

TECHNOLOGICKÉ OTÁZKY VE VZDĚLÁVÁNÍ



TECHNOLOGISCHE FRAGEN IN DER BILDUNG
TECHNOLOGICAL QUESTIONS OF EDUCATION



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Technologische Fragen der Bildung

Technological Questions of Education

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ONLINE COMMUNITY

Jason B. Ohler

Overview

I recently completed a three year study of „online community“ - the study of life within a computing conferencing environment approached from the point of view of community theory. The subject of this study is PortaCom, a computer conferencing system that has resided on the University of Alaska Southeast's (UAS) VAX mini-computer since 1988. Although, strictly speaking, „PortaCom“ is the name of a particular piece of computer conferencing software, in this article all references to „PortaCom“ refer specifically to the installation of this software at the University of Alaska Southeast. The purpose of this article is to share some of the major findings of this study.

During the study PortaCom was home over 100 conferences covering a variety of topics and over three hundred members of varying involvement. I selected the PortaCom system as the subject of this study of online community for four reasons. First, I have had a great deal of personal experience on the PortaCom system, using it extensively since 1990 in the capacities of teacher, student, project organizer and participant, researcher, system operator, and network explorer. Second, during the past three years I have observed many references to „the PortaCom Community“ by PortaCom users, as well as group behaviors that implied the presence of some form community. Third, members of exploratory focus groups held at the beginning of this project overwhelmingly agreed that they considered PortaCom to be a community, although they had a difficult time describing the nature of the community. And fourth, PortaCom supports different kinds of conferences that form different kinds of online space, which in turn encourage different kinds of social interaction and behavior. It is variety of social interaction that makes PortaCom a rich social environment, and makes it such an interesting subject of study.

Online Community and Community Theory

A number of the conceptual problems associated with community study are caused by the fact that the term „community“ has many different meanings. In particular, modern adaptations of the term cover a wide variety of social experience ranging from limited associations, such as one's professional community, to more encompassing experiences, such as one's physical community and the sense of belonging attached to it. During the course of this study, I talked with many colleagues and others interested in this research project about the issue of „community“. I came to appreciate that many felt an emotional attachment to the word „community“. Some of those not involved with PortaCom felt strongly that the term „community“ should not be used to refer to anything less than a fairly comprehensive social experience, which they felt a computer - mediated communication (CMC) system could not provide. However, some of those involved with PortaCom, particularly focus group participants, felt strongly that PortaCom did constitute a manifestation of community, though they found this manifestation difficult to describe.

Emotional attachments aside, the terms „community“ and „online community“ are widely used and need to be addressed as part of any study of the social structures within a CMC system. For the purposes of this article, online community, both expands and limits the concept of community. The rest of this section explores the concept of online community, how it relates to the other models of community used in this study, and what it adds to conceptual considerations of community.

In this historical overview of media evolution, Levinson notes that there is „always a price to pay, a loss of prior communication ability, with each step forward“ (p.4, 1990). His second principle of media evolution states that „new media often retrieve elements of biological (natural) communication eclipsed by primitive media (which extend communication only by sacrificing some of its natural benefits)“ (p.4, 1990). Consider the three primary communication technologies of modernity: telephones, radio and television. Telephones connect in an interactive environment people who are separated by space. However, phone interaction is largely dyadic communication, and very rarely group - oriented. Radio and television create vicarious group experience but at the expense of interactivity and group self - awareness.

Computer conferencing offers some compensation for the weaknesses in these technologies. A computer conferencing environment offers a new dimension to „community“ because of a unique quality: it facilitates not only elements of personal networks, helping individuals maintain networks consisting of people who do not live near each other, but also of the neighborhood model of community, in which members of a community share some common geographic basis. Online community is represented in the table below:

A comparison of key aspects of the communication channels used to sustain community helps to illuminate other unique qualities of computer conferencing with regard to the concept of online community.

