

## **The learning and knowledge creating school**

### **CASE OF THE FINNISH NATIONAL DEFENCE COLLEGE**

#### **A brief introduction to the present educational challenges at the Finnish National Defence College**

In the very first Development Laboratory meeting teacher X expressed some of his basic assumptions related to teaching as follows:

##### Excerpt 1

When focusing on the essence of teaching we have to ask what it really is. Obviously it is *the transmission* of culture from the older generation to the younger generation. From my point of view the question about what will be transmitted and where it will be transmitted from is the most essential question... Consequently, the question of how the teacher arranges his transmission duties in practice is a completely secondary issue... From my point of view these kinds of [developmental] activities are *useless*.

Although the above opinion did not seem to be widely shared by the participating teachers, an important question came to the fore: Could it be possible that the current managers of the Finnish National Defence College (FNDC) and also the teachers of the FNDC share the opinions of the teacher X?

In the thematic interviews the managers of the FNDC understood the concept of learning very differently. Some of them emphasized the fact that the students need some background knowledge and understanding to be able to solve practical problems. It could be said that generally speaking learning was identified to be a combination of learning "old things" and creating something "new". Learning was not considered to be limited to "internalization" or "appropriation" of the given information, but it was also seen to have a functional and practical aspect (e.g. the capability to solve practical problems). So also the managers of the FNDC seemed to be challenging the transmission kind of education, but obviously the teachers of the FNDC are not aware of this fact. Hence the question of systemic guidance of the current teaching practices at the FNDC comes to the fore.

In the case of the FNDC, when starting a developmental process, the question of the guidability of societal systems was actually expressed in the following form:

## Excerpt 2

But discussing the change and development of our objectives brings to my mind an idea that there could be such an issue that we cannot guide and affect.

The participating teachers felt that at least they as teachers cannot have an effect on the societal and organizational change processes at the FNDC. Paradoxically, we often tend to neglect the fact that our social and organizational reality consists of individual actors or agents who play a dominant role in the game of life. Giving primacy to the interactionist paradigm (Boudon 1982, Giddens 1979, 1984; cf. e.g. Wenger 1998), it is reasonable to see that without human agency human societies or social systems would plainly not exist. But actors do not create social systems: instead they reproduce or transform them, remaking what is already made in the continuity of praxis (Giddens 1984, 171).

Speaking in a fundamental manner, life is a dialogue among relatively autonomous "embedded holons" (Sahtouris 2000, 52; Allee 2003), or agents, actors, human beings, if so preferred, *all of which are critical to the function of the complex social system.*

Actually when asked about the role of the individual teachers in the Bologna process (see Bologna Process), and in the educational development in general, the centrality of the teachers in the process was a shared opinion of the managers. As expected, the teachers were paradoxically unaware of the expectations of the managers and they all seemed to be unaware of the need to reflect on the very essence of social systems.

Our habituated ways to see our current social reality is challenged by figure 1 (next page, Mäkinen 2006).

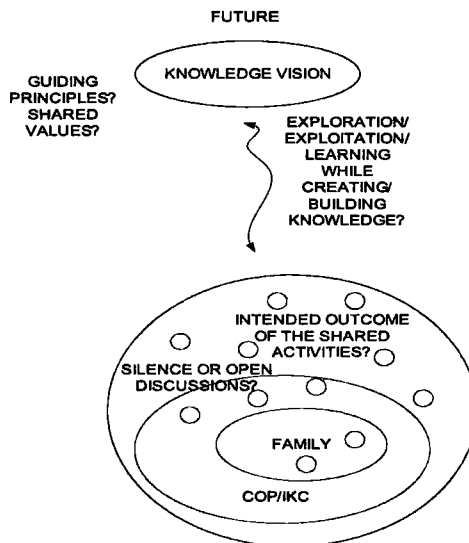


Figure 1. Seeing our social reality from an alternative angle

Figure 1 reminds us of the fact that e.g. in an educational institution, such as the FNDC, relatively many individual teachers (illustrated by the circles in the figure 1) make several influential decisions (e.g. pedagogical; educational) almost on a daily basis. Therefore, it is not appropriate anymore to focus solely on the written curriculum as the one and only object of the ongoing military educational planning processes. Curiously, the layeredness of the curriculum (i.e. written; taught; learned) was already a widely shared interpretation among the managers of the FNDC.

