joo.*
> ***Opettaja**: Et sellanen, et se olis niinkun, tosiaan et se ois yhtenäinen luokka. Luokka joka sitten tota kaikessa tässä kanssakäymisessä ottaa toisensa huomioon. Et se olis silloin mun mielest saavuttanut tavoitteensa.*

As I analysed before, teachers choose what to send and what not to send through the link. The teachers also made visual choices in the social sense. They changed the arrangements in the Helsinki classroom during the project. When I entered this classroom at the beginning of the second year, the room looked like this:

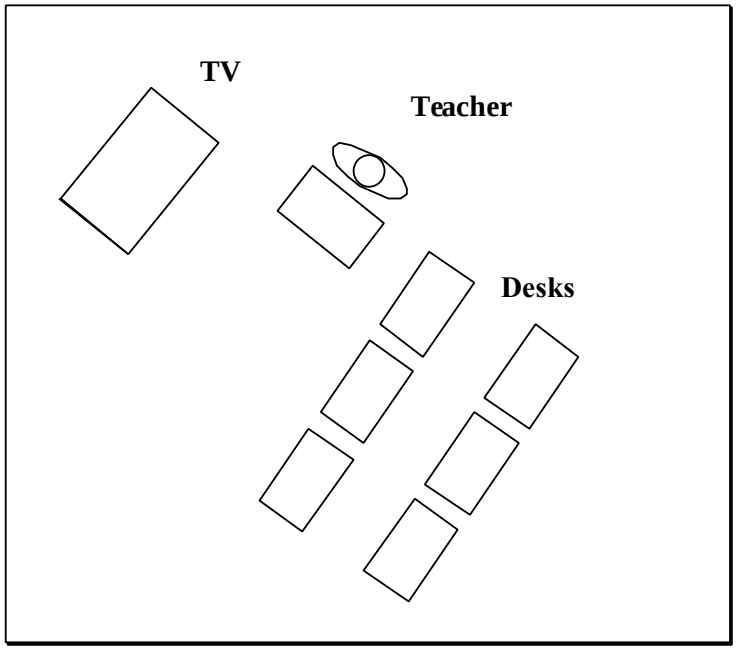

Figure 1. Layout of the Helsinki classroom the 14th November 1996.

In the previous year desks and video set were placed somewhat differently, obviously because of large number of pupils in Helsinki. The teacher often stood or sat behind her desk so that she had to choose if whether to transmit her image or that of her pupils. The new arrangement, which is described in Figure 1 appeared, was a fundamental change. Now everybody was in the picture. The Kilpisjärvi pupils could see the entire classroom, including the teacher, and vice versa. In the visual sense, there was a common classroom where everybody could see each other. One of the teachers spoke about *the same visual reality* (sama visuaalinen todellisuus). He said that, although, the Kilpisjärvi pupils were there as a picture in the screen while he was in Helsinki, he could imagine them all in the same visual reality. To the observer's eye, the feeling that the teacher was turning (see above) between two sites and the two groups of pupils had lessened, if not totally disappeared.

Two pupil groups, two cultures

As indicated above, the teachers sensed the idea behind linking separate sites together. They tried to create a common classroom in the online lessons and bring the two groups of pupils, who lived in distinct environments, together. Their pedagogical approach was characterised by this intention. One of the teachers remarked that he wanted that there would be mutual appreciation and understanding between the pupils:

> ***Teacher**: … I aimed at that there would be mutual understanding and respect and this kind of social …*
> ***Interviewer**: Yeah, yeah.*
> ***Teacher**: Social mutual understanding. (In95/To/HeTe1)*
>
> *(Interview by Tor Kronlund)*

> ***Opettaja**: … mä pyrin siihen, että ois sellasta ymmärtämystä ja toisensa huomioon ottamista ja semmosta sosiaalista …*
> ***Haastattelija:** Joo, joo.*
> ***Opettaja**: Sosiaalista yhteisymmärrystä.*

This is close to the dialogic approach which has characterised the theory of media education lately (see Tella & Mononen-Aaltonen 1998). The bringing together of separate groups of pupils is not an easy task, especially if the groups essential differ from each other in terms of culture or social background. Accordingly, in addition to the instructional problems and technical aspects there are also cultural and social issues that the teachers must take

into account. A teacher of online lessons may thus be in the same kind of situation as a teacher in a multicultural classroom.

One of the wishes of the Kilpisjärvi people was that the project would introduce alternative ways of living to the children. The pupils would get a picture of what young people of their age in urban Helsinki area thought about life and about things in general. During the three years of the project the Kilpisjärvi pupils have heard the opinions of the pupils in Helsinki, their likes and dislikes. One of the pupils put it in the following way:

> *It's good to hear opinions from Helsinki. On the other hand, they're not that different. (In96/KiPu7)*
>
> *On hyvä kuulla helsinkiläisten mielipiteitä. Tosin eivät ne [mielipiteet] ole kovin erilaisia.*

One of the pupils told me that:

> *There are too few pupils here [in Kilpisjärvi]. It would have been nice to go to somewhere else. (In96/KiPu4)*
>
> *Täällä [Kilpisjärvellä] on liian vähän oppilaita. Olisi ollut kiva lähteä muualle.*

This pupil, of all the Kilpisjärvi pupils, had the closest relationship to the Helsinki pupils. She corresponded with some of the pupils in Helsinki, and had also visited Helsinki during the holidays. As she said, she felt the community of Kilpisjärvi was too small.

On the other hand, the Kilpisjärvi pupils also received feedback from their distant classmates about what the Helsinki pupils thought about the way of life of young people in Kilpisjärvi. The Kilpisjärvi ways of thinking, talking, joking, for example, were all mediated through the link. Some of the Helsinki pupils said that they often looked at the screen and at their distant classmates. After the layout in the Helsinki classroom had been changed (see above), they seemed to pay more attention to Kilpisjärvi. The Kilpisjärvi pupils were conscious that they were to be seen and heard in Helsinki. One of them told me that she sensed her presence through videoconferencing as very public, as a big face on the screen in Helsinki. The two groups of pupils live in distinct environments which could be described in terms of dichotomies: a sparsely-populated area—a city, small village—metropoly, geographical isolation—the urban jungle, Northern Finland—Southern Finland, a small village school— big urban school. Mason (1998) investigated the emergence of global education and the reasons for establishing global courses. She ar-

gues that when we think about global education on purely educational grounds, the strongest argument relates to the diversity of the student body. Students' different backgrounds bring polyphony (see Tella & Mononen-Aaltonen 1998) to a course when many voices participate in discussions giving distinct perspectives to the topics which are under study. Mason suggests that this kind of bringing together of different students works against the hegemony of the dominant culture and provides the opportunity for minor voices to be heard.

The teachers' enthusiasm to create a feeling of one common classroom on the one hand, and their awareness of the different living environment of the Kilpisjärvi pupils on the other, caused some strange situations which were sometimes rather unpleasant for the pupils in Kilpisjärvi. As I proposed in the chapter eight, the Helsinki teachers did not know the reality where the Kilpisjärvi people live very well. They had some knowledge about it but not perfect comprehension. The long distance from Helsinki to the other end of the link, the remote location of Kilpisjärvi, the unusual characteristics of the community, the strange dialect of the pupils, for example, were perhaps reasons why the teachers sometimes made the way of living in Kilpisjärvi sound more exotic than it actually was. I have faced this phenomenon myself as a researcher, as an ethnographer working in my own society. Ortner (1991, 166–167) remarks that anthropologist, when doing research in their own societies tend to 'ethnicize' the groups they study, i.e. treat them as isolated and exotic tribes. I have considered elsewhere (Kynäslahti 1997) whether teachers' behaviour deals with some kind of 'othering' which has been discussed in anthropology, i.e. building a boarder between 'we' and 'other' even if such a boarder may be fictitious. Teachers' intentions to unite the virtual classroom and to pay attention to distinct backgrounds may, paradoxically, emphasise the border between 'me' and 'other' among the pupils. When the local contexts is given attention in teaching, and teaching is thus differentiated, differences become emphasised.

Some statements by the teachers support this view:

And then they have such a distinct culture. (In95/Ja/HeTe5)

Ja sit toisaalta, kun niillä on niin hirveen eri kulttuuri

…these strange and peculiar pupils. The pupils in Kilpisjärvi. (In95/To/HeTe1)

…nää oudot ja ihmeelliset oppilaat. Oppilaat siellä Kilpisjärvellä.

(Interviews by Tor Kronlund and Jari Salminen)

The teachers made efforts to make the Helsinki pupils understand that Kilpisjärvi differs from Helsinki. The Kilpisjärvi pupils were brought to the unity of the online classroom, or virtual classroom, in their own terms. The teachers, at least, thought that this is the case. I discussed this matter in some detail in Chapter eight, but my perspective is a little different here. I will give some examples:

> *Teacher: 'Do you ever watch films in TV?'*
> *Kilpisjärvi pupil:' Of course we watch films.'(Fn 45/97)*

Here the reaction to this polite question, which perhaps was somewhat strange to pose to fifteen-year-old pupils, was aggressive (this particular pupil was sometimes rather impolite and hostile towards this teacher) and collective. In other words, *why should we here in Kilpisjärvi not watch films on TV*? A good question!