Table 1. Comparison of Different Forms of Community

<i>Kind of Community</i>	<i>Group Based OR Individual Based</i>	<i>Geographically Dispersed OR Geographically Concentrated?</i>
Neighborhood	Group	Concentrated
Personal Network	Individual	Dispersed
Online Community	Both	Both

Table 2. Comparison of Channels of Communication

	<i>Facilitates Group/Activity Identity?</i>	<i>Facilitates Extending Personal Network?</i>	<i>Accommodates Geographically Dispersed Communications?</i>	<i>Accommodates Asynchronous Communication?</i>
Phone	NOT EASILY	YES	YES	SORT OF
In-person Interaction	YES	YES	NO	NO
Written Correspondence	NOT EASILY	YES	YES	YES
Computer Conferencing	YES	YES	YES	YES

As mentioned earlier, technologies are coming together rapidly, making it difficult to form definitive distinctions among them in terms of these key aspects. However, the table adequately reflects common usage and strengths of these forms of communication, and thus a detailed analysis of all the exceptions that could be cited does not add anything substantive to this discussion.

As the table indicates, only computer conferencing allows asynchronous, geographically dispersed, personal, and group activity. However, the crux of computer conferencing's real power and unique contribution as a medium to the realization of community lies in the fact that it is the only medium that truly facilitates asynchronous group activity. As such it allows groups of people to interact in a common, virtual „space“ that does not operate according to schedules. The benefits of asynchronicity are unique. The online equivalent of a town meeting happens whenever people sign on. No one waits. There is no such thing as being late. No one

misses any part of the meeting because all meeting activity is stored and retrievable. Both space and time are almost completely eliminated as barriers to forming this kind of group activity. I define online community as follows:

Online Community: an asynchronous social system that, through the use of computer-mediated communication, facilitates:

- geographically dispersed communication,
- the extension and facilitation of one's personal network,
- group activity and identity.

However, the limitations of online community are also present in this definition. Its greatest strengths, asynchronicity and geographic dispersal, are also its weaknesses. The lack of synchronous, geographically-based activity precludes many of the activities normally associated with living in a community. The fact that online community is a CMC-based activity reduces community to an exchange of, at present, primarily text. Online community, like all expressions of community in the modern age, is an act of limited, focused community, with its own unique contribution to the expansion and limitation of human potential. The next section of this chapter deals specifically with those aspects of PortaCom that contribute to the expansion of human potential.

The Opportunity of Online Community

The combining of the qualities of group-based communities and personal networks in an asynchronous environment creates resources and facilitates social opportunities not commonly found in either community model. Described below are the new resources and opportunities that PortaCom offers. Some of these are, no doubt, shared by other online environments. However, they represent the strongest qualities of PortaCom as indicated by the data. These qualities could give future studies a step toward understanding how an increased involvement in online environments changes our behaviors and social expectations, in both virtual and non-virtual environments.

PortaCom offers:

1. Private, public, and restricted group-based communication within the same environment. Users can engage in private, personal, social, and public communication, which offer opportunities to develop many different kinds of relationships.

2. Opportunities to meet new people and make new friends. This aspect of PortaCom surfaced many times during the course of the study. It is a truly unique contribution to social activity and the clearest example of Levinson's second principle of media evolution, which states that elements of natural, in this case face-to-face, communication that were abandoned by other modern media will be retrieved by newer media.

3. The freedom and safety to express oneself about subjects often considered taboo in the non-virtual world. The overwhelming predominance of „Love and Sex“ as one of the two focal conferences („Open Forum“ being the other) among the over one hundred conferences that PortaCom supported is testimony to what happens when people are uninhibited enough to discuss highly personal issues with strangers.

4. The freedom and safety to be more forthright about one's immediate feelings, and in the process break the individual and group behavioral norms of the non-virtual world. The volume of traffic in „Open Forum“ is testimony to what happens when people feel uninhibited enough to react „in the moment“ rationally and emotionally.