Figure 1 suggests that the attention should be turned towards the shared principles. Here it is assumed and expected that rule-governed interaction among a set of interconnected individuals *can potentially* generate emergent structures (Monge and Contractor 2003, 85, Jackson 2000, 88, Kupers 2001, Anderson 1999, Wheatley 1999), but which ones are the ones currently emphasized and shared at the FNDC?

One main principle often emphasized by the managers was the comparability of the degrees (civilian versus military ones). The principle has been highly valued at the FNDC, aiming to obtain and sustain a university status. The importance of the comparability principle has been increased also through the Bologna process. Despite of this, the degrees of the FNDC have been shifting between comparable and incomparable (Viitasalo 2005).

Another main principle was that the training and educating of soldiers should be based on researched knowledge. The respondents saw that so far the biggest reform of the Bologna process has been the emphasis on scientificity. But what is the essence of being scientific? On the basis of what kinds of shared principles and ethos will the boundary between "civilian science", military science and the ordinary activities of the professional officers be negotiated and renegotiated by each individual researcher on a continuous basis? When the military researchers give reasons for e.g. the choices of text books (cf. choices of theories; various kinds of choices needed to be done during the research process), what kinds of reasons do they give, if any?

The researcher asked about the principles behind the choices of books, and the respondents expressed views like "the classics must be read", "centrality", "stimulating", "offering problems". Explanations related to scientificity or some sort of "scientific ethos" were missing. Obviously much work needs to be done also on the metatheoretical or philosophical level at the FNDC when the basic assumptions of social scientific research are scrutinized.

How about then the shared values of the personnel of the FNDC? During the Development Laboratory meetings the centrality of the values seemed to be a shared opinion, as expressed in **excerpt 3**:

...without values, enduring values, in a way without such energizing values this organization will not even sustain its vitality.

At the moment the FNDC claims that it values e.g. expertise. During the Development Laboratory meetings the researcher connected the ideas of shared enduring values, the espoused values of the FNDC (i.e. the expertise), "goodness" or "badness" of the teaching to the idea of an evaluation sheet for the teacher community (the Teacher's Self-Evaluation Sheet). The sheet allows the teachers to explicitly grasp their personal ideas about good pedagogical expertise and gives a practical example of how the organizational values could and should be operationalized.

During the thematic interviews the researcher tried to identify exactly and truthfully the present social situation at the FNDC and how the situation was seen from the managerial perspective. Each of the respondents was asked to depict *on paper* how he personally saw the present state at the FNDC (position A) and the desired future state (position B)?

The analyzed drawings showed misalignment of the interpretations of the present as well as of the future state of the FNDC. This point can be partly explained by the fact that at the same time the planning process for a new strategy was going on at the FNDC. Now after the new strategy has been completed, it will be interesting to focus on the means by which the identified misalignment (cf. e.g. Biggs 2003; Hakkarainen et al. 2004, 312) and basic assumptions of teacher Xs will be met in the complex system called the FNDC.

### **Analyzing the present situation at the FNDC**

According to the main principles of the cultural-historical activity theory (CHAT), human behaviour is understandable only when interpreted against the background of the entire activity system (Engeström 1987, 2001 ; see Engeström 1987, 73-82 for the explanation how the structure of human activity has emerged through our evolution and cultural evolution). The activity system model offers us a useful alternative solution to conceptualize the social system for organizational developmental activities during e.g. Development Laboratory meetings (cf. the Change Laboratory Method ; i.e. Engeström et al. 1996, 291; cf. in a school context Engeström et al. 2002), as it was done here.

In the first meeting no theories were introduced to the participants and the discussion was intended to be as practical as possible. The researcher emphasized that the aim was to develop the teaching practices by identifying some effective methods for societal guidance. The sheer possibility of this kind of task was severely challenged during the meetings and the following excerpt captures a widely shared opinion:

#### Excerpt 4

Especially in our project, but also in all kinds of activities aiming at developing learning, the basic problem and challenge is the question about the levels. Personally I could identify three possible levels: on the first level there are individual teachers, on the second level there is the system [the FNDC] and on the third level there is an outer level [the Finnish Defence Forces; or the outer area of operations]. The main problem is to choose the proper level, and complete unification of the three levels is not a easy task. Personally I prefer choosing one of these three levels to focus on.