> *The teacher asks if Japanese tourists visit Kilpisjärvi. The pupils answer: 'No!'. The teacher comments on this by suggesting that perhaps Kilpisjärvi is too remote for them. This causes some sullenness among the Kilpisjärvi pupils. (Fn 22/96)*

In one lesson there was talk about newspapers:

> *The teacher asks: 'What newspapers do you have there in Kilpisjärvi?' The boys answer:'Helsingin Sanomat, Kauppalehti ... and some local newspapers.' (Fn 23/96)*

The two above-mentioned newspapers are big, national newspapers. I doubt that Kauppalehti (an economic newspaper) is very popular among the young people in this village, but they did not mention the local newspapers, which apparently are much more important to them, by name. My interpretation of the situation was:

> *It seems to me, that when [teacher] gives attention to the local context of Kilpisjärvi, the pupils here get irritated—'Does he think this is some one-horse-town?'—thus, they name Helsingin Sanomat and Kauppalehti first. (Fn 23/96)*

Further:

> *Somebody calls [Helsinki pupil's] mobile phone. The Kilpisjärvi pupils complain about the noise it causes in the link. [Teacher] asks them if there are mobile telephones in Kilpisjärvi. (Fn 41/97)*

On one occasion a student teacher was giving an English lesson on the topic of ‘minorities’ and ‘discrimination’. He tried to teach what the word ‘isolated’ means in Finnish. He took as an example:

> *'You are isolated in Kilpisjärvi', says the teacher. A pupil in Helsinki burst out laughing. The supervising teacher interrupts the student teacher and explains: 'No, they are not because ...'. I can’t hear the rest of the sentence through the link. (Fn 50/97)*

The Helsinki pupils’ knowledge about Kilpisjärvi was, indeed, poor. When the project started, some of them had never heard anything about the village. Nobody knew it well. Here is a comment by a pupil in Helsinki.

> *Well, I thought that it was a very remote place. That there are farms and so on and they can’t go out on town dancing and things like that. Actually, I don’t do that a lot either. But anyway, here we have a lot more things going on than they do. Such a tiny village where nothing happens. Except the Northern lights. (In95/Ma/HePu4)*
>
> *(Interview by Marjo Salonen)*

> *No, mä pidin sitä semmosena hirveen syrjäsenä paikkana. Et siell kaikkii maalaistaloi vaan ja kun ne ei pääse minnekkään kaupungille joraileen ja jotain tällasta. Mut ehän määkään hirveesti. Mut siis kumminkin täällä on paljon enemmän säpinää ku siellä. Semmonen pikku kylä, missä ei koskaan tapahdu yhtään mitään. Revontulii oli.*

One and a half year’s after the pupils had started the online lessons, a pupil in Helsinki posed the following question:

> *[Helsinki pupil asks the Kilpisjärvi pupils: 'Does anybody live in Lapp huts any more?'*
>
> *The answer: 'Hell, no! This is no Sami village!'. (Fn 37/96)*

Accordingly, the people in Helsinki, both pupils and teachers, sensed that living Kilpisjärvi was different from their way of life and these differences got attention. At the end of the project I asked the Kilpisjärvi pupils if they had noticed this kind of comparison on online lessons.

> ***Me:*** *Do the teachers compare Kilpisjärvi and Helsinki in the online lessons?*
> ***Pupil:*** *Yes, some differences come out. Often it’s like: ‘we here in the capital area and you there at the back of beond’. The link does not eliminate distance.*
> ***Me:*** *How do you feel about that?*
> ***Pupil:*** *If you are thin-skinned it could be insulting. Sometimes the comparison has been insulting. But if they [the Helsinki teachers] think like that, let them.*

It's just true that Kilpisjärvi is in the backwoods. There's also been a similar attitude also among the pupils in Helsinki—although not necessarily in a negative sense. (In97/KiPu4)

Minä: *Vertaavatko opettajat Kilpisjärveä ja Helsinkiä keskenään etätunneilla?*
Oppilas: *Kyllä tulee eroja esiin. Aika usein asetelma tunneilla on ollut: 'me täällä pääkaupunkiseudulla ja te siellä jumalanseläntakana'. Ei yhteys vie välimatkaa pois.*
Minä: *Miten suhdaudut siihen?*
Oppilas: *Jos olisi herkkä, siitä voisi loukkaantua. Joskus vertailu on ollut loukkaavaakin. Mutta jos ajattelevat sillä tavalla, niin ajatelkoot. Onhan se totta, että Kilpisjärvi on käpykylä. Myös Helsingin oppilailla on ollut tällaista ajattelutapaa – vaikka ei välttämättä negatiivisesssa mielessä.*

The pupils in Kilpisjärvi seemed to be sensitive to comparison of the two sites, Kilpisjärvi and Helsinki, and the way of life in them. It appeared to me as that they did not want to be seen as too different from the pupils in Helsinki. When asked what they thought about their classmates at the other end of the link, they said that they did not see much difference from themselves (Salonen & Kynäslahti 1996):

They [pupils in Helsinki] are just normal people. Not so different from other people. (In95/KiPu3)

Ihan normaalejahan ne on. Ei sen kummempia kuin muutkaan.

Edwards pays attention to the significance of distance education in the development of identity. Globalisation has decreased the importance of the home community when people are able to search for targets of identification on a wider scale than previously, and in a variety of communities (Edwards 1996, 4–5). The restrictions of a small community may urge people to seek wider circles and links, and distance education is one way to do this. On the other hand, the outcome of globalisation may be contradictory. Because of the variety of new contacts, people may experience feelings of insecurity in this new social situation. Instead of developing a flexible identity, individual may build up strict ethnic, religious or territorial boundaries, for example (Edwards 1996, 5). As several theorists have claimed (e.g. Appadurai and Castells), the rise of current fundamentalist movements mirror this development. I found some indicators of this kind of strict local identity even in the Kilpisjärvi project. One of the pupils stated that:

I don't know [the Helsinki pupils] very well. The teacher is important, not so much the pupils. (In96/KiPu3)

> *En tunne [Helsingin oppilaita] erikoisen hyvin. Opettaja on* tärkeä, ei niinkään oppilaat.

I recall an episode which concerned an online lesson of History. The pupil complained to the local teacher about having to watch a video about the history of Kallio, an area of the city of Helsinki. Obviously this pupil did not see it as very relevant for pupils in Kilpisjärvi. The local teacher justified his colleague's actions by pointing out that Helsinki was the capital of the country. The pupil, however, snapped back: 'Helsinki is not my capital'. On another online lesson occasion this pupil changed the angle of the camera to send picture of the school yard. The teacher asked, what is going on:

> *[Pupil] says, in English, that he wanted to show that there is a lot of snow here. [Teacher] comments that Kilpisjärvi is ahead of Helsinki. [Pupil] says that Kilpisjärvi is A LOT OF ahead of Helsinki. (Fn 34/96)*

These are, of course, just small episodes and it would not be wise to make too far-reaching conclusions on those grounds. However, it is interesting to note at this micro level similar trends to those which have been discussed in research literature concerning the macro level.

Nothing occurred that indicated that the Kilpisjärvi pupils were ashamed of their background or their way of life. I did not witness situations in which they had tried to imitate their distant classmates, nor did they change their dialectal language (although they had been teased by some Helsinki pupils because of their way of speaking) during distance lessons (Kynäslahti 1996). In the interaction of two 'cultures', the minority one of Kilpisjärvi and the majority one of Helsinki, they were sensitive to being ridiculed, but were not ready give up their own way of living.

The virtual classroom

I will repeat here the question which I posed an the beginning of this chapter: did there emerge a virtual classroom in the Kilpisjärvi project? I will approach this problem from two perspectives. First, I will refer to the chapter three in which I discussed at length the phenomenon of the virtual classroom and other related features. Secondly, I will discuss how the theoretical issues which I presented in that chapter are associated with the above, with the 'life' which I found in the online lessons.

The pupils did not experience a strong feeling of belonging together in one common classroom. Using Reid's (1995) definition of virtual communities, they did not have particularly strong desire to experience the virtual classroom as a shared common environment. The two pupil groups were interested in each other to some degree but not to a remarkable extent. The mutual interest was rather the teachers' teaching. By this I mean the teachers' undertakings to support the pupils studying, i.e. intentional activity to achieve learning (see Uljens 1997; Kansanen 1999). The main goal of the Kilpisjärvi project was to make it possible for the Kilpisjärvi pupils to complete their lower-secondary education in the village and to support the local school in this endeavour. The aim of the project was, in that sense, clear to the Kilpisjärvi pupils. Not only was the aim clear to them, it was also near to them, in other words, it served their needs in particular. In everyday praxis, the support for the Kilpisjärvi School appeared as teaching by the Helsinki teachers who the pupils in Kilpisjärvi appreciated as competent professionals. It was important for the Kilpisjärvi pupils to have a chance to participate in the online lessons in which competent teachers taught subjects for which the teacher resources of the local school were not sufficient. The teacher was the element that they missed in Kilpisjärvi, and the element which the virtual classroom made possible.

The perspective of the Helsinki pupils on the Kilpisjärvi project was different. Basically, the online lessons did not differ considerably from the rest of their school day. The appear of the Helsinki classroom did not differ in a radical way from a traditional classroom (except for the abundance of technical equipment). There were pupils, there was a teacher, there were desks. Neither were the activities in the online lessons strikingly different from those in the traditional lessons: discussing, questioning, answering, raising hands. The Helsinki pupils did not have any particular need to be involved in this virtual classroom, and the aim of the project was somewhat unclear to them. The reason behind of the Kilpisjärvi project did not concern them in the same way as it concerned the Kilpisjärvi pupils. As we saw, they regarded the project as some kind of experiment, somebody somewhere wanting to find out if this kind of education was possible. However, competent teaching was as important for them as it was for the pupils in Kilpisjärvi. Although they did not need the link to Kilpisjärvi, which was only an additional feature of their school days, they needed the teacher and the teaching. Following on from this, the *teacher* and *teaching* became uniting points of the online lessons and of the virtual classroom consisting of two groups of pupils and a teacher. The role which the teachers adopted in the online les-

sons had a further effect here. They tried to act as a uniting element between these two distinct pupil groups with different backgrounds.