5. An opportunity to pursue rational order. PortaCom is a hands-on, participant-driven act of social evolution. It represents an intellectual version of what communes in the 1960's tried to produce in the non-virtual world, incorporating many individual concerns within an environment that has little authoritative structure or government.

6. Both a broadcast and narrowcast information medium. PortaCom facilitates a process by which users can easily appeal to a broad user group in order to locate information, experts, and discussion groups concerning very specific, often esoteric, interest areas.

7. Access to people grouped by interest. PortaCom seems to be a community in which activities and people are searchable, based on interest (through „new user presentations“ and by virtue of conference membership). The effect of this is the minimization of „start up time“ in getting to know people and determining areas of compatibility.

8. Core groups co - existence. PortaCom is flexible and powerful enough, as software and as a social system, to maintain two largely independent groups of users engaged in two of life's main social functions: work and recreation.

The Future

Within the framework of Levinson's theory of historical overview of the evolution of media, it is reasonably possible to predict the future evolution of the online environment by understanding its strengths and weaknesses. CMC system developers will likely build upon CMC system's abilities to facilitate group - based, geographically dispersed communication. However, as a text - based medium CMC systems conveys a very limited kind of information and thereby facilitate limited kinds of communication. This is a major weakness of CMC systems, and will need to be addressed.

It appears fairly likely that the next step in the evolution of online environments will be the synthesis of multimedia capabilities and networking. Each has what the other lacks. CMC - based networks offer social distribution on an international scale, but in largely text - based environments. On the other hand, current multimedia environments are generally „stand - alone“ and non - distributed (largely due to equipment and transmission costs) but are data - rich, incorporating text, graphics, voice, and video. The online environment will seek to regain the information it lost in becoming a world of words by incorporating these data sources in an interconnected web of resources.

The PortaCom of the future might well include conference messages consisting of audio and/or video information. It might also include drawings, charts, and other kinds of graphics that make the communication of complex ideas much easier. A number of inexpensive, multimedia programs already allow for this kind of communication, but they are not currently used within the context of a conferencing environment. Recent software products developed to transmit multimedia information on the Internet, such as NCSA Mosaic, are plagued by bandwidth problems - current data networks do not have the capacity to effectively transmit multimedia information. The transmission speed of the information varies with network traffic and is often slow. But the direction of CMC is clear: the restoration of some of the elements of communication lost by reducing communication to an exchange of text.

Micro versus Macro Perspective and a Call for Online Anthropology

I see the need to develop two different perspectives for researching online activity: the micro perspective and the macro perspective.

The micro perspective pursues a psychological understanding, focusing on users who are committed to an online environment and have included it as an important part of their lives. A follow - up study might well consist of interviews with core group members to determine the nature of their use of and attachment to PortaCom. In particular the researcher might attempt to determine whether there are types of people who are attracted to and dependent upon PortaCom or if there are personalities that are especially suited to PortaCom or the online environment in general. Such information could be invaluable to software developers, educators, business professionals, and designers of CMC systems.

The macro perspective looks at the broad spectrum of online groups and conferencing systems, analyzing and classifying them according to size, purpose, behavioral norms, social structure, ritual, and other characteristics that are usually associated with the pursuits of cultural anthropology. Research could benefit greatly if the broader fields of online studies and anthropology were to work together in applying anthropological methodology to online research techniques, perhaps forming a branch of study that might be called online anthropology.

In some ways, online anthropology is implied in the work of Hiltz (1984), Vallee (1979), and others. With the following statement, Hiltz came closest to calling such inquiry „online anthropology“ when she concluded a large case study of an office automation project involving computer conferencing. If online anthropology has a beginning point, it is this:

Much of the early work in anthropology fell into the category of „ethnography“: a description of a single society. Later, as this descriptive material accumulated, „ethnology“, or the comparison of similar institutions across societies, became possible. A priority for future research on computer - mediated communication systems should be sufficient standardization of the types of data collected and the measurement used so that an „ethnology“ of computer - mediated systems becomes possible (1984, p.196).