In his comment the researcher explained his point of view by saying that the main question was not necessarily which one of the levels to choose but to identify the intertwined levels and act actively on several levels – the human behaviour is understandable only when interpreted against the background of the entire activity system, as will be shown below.

The researcher introduced the key principles (cf. e.g. Engeström 2001; cf. Mäkinen 2006 where also the social scientific position of the researcher has been explained) of the cultural-historical activity theory to the participants when the shared attention of the group had shifted towards the question about organizational levels. The researcher gave each participant a copy of the draft analysis of the FNDC made by him (Figure 2).

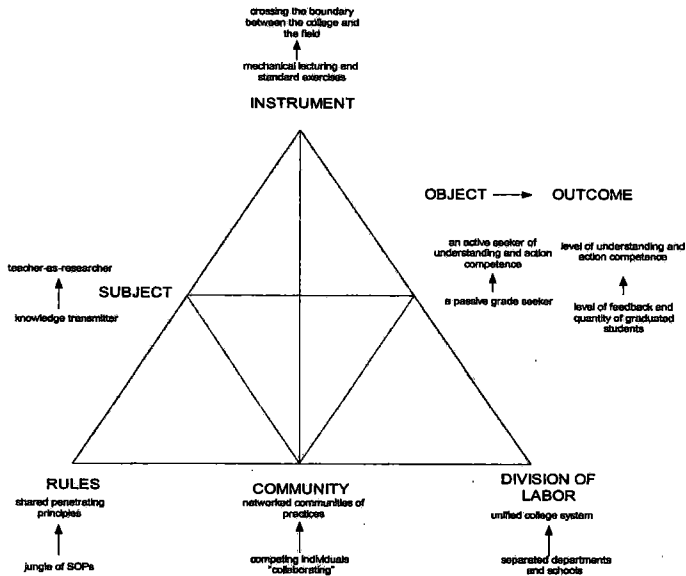
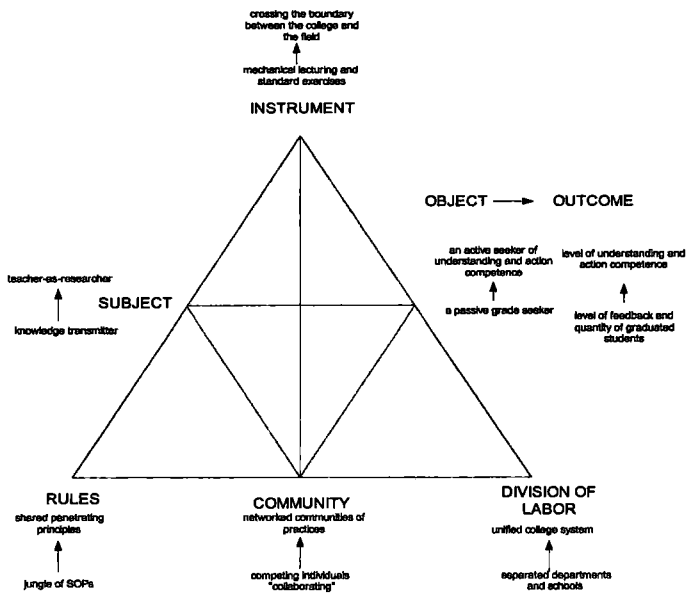


Figure 2. A draft analysis of the FNDC

The analysis shows how each corner of the activity system of the FNDC seems to need developmental actions to be *potentially* "lifted" to the qualitatively higher levels. But how well aligned with the basic assumptions and beliefs of the participating teachers was the analysis? Although the draft analysis was challenged by a simplified alternative (student → teacher → outcome), the gained experiences justify the initial interpretations of the researcher to a large extent.

Figure 3, an elaborated analysis of the FNDC, shows explicitly how well aligned with the interpretations of the participated teachers the draft analysis of the researcher actually was (cf. figures 2 and 3; next page).