In the first part of this publication I wrote about the translocal field. I argued that in addition to the need to clarify how the virtual classroom can be investigated ethnographically, there is a need to elaborate the concept itself: what a *virtual classroom* actually is. In order to complete this circle, I will look at the online lessons of the Kilpisjärvi project from the perspective the virtual community and, as a methodological aspect of the virtual community, from the perspective of translocal field. A translocal field is based on an idea which is shared by all its members. This idea, in the Kilpisjärvi project, concerned participation in lower-secondary education and the quality of this education in terms of competent teaching. Every member of this field, the pupils in Kilpisjärvi and in Helsinki and the teacher, evidently shared this idea. Further, we could speak about more specific common interests, and about activities which are in accordance with these interests as well as with the main idea of the field. I argued above that the common interests of all pupils are teaching and teacher. *Activities*, then, refer to pupils' studying and to teachers' attempts to support this studying, i.e. teaching. In Tiffin and Rajasingham's text, the definition of the virtual class(room) moves towards virtual community: a virtual class(room) is a meeting place for a virtual community of learners with common educational needs and interests (Tiffin & Rajasingham 1995, 177). For to these 'educational needs and interest' I refer to the previous paragraphs.

Translocal fields are fields of interaction. Indeed, when there was no interaction between Kilpisjärvi and Helsinki, for example because of technical problems, it was questionable whether an online lesson was going on at all any more, and whether there was any one common classroom to be found. I will return to this theme below. The concept of the translocal field suggests further that activities inside the field must have a more or less regular character. This criterion is easy to satisfy in my case. There were regular online lessons during the three years of the project, often several lessons a week. Those who are in charge of this kind of regularity of activities and interaction are called heroes in the vocabulary of translocal fields. In the Kilpisjärvi project we could regard the teachers as such heroes, which greatly amused them at a seminar at the end of the project (Salminen 1997).

Interaction between the pupil groups, especially spontaneous and personal interaction, was meagre which resembles the results from other similar research (e.g. Hein 1995; McHenry & Bozik 1995; Robson 1996). Naturally, there were several reasons for this: the few opportunities for chatting outside

of the online lessons, restrictions caused by the technology, the rapid tempo of the online lessons, the need to concentrate on the online lessons, and so on.

It was mentioned in Chapter three that several theorists treat the virtual classroom as an information or communication system. Hiltz (1986) suggests that it is computer-mediated communication which offers the usual functions of a classroom. The expression 'computer mediated communication' is not perhaps very adequate regarding the Kilpisjärvi case. It is better to speak about communication which is enabled by information and communication technologies. Accordingly, the question could be asked whether the information and communication technologies enabled the usual communication forms of classroom, such as lectures, discussions, in the classroom of the Kilpisjärvi project. I have strived to show in the present chapter that the activities in the online lessons were basically similar to those in a traditional classroom. It seems that this criterion for the virtual classroom, then, is satisfied. Tiffin and Rajasingham elaborate Hiltz' definition. They argue that, in a virtual class(room), everybody can talk and be heard as well as identified, and everybody can see the same words, diagrams and pictures at the same time (Tiffin & Rajasingham 1995, 6). In this respect, there were problems in the online lessons of the project. There were usually no problems seeing the words, pictures and diagrams, for example. There were, however, difficulties being heard and being identified. The teacher's role thus again becomes crucial. The teachers tried to ensure that communication succeeded, for example by repeating the pupils' answers.

Accordingly, it could be said that there, indeed, appeared to be a virtual classroom in the Kilpisjärvi project. As far as the type of virtuality was concerned, this virtual classroom largely dealt with virtual 'as if real', as the previous lines indicate. Was there anything of the other aspect of virtuality, possible worlds? The first notion is that there was a common classroom although the participants were situated over 1000 kilometres from each other. This classroom was deterritorialised. It was a possible classroom which in actual, physical reality is not possible. Second, two groups of pupils met each other in this virtual classroom, groups of pupils who lived in different realities in terms of location. By this statement I am mainly referring to things such as way of life, but also to the physical environment. While the pupils in Helsinki wore shorts in springtime, those in Kilpisjärvi had made their way through the snow to their school the very same morning. The virtual classroom brought together different worlds and established a new, possible world of its own.

Note

[1] Structuring and soliciting are pedagogical moves defined by Bellack & al. (1996). Stucturing launches or focuses attention on the topic or problem. Soliciting refers to questions, commands, imperatives and requests which are designed to elicit a verbal or physical response. (Salonen & Falck 1996, 80–81).

CHAPTER 10

Conclusions

At the beginning of this volume I wrote that my research was about a school and the people in a small and geographically-isolated village in Finnish Lapland. It is an ethnographic account of life in and around the school when it became of part of an electronic inter-institutional network of schools through distance education based on information and communication technologies.

I have pointed out several times the problems I faced and the self-doubt which followed from the difficulties I had solving these problems. My research concerns phenomena which were thus far mostly unexplored during the actual research period. On the theoretical level, as well, I was obliged to seek answers and theoretical domains from sources which were rather unknown to an educationalist. This has brought a fresh outlook to my research, but some tentativeness as well. The theoretical framework turned out to be wide in scope. This is a troublesome feature of my research but, on the other hand, this very research deals with a micro-perspective which is closely connected to very wide phenomena. The balance between the micro and the macro perspectives, and the outlining of the theoretical framework which follows from this balance, appeared problematic.

The events I described above took place in a society in a period which is called the information society. In Chapters one and four I discussed the concept of the information society and how it has been treated in the Finnish educational context. When we look at theoretical considerations to do with our time, culture and society, we face phenomena which have been described with terms such as 'flow', or the suffix 'scape'. If we trust some Finnish commentators, the ideas of Castells, the father of 'space of flows', are central conceptual tools for the analysis of Finnish society (Helsingin Sanomat, January 2nd 2000). These phenomena are consequences of certain developments, such as globalisation and the expansion of information and communication technologies, as I tried to show in chapters one and two. We could imagine similar developments in education, which I speculated about using the concept of eduscape.

My perspective was that of individuals and groups of persons, namely people in Kilpisjärvi. The initiative to connect the new lower-secondary school of Kilpisjärvi with a network of schools did not come from those peo-

ple. Nevertheless, I see them as active citizens of today's Finland (or that of 1994). They welcomed the suggestion at once and tried eagerly to benefit from it. Although distance education was not a great success story, and faced difficulties from the very beginning of the project, the people continued to trust its potential to enhance the educational circumstances of the village. I am talking now about the parents as well as the local teachers and pupils, although the pupils were often tired of the demanding online lessons, and distance education may have appeared to them to be of questionable merit on several occasions.

The network connected the local school to the national body of lower-secondary education. Education in the Kilpisjärvi school became part of wider educational activity. People stayed where they lived, the school was still located in the village, and the village continued its existence as a geographical locality. The physical reality stayed the way it had been for decades. Locality maintained its importance despite the new link outside. One of the promises of the information society seemed to become fulfilled. The limitations imposed by the geographical location (regarding organising the appropriate standard of education) could be alleviated with the use of information and communication technologies. The outside link supported living in the village. As community action, the Kilpisjärvi project somewhat strengthened the Kilpisjärvi people's notion of themselves as a community with educational needs. The interplay between local and non-local has traditionally been a crucial feature, even a dilemma, in rural education. The Kilpisjärvi school, its pupils and teachers, reached educational flows which were not located in any particular physical place, they were more like translocal, education which had to some extent become divorced from a place. It was more or less deterritorialised. On the other hand, they did not expect the education which flowed to their school to be local in character, characterised by territory, so to say. For localism they had the local teachers.

The alliance of the Helsinki pupils and the Kilpisjärvi pupils was strange in the way that encounters in the spheres of educational flows and in the rhizomes of networks are. They were strangers who were heading in the same direction for a while, to echo the rather poetic phrases I used in Chapter one. By participating in a network of schools, the Kilpisjärvi school joined the flows of education which circulated in it. The substance for the Kilpisjärvi people was the competency of the teaching. This also worked as a tool for estimating the quality of the local education. Education from outside, from the national body of lower secondary-education, could be regarded as a warranty of appropriate quality for the people in Kilpisjärvi. Within the frame-

work of Castells' dynamics of networks, the link to the hub of the Second Teacher Training School connected the Kilpisjärvi School to more powerful sources of quality education in the terms of competent teaching.

The pupils, the parents and the local teachers in Kilpisjärvi felt that the project prepared the Kilpisjärvi pupils for the present and future information society. It is questionable whether dealing with video conferencing and audiographics gave them a superior status in their society after school. (At the very least, they became used to computers.) It is obviously a question of the way of thinking. As one of the parents commented, distances can be overcome in today's Finland. For members of a community which lies 120 kilometres away from the nearest village, this feature is not meaningless. This parent had experienced this phenomenon herself during the run of the project. Accordingly, the Kilpisjärvi pupils were exposed to some features which are characteristic of the information society. Through their own experiences, they may discover more easily than other young people the new opportunities which the Finnish information society fosters.

