

# A CHAT APPROACH TO "NETWORKED LEARNING"

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**Abstract:** The poster presentation comprises two parts. The first part - a cultural-historical activity-theory (CHAT) exploration of the concept of "networked learning" - is the paper display seen here. The second part is a computer presentation of a case of "networked learning" - the Ronneby version of the Fifth Dimension approach to learning..

## 1. WHAT IS "NETWORKED LEARNING"?

"Networked learning" or "netlearning" are catch-words referring to changed circumstances of learning due to new information and communication technology, new patterns of collaboration, and related pedagogical innovations. Although commonly used today, the terminology still has a weak conceptual ground. We have two concepts to disentangle here: "networked" and "learning." Network, according to the Oxford English Dictionary, means: "*c. To link (computers) together to make possible one or more of several functions, as the transfer of data, the sharing of processing capability or workloads, and accessibility from many locations.*" Thus, in its general form networked means *linked together to make possible one or more of several functions.*

The concept of learning is highly contested. The point of departure of the poster is a distinction usually made in CHAT. First, there is learning as a general activity, which means that one learns as long as one lives. Learning in that sense takes place on the level of *actions*. When taking part in any activity whatsoever, one learns new actions. Second, there is also learning as a specific activity, learning as an *activity*. This means, to use a wording from Yrjö Engeström (1987, pp. 155-156), that "in learning activity, development itself becomes the object of learning." This genetic (developmental, historical) aspect of learning is important to underline, especially in a time when the school-learning paradigm has turned the conception of learning into an idea of learning of a fixed content. In contrast, we have to realize that *learning (as activity) is addressing development.*

Learning activity is more long-termed than just improvement of learning actions. Its scope is wider, namely "*mastery of expansion from actions to a new activity*" (Engeström 1987, p. 125). In other words, "learning activity is an *activity-producing activity*" (ibid.). The argument is that if one wants to bring about learning activity, one has to work for transformation of an activity. A fixed learning system will produce nothing but learning actions (Fichtner 1984, 1988). Therefore, the kind of learning of interest from a CHAT perspective is primarily learning activity, learning that is addressing development of an activity system, and of the mastering abilities of the participants in the activity system in question. To sum up: From a CHAT perspective *networked learning* is learning that is linked together in such a way that it makes possible the function of producing a new activity.

## 2. THE RONNEBY 5D CASE OF "NETWORKED LEARNING"

The Fifth Dimension (5D) is a model system for learning. It is inter-institutional and intergenerational involving (at least) children, undergraduates and researchers, an environment for imagining the future of learning while trying to realise it in present activities. 5D comprises local learning sites that are collaborating in a global network. 5D indicates that learning can be networked in several ways.

In a **basic** sense the interlinkedness corresponds to the sociocultural approach of the 5D according to which human activity is mediated by people and by artefacts. In this perspective learning is artefact-mediated.

A **local** 5D site constitutes a community of learners where more capable companions support each other, with expertise shifting according to situation. In this perspective learning is co-coaching.

**Globally** 5D forms a network of local learning communities collaborating internationally.

Although “networked” and using ICT since its conception, modern information and communication technology has made 5D even more networked by the **technological** enhancing of the possibilities of communication.

Table 1. A summing up of networkedness/mediation at 5D Ronneby

Networked/mediated by	Ways of being linked together	The production of new activity	Central mediating artifacts of the activity	Outcome of learning
Basic interaction	Dyad, “small ensemble,” ZPD, “construction zone”	Interaction in the zone of proximal development	Mundane Computers, computer games, maze, task cards The 5D concept of learning	“pre-intersubjectivity” “intersubjectivity” “post-intersubjectivity” Emergence of a new local learning activity
Local site (Ronneby)	Intergenerational Inter-institutional	Systematic and work-oriented interaction between participants	Letters to and from the Wizard	1 <sup>st</sup> grade children: learning actions High-school students: Learning actions Undergraduates: learning activity
Global collaboration from the perspective of 5D- Ronneby	International collaboration on education and research	-Chat Ronneby-Barcelona -Chat Ronneby-Denver -The 5D EU-project (Barcelona, Copenhagen, Ronneby) - The 5D EU-USA project: collaboration on higher education (as above + Kajaani, Miami, Denver, San Diego)	ICT of diverse kinds	Test of “networked learning” (emergence of a new international learning activity?)