**Figure 3.** A draft analysis of the FNDC

There seemed to be some sort of agreement on the need states of the different aspects of the activity system of the FNDC, but despite of this, due to the latent secondary contradiction, the developmental mission was generally felt as impossible; at least for the teachers, but what about the managers of the FNDC?

The reasonability of the level of student feedback as a main result objective was severely challenged by the managers. Obviously the final outcome of schooling in the FDF should be something else than the "level of feedback" and it seems to be justifiable to ask to what an extent we can develop our military educational institutions on the basis of student feedback only.

In the discussion on the object of our schooling (i.e. the student), the managers said that the activeness and the responsibility of the students are highly valued. Recently the PISA (The Programme for International Student Assessment) reports have given some of the managers high expectations on the student population of the FNDC. Contrary to these kinds of expectations, the heterogeneity of the students was identified in a study made with the assistance of the Centre for Educational Assessment of the Faculty of Behavioural Sciences at the University of Helsinki in Finland.

The question of the increasing responsibility of the heterogeneous students is not an easy question at all, but despite its difficulty it needs to be faced on an ongoing basis by the teachers, departments, divisions and schools of the services and branches. The main idea of the need of a close look was put into an explicit form by colonel Douglas Macgregor when he analyzed the transformation of the Armed Forces of the United States of America: "It is unrealistic to expect that military leaders will demonstrate the requisite physical energy, mental agility, and moral courage in war to inspire subordinates to exercise initiative, to innovate, and to take risks if they have been discouraged from doing so throughout their military careers" (Macgregor 2003, 208). The question seems to be highly relevant also in the case of FDF and the FNDC especially at the time of increasing threats of international terrorism.

Presently the educational arrangements of the FNDC restrict the flourishing of the principles of activeness and individual responsibility. Putting the problems into the form of a question, we have to ask whether we will change our key principles or our educational practices in these cases.

### **Modeling our way out of the problematic situation**

On the most simplifying level, development could be described as a movement from A (the current state) to B (the visionary endstate) by Cs (by e.g strategy). Naturally the effective use of even this formula demands that A is appropriately located "on the map".

For an educational institution, which is a complex social system, the transformational development means that *all* the teachers both individually and collectively self-reflect on the "goodness" or "badness" of their educational expertise. A Teachers' Self-Evaluation Sheet has been developed for these purposes (Mäkinen 2006).

After self-reflection, collective reflection is a fruitful next step along the long path of deep educational transformations. Double-hermeneutic (Giddens 1984, 1990, 2001, cf. also Habermas 1984) processes are the key issue for the following steps in teachers' on-the-job-education. A Military Teacher Education Course should be compulsory for

“novice” teachers. Also the relative position of military pedagogy in the Senior Staff and General Staff Officer education needs to be reconsidered. The pedagogical expert status of the Department of Education should be supported by all available means.

Life-long teacher education is a necessary but not sufficient prerequisite for the future aligned educational reforms and transformations (Mäkinen 2006). If one of the main educational principles of the FNDC is that the training and educating of soldiers is done on the basis of researched knowledge, it logically follows that every teacher should be a researcher, and more precisely, a progressive inquirer (cf. e.g. Dewey in Campbell 1995, Bereiter 2002, Hakkarainen et al. 2004, Hakkarainen et al. 2005, Hakkarainen and Palonen et al. 2004).

But a teacher is not just a researcher, he is also a leader. Therefore, the teachers’ management and leadership development are essential parts of the teachers’ on-the-job-education. The core expertise of the military teachers at the Finnish Military Educational System (FMES) *should* be pedagogically, managerially and also leadership oriented.

According to the espoused beliefs of the managers, the teachers play a central role in educational transformations. Now it seems to be the right time to turn these espoused expectations into systematic teachers’ on-the-job education, especially when the alignment in research-based teaching seems to be the desired end at the FNDC.

When aiming towards future alignment at the educational institution, figure 4 allows us to locate ourselves in the situation of the FNDC and its personnel.