I discussed globalisation at fairly great length, in the sense that the Kilpisjärvi project carried a national rather than a global character. Globalisation penetrates today's societies and cultures, with consequences in education, too, as was discussed in Chapter one. There were not many contacts through video conferencing outside of Finland from the Kilpisjärvi School, although some such sessions occurred, for example with a school in England. On the other hand, lively co-operation with Swedish and Norwegian schools could also have resulted collaboration in the mode of online lessons, but that was not the case. In terms of globalisation, my research refers mainly to the lessened significance of distances and to the increased importance of impacts from outside. Thus, we are dealing here with time-space compression and with action at a distance. The Kilpisjärvi School could have networked with other Lappish schools. Instead, it started co-operation with the lower-secondary and the elementary Teacher Training Schools in Helsinki and with the Ruskela School in Tuusula. These are all practically as far away from Kilpisjärvi as is possible inside the Finnish borders. Any other school would have been nearer. However, this was of no crucial consequences, as far as the co-operation was concerned. The distance between the Kilpisjärvi School and the other schools in the network could have been 100 kilometres, 500 kilometres, or (as was the case) over 1000 kilometres, it did not matter. On the other hand, the network linked distant localities in such a way that local happenings were shaped by events occurring many kilometres away and vice versa. Co-operation in the network bound the Kilpisjärvi School to certain

educational activities which took place over one thousand kilometres away. The school days in Kilpisjärvi were thus shaped by these distant events, so to say.

There was a virtual classroom in the Kilpisjärvi project, which differed in appearance depending on the approach. From the Kilpisjärvi perspective, a crucial element was the teacher. It was a virtual classroom in which the teacher and her teaching were available. This finding refers to speculations about the relationship between traditional school and virtual school. It was the basic educational activities which were essential for the Kilpisjärvi pupils. In this possible classroom, teaching, in order to support studying, became a bridge between the pupil's reality, with its actual educational needs, and the possible entity that the virtual environment provided. The Helsinki pupils were an enriching addition who provided opportunities for learning about the lifestyles of young people in a different kind of environment. Their (tele)presence in the virtual classroom was not a decisive factor for the Kilpisjärvi pupils, however. Although the social cohesion of this virtual classroom was not extremely strong, it could still be seen as a virtual community of learners and teachers. The concept which anthropologists have coined for methodological purposes, the translocal field, includes several aspects which also apply to the virtual classroom as a virtual community. In the Kilpisjärvi case, there were sufficiently-common educational interests and needs to foster the idea to come virtually together, there were constant activities aimed at reaching these educational targets, there was interaction between the participants, there were media which made the interaction possible, and there were 'heroes' of the virtual classroom, namely the teachers and sometimes some pupils who acted as jokers.

We should also think about the essential properties of this virtual classroom that connected it to a traditional classroom. What were the basic educational tasks which it carried out in the virtual environment instead of a traditional school environment? For what purposes was this virtual classroom as good as a traditional one? These questions refer to the theoretical considerations which the literature on virtuality brought into the discussion in Chapter three. The virtual classroom worked mainly as if it were a real classroom. The pupils' and teachers' behaviour imitated the way they acted in a traditional classroom. We could say that this was technically possible. The participants emphasised, to some extent, those elements which strengthened the illusion of a real classroom. The teacher's pedagogical approach indicated an orientation towards a traditional classroom rather than towards something new and exceptional. The dimension of virtuality that refers to (alternative)

possible worlds was actualised mainly because the experience of one common classroom was made possible even when there was distance of over 1000 kilometres between the participants. Another indication of alternation was the mixture of people living in different realities. The virtual classroom brought together participants from distinct living environment, people who in ordinary life would never have met. From the perspective of virtuality dealing with 'virtual as good, as a real thing, for certain purposes', this brings us close methodologically to the idea of a virtual community of learners and teachers, and methodologically to the translocal field. This also covers the metaphorical approach to the virtual classroom.

I will now look at the virtual classroom from the point of view of the metaphors I present in Chapter three. All three of them apply to some extent to the Kilpisjärvi project. This virtual classroom could be seen as a virtual community of pupils and teachers with intermediate educational needs and interests. It was as good as a real classroom for certain purposes, largely associated with the pupils' educational needs. I have emphasised their interest in the support of their studying in the form of teaching as an elementary need and interest. The virtual classroom as an information system is not an irrelevant metaphor for the Kilpisjärvi case, either. The significance of the success of communication was obvious from the results of my research. If the usual communication forms in a classroom, like discussions, did not succeed (e.g. the participants could not hear each others' comments and questions), the very existence of the virtual classroom became questionable. On the other hand, the teachers' competency is not beneficial if the pupils cannot hear or see what they say or do. The spatial metaphor is, in a certain sense, already included in the concept of the virtual class*room*. The virtual classroom in the Kilpisjärvi project was 'a room' which made communication inside its walls possible, a space created for educational communication among a certain group of people.

I will give further attention to the idea of the virtual community. In Chapter three I discussed the virtual community in the terms of the participants' mutual willingness to experience it as a real community. How did of the participants in the virtual classroom of the Kilpisjärvi project behave in this respect? Again, there are two somewhat different perspectives. The Kilpisjärvi pupils certainly wanted to experience the virtual classroom as a real classroom, a classroom in which there was a competent teacher. They treated it like a real classroom and they behaved mostly as if they were in a real one. I have described the experiences of the Helsinki pupils above and I will not repeat them here. Briefly, they were less willing to experience the virtual

classroom but on the other hand, they were already in a real one: the class-*room* with a teacher in the Second Teacher Training School of Helsinki University. Thus, there was not a strong willingness to experience the virtual classroom as a real classroom if the willingness of all participants is used as a criterion.

'Experiencing' a virtual classroom is near to 'imagining' a one. I gave considerable attention to the concept of imagined communities in Chapter three, thus echoing researchers and theorists of virtual communities. On that occasion I argued that virtual communities could be imagined as entities in which the use of technologies made it possible for people from different localities to feel connected to each other, in the sense that they were sharing something in common across traditional geographical borders. Researchers of virtual communities have so far usually dealt with a textual environment where people are not able to see each other. (Apparently, the situation is changing somewhat due to the emergence of 'cam communities', for example) In my case, it was possible for people to see each other to some extent. The picture was an essential element of the virtual classroom. The Kilpisjärvi pupils looked at the screen most of the time during the online lessons. Their wishes about what the picture showed varied a little. They wanted to be able to see the faces of the Helsinki pupils so that they could recognise them, but there were also different attitudes. As mentioned in Chapter eight, some thought the picture should be focused on the 'teaching'. Theories of the virtual classroom as a community of learners, and the theoretical approach to virtual communities as imagined communities, seem to bear some tension between each other. While the virtual-classroom view emphasises participants' ability to identify each other, the imagined-community perspective, in turn, applies to participants who simply are aware that there are other participants joining them in similar (educational) activities. To some extent, both of these views were evident in the Kilpisjärvi case. The Helsinki pupils remained somewhat unidentified for the Kilpisjärvi pupils (and vice versa), but at the same time they were also interested in personifying them, to make them seem more like classmates. From both of these theoretical perspectives, it was true that the context was educational. Identifying and imagining took place in online lessons concerning educational interests and activities, not outside the lessons and not on a more personal level.

There is not much research available about organisational change in schools which establish electronic networks between each other. Schools networking is becoming more popular nowadays, and we are able follow the experiences of participants at numerous conferences and in journal articles,

but the focus is often on 'lessons learned' or on the 'grassroots level', without wider theoretical considerations. Post-Fordism has been a topic of lively debate in the field of distance education. It has been used in analyses of changes in the organising of education. This is true especially for British and Australian distance educators, who are familiar to me because of my contacts in these circles. I became interested in post-Fordism because of the potential it seemed to provide for my research on electronic inter-institutional networks of schools. Chapter seven of this work reported findings about the position of local teachers in the Kilpisjärvi project. I also used the post-Fordist approach, in this occasion, although I am not totally convinced about it. I still believe that as a theoretical framework post-Fordism has a lot to offer research on networking education, as a theoretical framework. Bringing the theoretical discussion of distance education into the context of school and school networks would have required more theoretical elaboration than I gave. However, I argue that my research already shows the potential of post-Fordism for research in this field. A flexible and networked organisation, the intensive use of information and communication technology, the sharing of resources and expertise, … all these elements belong to the core of both schools networking and of post-Fordism.

According to some visions which concern the development of virtual educational organisations, education in local schools will change because of the outside impact of the virtual school. I discussed this topic in Chapter three. Local schools will take responsibility for areas where it is not reasonable or possible to organise with a virtual school. The post-Fordism framework, in turn, considers the position of academic staff in educational institutions which organise distance education or open learning. I gave some thought to this in Chapter two. In the Kilpisjärvi case, there was no evidence that the importance of the local teachers and the local school in general was diminishing because of the education from outside, despite the fact that the teachers in the network were regarded as more competent than the local teachers by the Kilpisjärvi people. The implication is that the support for studying, in other words teaching, from the local teachers is needed even more. Requirements concerning the academic competence of local teachers seemed increase because of the increased competence level of the teaching from the network.

The character of the Kilpisjärvi School evidently changed during the project. To be precise, we cannot say that the character of the lower-secondary part of the school changed because there was no lower-secondary school in Kilpisjärvi before the project. However, we could think of the character of

the school in a new light now that information and communication technologies have become an integral part of the schooling in Kilpisjärvi. I cannot base my views on the theoretical considerations according to which the virtual school is a school without a physical infrastructure. The symbiosis view is more useful but it somehow represents an intermediate phase on the way to complete virtual school. The cyborg metaphor which I introduced at the beginning of this volume may seem to be quite far-fetched in the context of the Kilpisjärvi project. However, I believe that it offers a wide approach to the development of school when the activities are increasingly taking place in spheres which we now call cyberspace. Even in the Kilpisjärvi case it helps us to look at the school through blurred boundaries in a mix of local physical elements and technology based elements of virtual entities.