The usual CHAT-term to describe the “linking togetherness” of interacting elements is not “networked” but “mediated”. In fact, mediation is a key concept in CHAT, and every activity is conceived as mediated by means of different kinds of artefacts. Human activity is characterised by being “artificial” in the sense that it breaks away from nature (builds on and at the same time breaks away from nature). In mediation artefacts play a pivotal role. They embody already acquired knowledge. One may say that artefacts represent past activity used in the present to shape the future. In other words, artefacts are (potentially) instructional (Sutter, 2002). In this poster the word “networked” and “mediated” are used as synonyms. *The idea is that the usage of the word “networked” might gain educational power by being informed by the CHAT concept of “mediation.”*

By means of the classification in Table 1, what has happened in 5D-Ronneby pertinent to questions of mediation/networkedness, artefacts and learning, can be described in the following way. "Basic interaction" takes place in a small ensemble or a dyad. It is the prototypical interaction connected to the zone of proximal development or construction zone (Newman et al. 1989; Granott 1998). The artefacts in use are often mundane, and the basic occurrence here is the guiding of individuals into an activity, or metaphorically, learning them to dance through dancing with a more capable companion. At CSCL '97 Kaptelinin and Cole (2002) made an attempt to account for how individuals are "drawn into" the collective activity going on in the 5D and how, as a result, intersubjectivity between the interacting participants is shaped ("pre-intersubjectivity", "Intersubjectivity," and "post-intersubjectivity"). Even if it was questioned by critics and also by the authors themselves, if the concept of intersubjectivity was the best to use (Koschmann, Hall & Miyake, Eds., 2002, pp. 317-343), the idea was to account for the "interaction in the zone of proximal development" or the incorporation of individual's actions into a collective activity. This is the reason why one may put changed intersubjectivity as one of the outcomes of learning. Another outcome of learning, in addition to the changes of minds, namely the emergence of a new learning activity, is the 5D activity itself. There is a building activity going on in 5D, the construction of a learning environment informed by CHAT and sociocultural theories of learning and development, a construction that is never finished and fixed, but is developed all the time – by the children, the undergrads, the researchers and possible other participants. As learning activity is an activity producing activity, this should be in focus.

In the second row of Figure 1, I have gone from 5D in general to the specific sites at Ronneby 2002. In the third row, the networked global activity of 5D is seen from the 5D-Ronneby perspective. As the figure is built up, the second row incorporates row 1, and the third row incorporates row 2; they are layers of the 5D activity. The text in the figure is intended to give an indication of kinds of "networkedness" in 5D Ronneby. For a fuller account, see [www.5D.org](http://www.5D.org).

### 3. CONCLUSION

The point of this paper is that "networked learning" would better not be fixated to computer-linkage. Learning is basically comprising other kinds of networkedness or mediation, and this fact ought to be in focus. However, this does not mean that we do not realize that computer-linkage brings something new to learning. The case of 5D definitely illustrates that it does. (See [www.5D.org](http://www.5D.org))

### 4. REFERENCES

- Engeström, Y. (1987). *Learning by expanding. An activity-theoretical approach to developmental research*. Helsinki: Orienta-Konsultit.
- Fichtner, B. (1984). Learning and learning activity – two different types of learning in school and the historical-societal contexts of their development. In: E.Bol, J.P.P. Haenen & M.A.A. Wolters, (Eds.), *Education for cognitive development*. Proceedings from the third international symposium on activity theory. Haag: SVO/SOO.
- Fichtner, B. (1988). The unity of 'substantiation' (foundation) and 'development' in learning activity. *The multidisciplinary newsletter for Activity Theory*, Vol. 1, No. 1-2, pp. 42-47.
- Granott, N. (1998). Unit of analysis in transit: From individual's knowledge to the ensemble process. *Mind, Culture, and Activity*, 3(1), 42-66
- Kaptelinin, Victor, and Cole, Michael (2002). Individual and collective activities in computer game playing. In Koschmann et al.
- Koschmann, T., R. Hall, and N. Miyake, Eds. (2002). *CSCL2. Carrying forward the conversation*. London: Lawrence Erlbaum.
- Newman, D., Griffin, P., and Cole, M. (1989). *The construction zone: Working for cognitive change in school*. Cambridge, England: Cambridge University Press
- Sutter, B. (2002). Instructional artefacts. In: *Proceedings of CSCL 2002*. (Ed., by Gerry Stahl). Hillsdale, New Jersey: Lawrence Erlbaum.
- Alavi, M. (1994). Computer mediated collaborative learning: An empirical evaluation. *MIS Quarterly*, June, 159-174.