Online anthropology will help provide the perspective needed to understand the structures and broad behavioral parameters of the „online world“. And it will entice cultural anthropologists to assume the task of trying to understand a fundamentally new kind of human gathering. This study serves as a humble contribution to the development of this particular focus of the social sciences. It is my hope that in using conventional community theory to analyze a virtual social system, I can help to provide the means and perspective needed to advance online anthropology. In viewing PortaCom from the perspective of conventional community theory, we see from whence we came. In applying conventional community theory to the new environment of the virtual medium, perhaps we can also see where we are headed. PortaCom and the online world both limit and expand community. With enough foresight, we can guide the development of CMC systems to create the kinds of communities that will humanize our technological world.

Vlasta

EDUTECH

96

6. pražská konference o kybernetické pedagogice
6. Prager Konferenz über Kybernetische Pädagogik
The 6th Prague Conference on Educational Cybernetics

Praha (CZ) 28. - 30. 5. 1996

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14.00-16.00

B3. Praktikum / Praktikum / Practicum

Ohler Jason, Alaska (USA): Online Communities / Online Gemeinschaften
(Jason Ohler spent 3 years studying an "online community"- the computer conferencing system at the University of Alaska. This presentation covers his findings and calls for the creation of Online Anthropology, the formalized study of cyberspace and online communities using the methodology of anthropology.)

Čtvrtek / Donnerstag / Thursday 30.5.96

00-12.00 Sekce / Sektion / section C:

Kolloquium doktorandů technologie vzdělávání / Kolloquium Doktoranten der Bildungstechnologie / Colloquium Doctorands of Educational Technology
Předseda / Vorsitz / Chairman: Švejda G., Č. Budějovice (CZ), Polák J., Nitra (SK)

Poláková Eva, Nitra (SK): Systémovo modelový přístup k řešení problematiky technologie vzdělávání / System- modellhafter Zugang zur Lösung einiger Hauptfragen der Bildungstechnologie / Modelling and Systemic Approach to Educational Technology
Bílek Martin, Hradec Králové (CZ): Elementy systémové didaktiky v počítačem podporované výuce přírodním vědám / Elemente der systemischen Didaktik im computer- unterstützten naturwissenschaftlichen Unterricht / Elements of Systemic Didactic in the Computer Supported Instruction in Natural Sciences

Mašek Jan, Plzeň (CZ): Mediální pedagogika, vzdělání a společnost / Medienpaedagogik, Bildung und Gesellschaft / Pedagogy of Media, Education and Society

Rychtera Jiří, Hradec Králové (CZ): Přírodovědný experiment a současné vzdělávací technologie / Naturwissenschaftliches Experiment und die gegenwaertigen Bildungstechnologien / The Experiment in Natural Sciences and the Present Educational Technologies

Ligas Štefan, Banská Bystrica (SK): Farebnosť ovplyvňuje kreativitu a kognitívne schopnosti / Die Farbigekeit beeinflusst die Kreativität und kognitive Fähigkeiten / Colours Have an Influence on Creativity and Cognitive Abilites

Panušová Marta, Plzeň (CZ): Proces komunikace z hlediska výuky cizího jazyka / Der Kommunikationsprozeß in Bezug auf den Fremdsprachenunterricht / Process of communication from the view of foreign language teaching

9.00-12.00 Prezentace firem činných v oboru / Präsentation der Firmen / Presentation of companies:

Předseda / Vorsitz / Chairman: Sládek Eduard (Praha), Chrdle Petr, Dobřichovice (CZ)

9.00 **Bím Jindřich**, Hradec Králové (CZ): M u l t i m e d i k

9.45 **Koča Jaroslav**, Praha (CZ): C z e c h d i d a c

10.30 **Sládek Eduard**, Praha (CZ): S c h o l a N o v a - K o m e n i u m

11.15 **Chrdle Petr**, Dobřichovice (CZ): K A V A - P E C H

12.30 Závěr konference / Konferenzschluß / Conference Concludes

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