I have given a lot of attention to the methodological questions involved in the ethnographic approach to media education. One reason for my eagerness to contemplate this matter at length was the fact that ethnography has not reached a stable position in Finnish educational research, despite the optimistic forecasts of some ten years ago. Some methodologists even claim that the situation is miserable, as we saw in Chapter four. As far as media education is concerned, the situation becomes even more complicated. Media education concerns environments which differ from those of traditional ethnography, and which therefore give rise to new problems and questions for researchers to solve. This was the main message in Chapter four. Some of these problems I faced myself in the Kilpisjärvi project. The education never moved significantly towards the WWW environment, and the use of the Internet in general was minimal. In that sense, the rather far-reaching considerations of cyborg anthropology and similar methodological thoughts remained somewhat out of reach in my actual research, although at the beginning of the project I foresaw them essential and usable. Their raison d'être in Chapter four was connected to the needs of media education on a wider scale, pointing, for example, to the research needs of the current expansion of net-based learning. My intention was also to bring some issues concerning current developments in anthropology to the Finnish educational discussion for the benefit of media education. In any case, the intense presence of information and communication technologies was obvious and it affected my ethnographical work. The most noticeable element of this presence was the character of my field. Part of my research target existed in a form which could not be defined using traditional methodological concepts. The issues of translocal field and what we could call translocal ethnography proved to be a promising research device in this context. They also suit the perspective of the virtual

classroom as virtual communities in which the emphasis is on common interests, activities, and interaction between participants, furthered through the use of technology. Further, the phenomenon of deterritorialisation seemed to receive reinforcement in the context of translocality as a budding concept in educational research.

Academic writing about the use of information and communication technology in schools often calls for change in education. New technology should change the way in which teaching, studying and learning take place, brining about better teaching, better studying and better learning. As I have described on the previous pages, we cannot talk about a great pedagogical change in the Kilpisjärvi project. By this I mean that the activities which took place in the online lessons were not radically different from those in a traditional classroom. I would like to stress to my readers that my intention is not to asses whether it was bad or not that this kind of big pedagogical change did not occur. I went to Kilpisjärvi as an ethnographer to find out how the project was working from the point of view of Kilpisjärvi, and how the people there experienced it. Accordingly, my task is now to present the views of the Kilpisjärvi people and, as a researcher, do this so that the findings are of interest to my academic readers in the field of education.

I have emphasised the role and importance of the teacher. This is certainly not a very fashionable thing to do these days. I have personally faced criticism on the grounds that the Kilpisjärvi project was too teacher-centred, and thus not sufficiently pupil-centred. I do not see that it is in my role as a researcher to be a judge here. What was essential for me was what the people in Kilpisjärvi thought about the matter. They, as we saw, emphasised the significance of the teacher. Were they just being conservative? I do not, however, see the Kilpisjärvi people in that way. As methodologists advise us to do in ethnography of education, we should pay attention to the context in which Kilpisjärvian people live. They did not expect any fundamentally new pedagogy from the project. Pedagogical change was not the main thing for them, but an ‘access’ to teaching by teachers was. To get a lower-secondary school in the village was pedagogical change enough. As the theory of virtuality suggests, the elements which create the feeling of a real environment may be strengthened. If the teacher has had a central position in a traditional classroom, it is this feature which will easily be emphasised in a virtual classroom, too, in order to create the experience of a real one.

Hannafin & al. (1996) call for realism in research on information and communication technology in the school context. ‘The path to innovative, reinvented schools is not simply one of designing an idealized technology-en-

hanced learning environment, but one of understanding the history and culture of formal schooling.' (Hannafin & al. 1996, 396). This is a welcome remark. The critics argue that the lack of any relevant pedagogical change in the online lessons compared with the traditional classroom renders the whole Kilpisjärvi project questionable. On the other hand, there have been commentators who have paid attention to the wider historical, cultural and social context of education. From this point of view, establishing an electronic network of schools with participants from different parts of the country was an organisational change in education in the Finnish school system. On the other hand, it was something that very well suited the development of the Finnish information society in the middle of the 1990s. The use of ISDN-based videoconferencing, a new possibility in those days, provided an opportunity which called for experimentation.

Promises and outcomes

Before ending this volume I would like to take a brief look back at the promises I outlined at the beginning of the project. On that occasion I presented some views of the possibilities and possible impacts which distance education, as I called it then, could bring about in Kilpisjärvi. Today I would use the term networking, instead of distance education, to refer to the inter-institutional electronic network of schools. In those times, my ethnographic work was in its infancy. Although the preliminary results I presented in the research report (Kynäslahti 1996) were somewhat raw, I find it interesting to evaluate the situation at the end of the Kilpisjärvi project in the light of those preliminary considerations. This also fits the picture of my research as an ethnographic process which has developed along various paths towards the present state as published on the pages of this volume. As I mentioned in Chapter five, I rejected the research problem which concerned the question of impact. What may be somewhat confusing regarding the table is that the topics which I mention there may appear as hypotheses. The aim of my investigation was not to test hypotheses. Despite the risk of giving a misleading picture of my ethnographic work, I will consider the situation at the end of the project.

The following table was drawn to give a general picture of the impacts and the possibilities of distance education in the first phase of the Kilpisjärvi project. The vertical row represents the levels which have remained the basic structure of my results even today. The horizontal row, on the other hand,

was the result of theoretical discussion which the research team had enjoyed in the beginning of the project. They pointed, for example, to ideas of Garrison (1993). For the purposes of this report, typology of access, quality, and integration are no longer essential. However, I preferred to keep the primordial structure in this volume, too, as an original source.

The following table presents my view of the promise of the Kilpisjärvi project to the village, the school and the pupils. The word 'promise' describes the optimistic nature of the table. It is full of opportunities. Threats and undesirable issues are absent. Today we are in a position to judge whether this optimism was reasonable or naïve.

Table 8. The impacts and potential of distance education in the village of Kilpisjärvi (Kynäslahti 1996, 126)

	access	**quality**	**integration**
community	• children can stay in the village • secondary education without alienation from the community	• educational equality with more privileged areas • standard of education raised from the primary to the secondary level	• breaks isolation • new ideas and influence from outside • possibilities for adult education • possibilities for development • possibilities for the local economy
school	• supports the future of the school • new possibilities for development	• widening curriculum • pedagogical discussions with colleagues outside • high tech, and status of the school • support for the new school	• contacts with colleagues • networking
pupil	• can stay at home • growing up in familiar surroundings • secondary-school education	• educational equality with pupils in more privileged areas • widening curriculum • many kinds of teaching by several teachers • peer groups and competition • experience in the use of communication and information technology	• new social contacts • new perspectives for personal growth and the future • possibility to find people with the same interests

The first thing mentioned in the table is that the children can stay at home in the village. This has been made clear in previous chapters and there is no need to go in detail here. In short, this possibility has become realised.

I also predicted that distance education (networking) would enable the pupils to grow up in their familiar home environment which fosters enculturation to the local way of living. We do not know if their moving to the boarding school would have alienated them from their background—probably not. In any case, staying in the village supported their growing up as Kilpisjärvi people. Some indications of a distinct local Kilpisjärvi culture emerged in my results, as was shown in Chapter nine. On the other hand, the link to Helsinki did not seem to appreciably affect the way of life of the Kilpisjärvi pupils. There even appeared some small resistance.

The Kilpisjärvi project was taken as an example of how educational equality is enhanced. A small, geographically isolated village is provided with the lower-secondary level education, the same as more privileged areas in the country. It went even further than that. The parents as well as the local teachers and pupils sensed that it was they who were privileged among the entire Finnish population because they were taking part in advanced educational undertakings. Further, I foresaw that a rise in the standard of education to include the lower-secondary level as well as the primary level would affect the community. This kind of argument may point to rather wide developments in the community, a question which I rejected as too demanding for my research. Nevertheless, some smaller issues arose. At least one family would have moved away from the village without the opportunity for their child to complete lower-secondary education locally. Another family actually moved back to the village because of this new possibility.

I assumed that distance education (networking) would moderate isolation. During the tourist season, Kilpisjärvi is an international and lively place. However, I was told outside that period, it is an isolated place. Joining several online lessons weekly appeared to moderate this isolation. The Kilpisjärvi pupils appreciated the opportunity to be in contact with pupils in a different living environment and with a greater variety of teachers. Although the virtual classroom was not coherent in terms of the personal relationships between Kilpisjärvi and Helsinki, the (tele)presence of the Helsinki pupils was not without meaning for the pupils in Kilpisjärvi. What emerged as a new thing was the alleviation of the pedagogical isolation of the parents. Contacts with other network participants and information about the pedagogical approach in the online lessons provided them with an opportunity to compare the educational policy of the local school with that of other schools.

This opportunity was taken up without hesitation. Were there flows of new ideas and influence from outside? I am not able to answer this question, or at least I do not have significant proofs which would verify such influence. The question of the potential for the local economy that the link to the outside would provide also remains unanswered. On a more general level, I also predicted opportunities for development in the village. The importance of the project for the local people has already been emphasised sufficiently in my text. What kind of concrete development in broader sense it has enhanced or will nourish cannot be seen from my results.