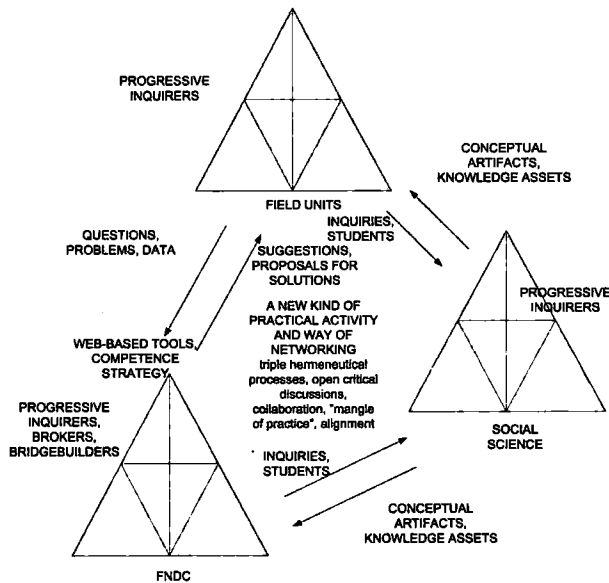


Figure 4. An example of the knowledge creating activity at the FNDC



Instead of being guided by the feedback of the military units and other profit centres of the FDF and the Finnish Border Guard (FBG), the FNDC should be aware of how powerful an impact their activities have on the key resources (i.e. knowledge) of their "military consumers".

Paradoxically, those practices for which people should be educated today *do not exist yet* (Hakkarainen and Palonen et al. 2004, 203). For the FNDC this means that it cannot solely focus on the present problems in the field (although it cannot neglect them either) but has to pay attention also to problems of the future. The FNDC is practically shaping the future of the FDF and the FBG, and the visionary future state of the FNDC has to guide the educational activities of the FNDC.

The future of the FDF will be shaped by the individual actions of the progressive inquirers and their communities (i.e. communities of practices: CoPs; innovative knowledge communities: IKCs; see figure 1), and the main question is how to guide these kinds of activities. For these kinds of purposes the organization needs a vision – a shared knowledge vision (Senge 1990, Collins and Porras 1994, 219-228, Collins 2001, 108–110, Nonaka et al. 2001, Mäkinen 2006) made within the organization. Not just the content of the knowledge vision but also *the method how it is elaborated and what the ensuing actions of the knowledge vision are*, are crucial and fundamental questions for the FNDC.

The FNDC has added the concept of "human security" and "learning organization" to its strategy (to the "knowledge vision"), presumably being followed by collective progressive inquiries into the phenomenon determining how the knowledge base of the FNDC and the FDF will be evolving in the long term. It seems to be obvious that human security will be guaranteed by the collective effort of several administrative branches and non-governmental organizations. But what this kind of knowledge vision means to the FNDC and for the education of officers, needs to be elaborated, because it will not emerge out of the blue. For the FNDC this requirement means that it has to *justifiably extend its networks* to be used for knowledge creating activities and by its progressive inquirers.

## **Examining and implementing the model in practice**

The Teachers' Self-Evaluation Sheet has been developed since 2001 and during the past years the Department of Education of the FNDC has had practical experiences of its use. The practical meaning of the sheet will naturally vary when it is used, but so far it has been used as an additional tool in annual planning discussions at the FNDC. The deepest layers of the educational institution are not neglected anymore, and the harsh social reality of the teachers is faced and improved.

The systematic use of the evaluation sheet allows us individually but also collectively reflect on the "goodness" and "badness" of our teaching expertise and to articulate tacit knowledge into explicit knowledge (Nonaka and Takeuchi 1995, 62-70; Nonaka and Toyama 2003, 495-498). Further on, its use will allow us to increase our interdepartmental and interorganizational connectivity, which seems to be a crucial success factor for an educational institution in the Knowledge Age.

Ultimately this kind of knowledge creation process allows us to reflect on our deep-seated cultural basic assumptions about the "machine-like bureaucracies" claimed to be "static" instead of "dynamically organic". Instead of being fully hierarchically controlled in a top-down manner where the decentralized nature of complex social systems is neglected, the shared responsibility of the teachers and the other personnel working at the FNDC will be hopefully emphasized in the future.

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