At the school level it could be stated that the project has supported the current situation and the future of the Kilpisjärvi school. This notion is almost a truism but, on the other hand, the whole project could have failed. Support has appeared in several forms. The widening of curriculum may be one of them, but optional courses were not a major factor behind the networking. The breaking of the pedagogical isolation of the teachers emerged as a significant opportunity for the Kilpisjärvi teachers, both at professional and personal levels. Even the term 'in-service teacher training' was mentioned. All the Kilpisjärvi participants in the project seemed to appraise the status which it gave to the local school. The school was characterised as a forerunner in the use of information and communication technology, a sort of high-tech school. This was true in the beginning of the project. Nowadays, videoconferencing is no longer something exceptional. In any case, the Kilpisjärvi school was indeed a pioneer.

Educational equality concerns the pupils as well as the community. In this respect, too, the situation changed somewhat from that which I presented in the table. Not only did the pupils think that they had achieved equality during the project, they also felt that they were privileged pupils in the Finnish information society. By participating in the project they gained special knowledge about the use of information and communication technologies which they will able to use to their advantage later in their lives. As I mentioned in Chapter seven, I have some doubts about this advantage.

I wondered whether the increased number of teachers which networking entails would enrich the pupils' studying by exposing them to a variety of pedagogical styles, each personal to the different teachers. This kind of pedagogical enrichment I did not find in the pupils comments. Instead, the pupil-teacher relationship flourished on a more personal level. On the one hand, the Kilpisjärvi pupils emphasised the competence of the teachers, but on the other hand they seemed to be very fond of most of the Helsinki teachers. Instead appreciating the variety of pedagogical style, they appeared to be

pleased with the new teachers as personalities. No inspirational effect of a peer group as an enabling element for competition between pupils was significantly evident from the data. There may have been some competition between Kilpisjärvi and Helsinki, but the pupils did not mention it in their comments, nor did I observe significant evidence of it.

On a personal level, new social contacts and friendships between the pupils in Kilpisjärvi and Helsinki could be seen. As the results reported in Chapter nine indicate out, this side of the project did not work very well. One of the pupils, however, made new contacts with the Helsinki pupils and paid a visit to them during the project. This pupil moved to Helsinki to continue her studies at the higher-secondary level in the Teacher Training School. The choice of school was a direct result of the contacts made through the project. However, these particular friendships did not show in the online lessons. The media for the interaction was merely correspondence. The online lessons themselves did not result in the building of new social contacts in the mode of strong friendships. This was also mostly true to the case when it came to finding people with similar interests. I am not referring to educational interests here, which were at the very core of the virtual classroom, but to the more personal interests of these young people. I did not find this in my results. One thing which is relevant here is the fact that there was only one girl in most of the online lessons in Kilpisjärvi. Thus, the online lessons gave her the opportunity to be in touch with other girls. What significance this had to the Kilpisjärvi girl, was not clear in my results. It remains on the level of speculation.

As a concluding comment about promises and outcomes, I would like to state that four pupils started their lower-secondary education in 1994 in the School of Kilpisjärvi, and in 1997 these same pupils successfully completed their lower-secondary education in that same school.

Further research topics

I have proposed on several occasions in this publication that the topics that I have investigated call for further research and theoretical elaboration. In that sense, mention of further research may sound repetitious here. In order to avoid tautology, I refer to Chapters 1 to 4 in which I have made propositions concerning theory of media education, ethnography in environments which information and communication technologies create, and the virtual classroom, for example.

I started my career as a conference participant in 1995. Since then I have taken part in numerous international conferences which have often dealt with the topic of distance education. In those early days, a presenter who spoke about the use of information and communication technologies at the school level, and about inter-institutional electronic networks of schools, was a curiosity. The situation has changed, but I believe that there is still a lot for researchers to find out about these kinds of networks. How can we organise education with networking, and how does the character of the school change due to intensive participation in a network (educational and social perspective), what happens when different cultures meet in a network (cultural perspective)? What kinds of pedagogical styles are suitable for different networks (didactic perspective)? What kinds of technical applications are best for networks (technical perspective)? These are just some examples of approaches to inter-institutional networks of schools from different research perspectives. Although my research have given some answers to most of the previous questions, my work is only a small piece of a big cake.

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APPENDIX A

The themes of the Kilpisjärvi pupil interviews 1995

The Kilpisjärvi pupils' hobbies and free time activities.

The Kilpisjärvi pupils plans for the future (vocational choice, staying in the village or moving out, for example).

The characteristics of distance lessons compared to local lessons.

What is a good distance lesson like?

The relationship between the Kilpisjärvi pupils and the Helsinki pupils.

The relationship between the Kilpisjärvi pupils and the distance teachers.

The interaction between Kilpisjärvi and Helsinki through the video conference link.

APPENDIX B

The interviews in April 1996

The Kilpisjärvi teachers

SECTION I

Comparative research: Teaching in remote networked classrooms in Finland and in New Zealand

1. Your name.
2. How long have you been teaching using audiographics or video conferencing? How long have you been involved in the integration of remote classrooms?
3. Have you had previous experience as a teacher in a remote school?
4. (Included in the section II)
5. (Included in the section II)
6. Are there any students who have particular difficulties with new communication technologies? Why is this so?
7. Please outline the way in which you allocate time during a lesson when online to other school. How is time shared between pupils in different schools? How have you planned your schedule when your pupils participate distance education from another school? Have you succeeded in this?
8. (Included in the section II)
9. What suggestions do you have for improving teaching in remote classrooms following your recent experience?
10. What do you consider to be advantages of teaching using audiographics and video conferencing?
11. What do you consider to be disadvantages of teaching using audiographics and video conferencing?

12. In which way should teacher education pay attention to distance education between separate schools? (for example in planning of education)

13. Are there any situations in which this sort of inter-school approach to teaching and learning is not appropriate?

14. What changes will you make to your teaching in this remote network after your experiences so far?

15. Are there any lessons that are particularly useful to teach in this networked way?

16. Are there any students for whom this networked approach to teaching and learning is not appropriate?

17. Do you see any difficulties to expanding this system to include pther schools in Finland?

18. Do you see any difficulties to expanding this system to include pther schools in other countries? What about different time zones?

19. Do you consider that this experiment has been successful? Why so?

20. Do you have comments for people in schools that are interested in distance education between separate schools?

SECTION I I

Local education versus distance education

(The following questions are part of comparative research between Finland and New Zealand)

4. What do you do when students ask about vocational opportunities?

5. How do you see the role of local education or the role of distance education when teaching a pupil that has learning difficulties? What do you do if you have a student who has learning difficulties in your remote classroom? How do you get assistance?

SECTION I I

Local education versus distance education

(The following questions are for my own use only.)

1. What are the educational tasks of rural education?

It has been argued that rural school should on the first hand to educate pupils to live in their home village and on the other hand to provide them with opportunities to a life outside of the home community and to further education. How do you see this dualistic task? How can distance education help to fulfil this task?

4. What is your relationship with distance teachers a) in professional sense, b) at more personal level?

5. What is your relationship with local teachers a) in professional sense, b) at more personal level?

6. Has distance education impacted the independence of your work? Has your freedom as a teacher decreased or increased?

7. Has distance education impacted the publicity of your work?

8. Has distance education made your work easier of more difficult? In what way?

9. Is distance education a threat or a resource to you? Why is this so?

10. If distance education will increase at the school level, what are the tasks of local education and those of distance education?

11. How has the character changed in those subjects in which part of the lessons are taught by teachers from other schools?

12. Has distance education impacted the expectation that the local community has regarding to your work? How and why?

13. Has distance education impacted the relationship between your and your pupils? How and hwy?

14. What are the relevant elements of local education and distance education when investigated from the perspective of local community?

15. What are the relevant elements of local education and distance education when investigated from the perspective of the pupils?

16. What about the perspective of the local school?

The Kilpisjärvi pupils

SECTION I

Learning in remote networked classrooms

1. What do you think of learning by audiographics? Video conferencing?

2. How effective has this technology been for you in improving your learning?

3. What advice woudl you give to students who are about to start learning this way?

4. Could you please describe an effective teacher in a remote, integrated classroom?

5. What are the advantages of integrating remote classrooms using new technologies?

6. What are the disadvantages of integrating remote classrooms using new technologies?

7. What changes to the integrated networked classroom system that you have here would you like to make?

8. (Only for the Ruskela pupils.)

9. What difficulties have you experienced in participating in an integrated classroom so far?

10. Please outline what, for you, are morale boosters in using this new technology to integrate your classroom to other schools?

11. Can you outline any learning situations in which integrating remote classrooms does not work for you?

12. What advice, as a learner using remote classrooms, have you for the principal of this school?

13. What advice do you have for the principal and the teachers of the other schools with whom you are linked?

14. What are your strengths and weaknesses to participate in this type of learning? Is distance education good for you? Why is this so?

15. As a learner, what things do you think that teachers need to know about if they are to be able to use this sort of technology successfully integrating remote classrooms?

16. As a learner, do you consider that there are classes in which integrating you class with other classes is no appropriate?

17. Are there any classes in which integrating with other schools is particularly useful?

18. Do you think it would be useful to try to link with classes in other places, including other countries? Why?

19. If linking with classes in other countries, how would you accommodate learning accross different time zones?

20. Would you be prepared to return to school for an evening class link with a school in another time zone?

21. Do you recommend that this experiment be continued? Why?/ Why not?

22. Do you have any other observations, comments or advice that you could pass on to assist in the development of future integrated classes?

SECTION I I

Local education versus distance education

1. How does the local teachers' teaching differ from that of distance teachers?
2. What things should be taught in local lessons, what in distance lessons?
3. What do you think if there would only be distance lessons in the school?
4. What do you think that the parents would like the distance lessons and the local lessons include?

SECTION IV

Principal of the Kilpisjärvi school

1. How does distance education impact the independence of the school?
2. How has distance education impacted the relationship between the community and the school?
3. At what level will the negotiation take place in the future: at the municipal level, at the school level or at the teacher level?
4. How will the costs be shared between different schools?
5. What are the greatest difficulties of distance education at the school level?
6. How has distance education impacted the relationships between the community, the school and the outside world?

APPENDIX C

In Finnish

Haastattelut huhtikuussa 1996

Opettajat

SECTION I

Vertaileva tutkimus:
Teaching in remote networked classrooms in Finland and in New Zealand

1. Nimi.
2. Miten paljon olet opettanut audiografiikan tai videokonferenssin avulla ? Miten paljon ja miten kauan olet muuten ollut mukana luokkamuotoisessa etäopetuksessa ?
3. Miten paljon sinulla on opettajakokemusta pienestä maaseutukoulusta ?
4. (Osana Section II kysymyksiä)
5. (Osana Section II kysymyksiä)
6. Onko oppilailla ollut vaikeuksia etäopetusteknologian kanssa ? Mistä vaikeudet mahtavat johtua ?
7. Miten olet suunnitellut ajankäytön, kun olet antanut etäopetusta ? Mikä on ollut eri koulujen osuus ajankäytössä ? Miten paljon eri koulujen oppilaat ovat saaneet huomiota antamillasi etätunneilla ?

Miten olet suunnitellut ajankäyttösi silloin, kun oppilaat osallistuvat toisesta koulusta tulevaan etäopetukseen ? Onko tämä ajankäyttösuunnitelma yleensä onnistunut ?

8. (Osana Section II kysymyksiä)
9. Mitä parannusehdotuksia sinulla on etäopetukseen kokemuksiesi perusteella ?
10. Mitkä ovat audiografiikan ja videoneuvottelun opetuskäytön etuja ?
11. Mitkä ovat audiografiikan ja videoneuvottelun opetuskäytön haittoja ?

12. Miten opettajankoulutuksessa tulisi huomioida koulujen välinen etäopetus ? (esim. opetuksen suunnittelussa)

13. Onko olemassa tilanteita, joihin tällainen etäopetuslähtöinen opetuksen ja oppimisen lähestymistapa ei sovi ?

14. Mitä muutoksia aiot tehdä antamaasi etäopetukseen tähän astisten kokemusten perusteella ? Mitä pitää ehdottomasti muuttaa, mitä olisi hyvä muuttaa ? Onko epäkohtia, joille ei voi mitään ?

15. Onko olemassa joitakin oppitunteja, jotka on erityisen mielekästä järjestää etäopetuksen avulla ?

16. Onko olemassa oppilaita, joille etäopetus ei sovi ?

17. Näetkö esteitä tällaisen järjestelmän laajentamiselle Suomen kouluissa ?

18. Näetkö esteitä tällaisen järjestelmän laajentamiselle muiden maiden kouluihin ? Entäpä aikaerot ?

19. Onko projekti mielestäsi onnistunut ja missä määrin ? Miksi ?

20. Onko sinulla kommentteja muille kouluille, jotka ovat kiinnostuneita koulujen välisestä etäopetuksesta ?

SECTION I I

Paikallinen opetus versus etäopetus

(Omat kysymykseni.)

1. Minkälaisena näet pienen maaseutukoulun kasvatus- ja koulutustehtävän ?

On esitetty, että maaseutukoulujen tehtävä on toisaalta kouluttaa oppilaita tulevaan elämään kotikylässä, toisaalta antaa tarvittavia valmiuksia elämään ja jatko-opiskeluun kotikylän ulkopuolella. Millaisena näet tämän kahtalaisen tehtävän ? Miten etäopetus on vaikuttanut tai voi mielestäsi vaikuttaa näiden kahden tehtävän toteuttamiseen ?

2. Mitä teet, kun oppilaasi tiedustelevat maaseudun ammatillisista mahdollisuuksista ?

3. Minkälaisen merkityksen näet a) paikallisella opetuksella, b) etäopetuksella sellaisen oppilaan opetuksessa, jolla on oppimisvaikeuksia ?

4. Minkälaisena näet suhteet etäopettajiin a) ammatillisessa mielessä, b) muuhun elämänpiiriin kuten ihmissuhteisiin liittyen? 5. Minkälaisena näet suhteet muihin paikallisiin opettajiin a) ammatillisessa mielessä, b) muuhun elämänpiiriin kuten ihmissuhteisiin liittyen ?

6. Miten etäopetuksen tulo kouluun on vaikuttanut opettajana työskentelysi itsenäisyyteen ? Onko liikkumavapautesi kaventunut vai laajentunut ?

7. Miten etäopetuksen tulo kouluun on vaikuttanut opettajantyösi julkisuuteen ?

8. Onko koulun osallistuminen etäopetukseen helpottanut vai vaikeuttanut työskentelyäsi opettajana ? Miten ?

9. Onko etäopetuksen tulo kouluun sinulle uhka vai tuki ? Miksi ?

10. Jos ajatellaan, että tulevaisuudessa koulujen etäopetus lisääntyy, minkä tehtävän näet paikallisella opetuksella ja minkä etäopetuksella?

11. Miten opetuksesi luonne on muuttunut sellaisissa aineissa, joissa osa opetuksesta on toisesta koulusta tulevaa etäopetusta ?

12. Onko etäopetuksen tulo kouluun muuttanut ympäröivän yhteisön opetustyöhösi kohdistamia odotuksia ? Miten ja miksi ?

13. Onko etäopetuksen tulo kouluun muuttanut sinun ja oppilaiden välisiä suhteita ? Miten ja miksi ?

14. Arvioi, mikä on keskeistä paikallisessa opetuksessa ja mikä etäopetuksessa ympäröivän yhteisön kannalta.

15. Arvioi, mikä on keskeistä paikallisessa opetuksessa ja mikä etäopetuksessa oppilaiden kannalta.

16. Entä koulun kannalta ?

Oppilaat

SECTION I

Opiskelu etäopetuksessa

1. Mitkä ovat tämänhetkiset kokemuksesi audiografiikasta ja videoneuvottelusta ?
2. Miten tehokkaasti etäopetuksen tekniset laitteet ovat vaikuttaneet oppimiseesi ?
3. Minkälaisia ohjeita sinulla on antaa sellaisille oppilaille, jotka ovat aloittamassa osallistumista etäopetukseen ?
4. Minkälainen on tehokas etäopettaja ?
5. Mitkä ovat etäopetuksen hyviä puolia ?
6. Entä huonoja ?
7. Miten haluaisti muuttaa etäopetusjärjestelyjä ?
8. (Vain Ruskelan oppilaille.)
9. Mitä vaikeuksia olet kokenut etäopetuksessa ?
10. Mitkä asiat koet etäopetuksessa sinulle tärkeimmiksi ?
11. Onko sellaisia tilanteita, joissa etäopetus ei omalla kohdallasi onnistu ?
12. Minkälaisia ohjeita sinulla olisi etäopetuksesta koulun johtajalle ?
13. Entä minkälaisia ohjeita sinulla olisi Helsingin koulun opettajille tai rehtorille ?
14. Minkälaisia vahvoja puolia ja minkälaisia heikkoja puolia olet kokenut itsessäsi, jotka vaikuttavat osallistumiseesi etäopetukseen ? Sopiiko etäopetukseen osallistuminen juuri sinulle ? Miksi ?
15. Mitä asioita vaaditaan opettajalta, joka opettaa etäopetuksen avulla ?
16. Arvioi, voisiko olla sellaisia tilanteita, joissa oman koulusi ja jonkin toisen koulun välinen etäopetus ei onnistuisi. Miksi ei ?

17. Minkälaisissa tilanteissa etäopetus kahden koulun välillä on erityisen hyödyllistä ?

18. Olisiko mielestäsi hyödyllistä järjestää etäopetusta muidenkin kuin Helsingin koulun kanssa ? Miksi ? Entäpä ulkomaisten koulujen ?

19. – 20. Mitä mieltä olisit siitä, että etäopetus ulkomaisten koulujen kanssa muuttaisi koulunkäynnin aikatauluja ? Esim. koulua käytäisiinkin illalla !

21. Haluatko, että etäopetusta jatketaan koulussasi ? Miksi ?

22. Olisiko sinulla jotain ehdotuksia etäopetuksen kehittämiseksi ?

SECTION I I

Local education versus distance education

1. Miten paikallisten opettajien opetus eroaa etäopettajien opetuksesta ?

2. Mitä asioita on hyvä opettaa paikallisilla tunneilla mitä etätunneilla ?

3. Mitä hyvää ja mitä huonoa olisi siinä, että teillä olisi vain etätunteja?

4. Mitä arvelet vanhempien toivovan etäopetukselta mitä paikalliselta opetukselta ?

SECTION IV

Kilpisjärven koulun johtaja

1. Miten etäopetus vaikuttaa koulun itsenäisyyteen ?

2. Miten etäopetus on vaikuttanut yhteisön ja koulun suhteeseen ?

3. Miten tulevaisuudessa tullaan suorittamaan neuvottelut etäopetuksesta: kunnan, koulun vai opettajien tasolla ?

4. Miten kustannukset jaetaan eri koulujen kesken ?

5. Mitkä ovat suurimmat vaikeudet koulun tasolla etäopetuksessa ?
6. Miten etäopetus on vaikuttanut yhteisön, ulkomaailman ja koulun suhteisiin ?

APPENDIX D

Interviews in April 1997

Parents

1. What is it like to be a 'Kilpisjärvian'?
2. Are you going to stay in the village after that you have retired?
3. What is the relationship between the community and the school like?
4. Has distance education changed this relationship?
5. How important the school is for the village ?

Additional question: Is it true that the adult people have never settled down in Kilpisjärvi but their children have?

6. What did you like about the open learning course through distance education?
7. What do you think about distance lessons the pupils attend?
8. Does the modern technology estrange the parents from the everyday life of the school?
9. What are your skills in using of information and communication technologies?
10. The project is about to end now. What kind of picture did you get of it? Did it succeed or not?
11. Has distance education brought Kilpisjärvi closer to outside world?
12. What are your expectations concerning distance education in the Kilpisjärvi school in the future?
13. Please outline the future of the Kilpisjärvi village.

Teachers

1. What is it like to be a 'Kilpisjärvian'? Is it characterised by temporality?
2. What is your relation to distance education ?
3. What about the future?
5. Has distance education disorganised the school?
6. Has distance education brought the Big World to Kilpisjärvi?
7. What kind of relationship is there between the Kilpisjärvi school and the community?
8. How has distance education impacted this relationship?
9. What is your relationship with the Helsinki distance teachers?
10. Do people compare your teaching with teaching which is provided by distance teachers?
11. Please outline the characteristics of the Kilpisjärvi school.
12. What are the tasks of a small rural school, like the Kilpisjärvi school?
13. Please outline the future of the Kilpisjärvi village.

Pupils

1. How do you spend your free time?
2. Do you spend your free time with your classmates?
3. What kind of plans do you have for the future?
4. About what kind of things do you talk with your friends?
5. Has distance education impacted your plans for the future?
6. Do the distance teachers compare Kilpisjärvi with Helsinki in distance lessons?
7. What do you think about it?

8. Why do distance teachers talk about the weather so much?
9. In what kind of situations do the Kilpisjärvi pupils joke in distance lessons?
10. Would it be better if there were only a teacher, not pupils at all, in Helsinki?
11. Has there emerged class spirit during these three years?

APPENDIX E

In Finnish

Haastattelut huhtikuussa 1997

Vanhemmat

1. Mitä on kilpisjärveläisyys ja onko sitä ?
2. Aiotko jäädä tänne asumaan eläkepäiville ?
3. Minkälainen kyläläisten ja koulun suhde ?
4. Onko etäopetus muuttanut tätä suhdetta ?
5. Miten tärkeä koulu on kylälle ?

Lisäkysymykseni: Onko siis niin, että aikuiset eivät ole juurtuneet Kilpisjärvelle, mutta lapset tekevät niin ?

6. Minkälaisia kokemuksia sinulla oli kansalaisopiston etäkurssista ?
7. Minkälaisen kuvan olet saanut oppilaiden etätunneista ?
8. Vieroittaako nykyaikaisen tekniikan tulo kouluun vanhempia koulun arjesta ?
9. Minkälaiset ovat omat taitosi tietotekniikassa ?
10. Projekti on nyt loppumassa. Minkälainen kokonaiskuva sinulle on tullut etäopetuksen onnistumisesta tai epäonnistumisesta ?
11. Onko etäopetus lähentänyt Kilpisjärveä muuhun maailmaan ?
12. Mitä toivot etäopetuksen tulevaisuudelta Kilpisjärven koulussa ?
13. Millaisena näet Kilpisjärven kylän tulevaisuuden ?

Opettajat

1. Mitä on kilpisjärveläisyys ?

Leimaako kylää väliaikaisuus ?

2. Mikä on suhteesi etäopetukseen ?
3. Minkälaisena näet jatkon ?
5. Onko etäopetus hajottanut koulun yhtenäisyyttä ?
6. Onko etäopetuksen myötä ‘suuri maailma’ tullut Kilpisjärvelle ?
7. Minkälainen on Kilpisjärven koulun ja ympäröivän yhteisön suhde?
8. Miten etäopetus on vaikuttanut tähän suhteeseen ?
9. Mikä on suhteesi Helsingin etäopettajiin ?
10. Verrataanko sinun opetustasi etäopettajien opetukseen ?
11. Kuvaile Kilpisjärven koulun luonnetta.
12. Mitkä ovat mielestäsi pienen maaseutukoulun , kuten Kilpisjärven koulun, tehtävät ?
13. Minkälaisena näet Kilpisjärven tulevaisuuden ?

Oppilaat

1. Kerro, miten vietät vapaa-aikaasi.
2. Oletko vapaa-aikana paljon luokkakavereiden kanssa?
3. Minkälaisia tulevaisuudensuunnitelmia sinulla on?
4. Minkälaisista asioista juttelet kavereidesi kanssa?
5. Onko etäopetus vaikuttanut tulevaisuuden suunnitelmiisi?
6. Vertaavatko opettajat Kilpisjärveä ja Helsinkiä keskenään etätunneilla?
7. Jos vertaavat, niin miten suhtaudut siihen?
8. Miksi opettajat kyselevät niin usein säästä?
9. Minkälaisissa tilanteissa Kilpisjärven oppilaat heittävät huumoria etätunneilla?

10. Olisiko parempi, että Helsingin päässä ei olisi oppilaita lainkaan, ainoastaan opettaja?

11. Onko tämän kolmen vuoden aikana syntynyt yhteistä luokkahenkeä helsinkiläisten kanssa?

APPENDIX F

Data and category codes

Data

Data	Code
Field notes in distance lessons	Fn
The number of the lesson	1, 2, 3 …
The year	/94 … /97
Other field notes	Fn *date*
Interviews 1995	In95
Interviews 1996	In96
Interviews 1997	In97
Questionnaire answers	Qu
Documents	Do
Interviews by Tor Kronlund	To
Interviews by Jari Salminen	Ja
Interviews by Marjo Salonen	Ma

People	Code
Kilpisjärvi pupil 1	KiPu1
Kilpisjärvi pupil 2	KiPu2
Kilpisjärvi pupil 3	KiPu3
Kilpisjärvi pupil 4	KiPu4
Kilpisjärvi pupil 5	KiPu5
Kilpisjärvi pupil 6	KiPu6
Kilpisjärvi pupil 7	KiPu7
Helsinki pupil 1	HePu1
Helsinki pupil 2	HePu2
Helsinki pupil 3	HePu3
Helsinki pupil 4	HePu4
Kilpisjärvi teacher 1	KiTe1
Kilpisjärvi teacher 2	KiTe2
Kilpisjärvi teacher 3	KiTe3
Kilpisjärvi teacher 4	KiTe4
Kilpisjärvi teacher 5	KiTe5
Helsinki teacher 1	HeTe1
Helsinki teacher 2	HeTe2
Helsinki teacher 3	HeTe3
Helsinki teacher 4	HeTe4
Helsinki teacher 5	HeTe5
Helsinki teacher 6	HeTe6
Helsinki teacher 7	HeTe7
Helsinki teacher 8	HeTe8

Parent 1	Pa1
Parent 2	Pa2
Parent 3	Pa3
Parent 4	Pa4
Home 1	Ho1
Home 2	Ho2
Home 3	Ho3
Home 4	**Ho4**

APPENDIX G

The lessons observed

1994	1995	1996	1997
Kilpisjärvi 1. 1.11. 2. 2.11. 3. 3.11. 4. 3.11. Helsinki 5. 22.11. 6. 22.11. Kilpisjärvi 7. 12.12. 8. 12.12. 9. 13.12. 10. 14.12. 11. 15.12.	Kilpisjärvi 12. 31.1. 13. 2.2. Helsinki 14. 3.20.3. 15. 20.3. 16. 22.3. 17. 23.3. 18. 27.3. 19. 27.3. 20. 29.3. 21. 29.3. **Kilpisjärvi** 22. 1.2. (I observed partly the lesson because I simultaneously worked as a substitute teacher.)	Kilpisjärvi 23. 10.4. 24. 10.4. 25. 11.4. 26. 11.4. 27. 15.4. 28. 17.4. 29. 18.4. 30. 18.4. **Helsinki** 31. 9.5. 32 23.9. 33 30.10. 34. 7.11. 35. 14.11. 36. 26.11. 37. 11.12.	Helsinki 38. 8.1. 39. 13.1. 40. 13.1. 41. 29.1. 42. 25.2. 43. 4.3. 44. 6.3. **Kilpisjärvi** 45. 25.3. 46. 26.3. 47. 27.3. 48. 1.4. 49. 3.4. 50. 3.4. 51. 10.4. 52. 10.4. 53. 10.4. 54. 7.4. 55. 7.4. 56. 7.4. 57. 8.4.

APPENDIX H

Questionnaire for the parents 1996

1. What are the good and bad things with regard to distance education from the perspective of the Kilpisjärvi village, the school and the pupils?
2. What kind of education do you want to be organised with the help of distance education?
3. What kind of education should be organised by the local teachers, not by the distance teachers?
4. Do you think that your children will stay in the Kilpisjärvi village in the future?

In Finnish

Kyselylomake vanhemmille 1996

1. Mitä hyvää ja mitä huonoa arvioitte etäopetuksessa olevan Kilpisjärven kylän, Kilpisjärven koulun ja oppilaiden kannalta?
2. Millaista opetusta toivotte järjestettävän etäopetuksen avulla?
3. Minkälaista opetusta ei ole syytä järjestää etäopetuksena vaan paikallisten opettajien opettajana?
4. Uskotteko lapsenne jäävän asumaan Kilpisjärvelle aikuisena?