Expertise sharing in networks

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For school culture there are challenging times. Groups are more heterogeneous, and more and more pupils need special support. The teachers want support for coping with more difficult problems in their work. The article describes the Learner's Support (Oppijan Tuki) System and the study focuses on the model. The system was developed for the changing needs of school culture. The purpose of the Learner's Support System was the cooperation and the expertise sharing in the network. The aim of the study was to clarify and create patterns of networking and expertise sharing using the method of accounts. The development of the network was described as a three-step process, which led to motivation to continue changing the school culture.

Keywords: expertise sharing, networking, resource centres, school culture

Introduction

The principle of equality is fundamental to the Finnish education system and Finnish culture. The aim is to ensure that each child and adolescent has an equal chance to learn. The results of this are seen in international comparisons in the high level of learning results, which are also quite even. Weaker students are supported most to ensure even results and, therefore, poorer performances are of a relatively high level in international comparison (Linnakylä et al. 2005; Lehtonen 2006). However, increasingly heterogeneous classes and the growing needs in special needs education have increased fears that learning will polarize into learners and drop-outs (Statistics Finland, 2008). Marginalization is on the increase. All this puts a great strain on the teachers, who are very committed to their work (Välijärvi et al. 2007). The concern for teachers' fatigue is real. In this context the Learner's Support (Oppijan Tuki) System was developed on the initiative of teachers and professionals in special education.

Learners' Support is a model of networking and expertise development and sharing. The networks of the Learners' Support System served as the teachers' learning environments. An aim of the model in the cooperation between the school staff and interest groups was to develop learning environments in which learning was based on students' readiness and needs. The focal action was to support teachers and educators in identifying different learning needs and to support the teaching of learning to learn. The

model was innovative. Co-operative and interactive work had not previously been part of Finnish school culture. The Finnish school system has been characterised by a tradition of working alone (Jokinen et al. 2006).

The purpose of this article is to describe and show how networking and expertise sharing took place in this model as a part of teacher's work. The research context, the Learners' Support System, is first described, after which we present the aim of the study and the theoretical and methodological approaches. After these, we describe the implementation and results of the study. The article concludes with a discussion that situates the topic in a wider context.

The Learner's Support System

The Learner's Support System was implemented in Finland in and around the southern Finnish town of Hämeenlinna and involved eight municipalities, with about 750 teachers and 12,000 pupils. The key elements of the model were the resource centres and the pedagogical support persons (see Figure 1). Almost all the support persons operated in the resource centres. The activities of the resource centres were based on their own initiative. The support persons informed the coordinator of their willingness to participate.

The coordinator took care of many practical things as a project coordinator in any other project. The mentor group consisted of authorities in various professional fields, including a chief education officer, an educationalist, a teacher, a psychologist, a school welfare officer, a social worker etc. The mentor group developed visions of a future function, created theoretical and practical frameworks and provided multi-professional cooperation. The Department of Teacher Education of the University of Tampere directed studies at the Learner's Support System. Several master's thesis and one doctoral dissertation were produced in the course of the project.
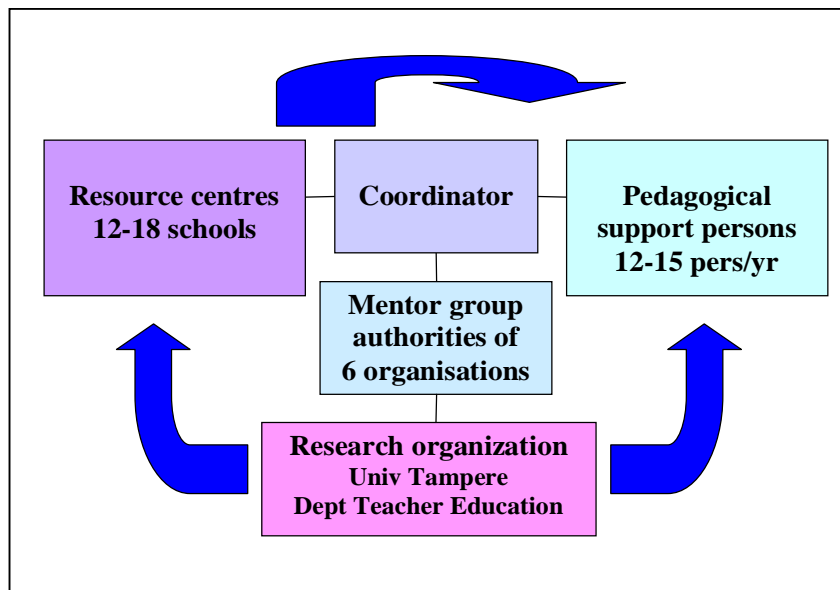
Figure 1. The Learners' Support System

The Learners' Support System was briefly funded by the Ministry of Education, Finland. The model was an economic system. Only the coordinator was paid a regular salary. The pedagogical support persons billed for sharing their expertise, and the resource centres received a small amount of start-up money for materials acquisition. However, this small financial support was essential.

The aim of the study

This study concerns the phenomenon of networking and expertise sharing in the Learner's Support System. The aim of the study was to clarify and create patterns for networking and expertise sharing in the resource centres. The resource centres are also called resource schools. The main question was:

> *How do networking and expertise sharing take place as a part of teacher's work in the resource schools?*

The other research questions were
- *How have the schools become resource schools?*
- *How do innovative ideas develop and spread?*
- *How does the action of resource schools change school culture?*

In order to elicit answers to these questions, the study proceeded with next phases. First, the researcher acquainted herself with the activities and aims of the resource schools and considered the activities of these schools. Second, the researcher investigated how the teachers in the resource schools became aware of the special purpose of their

resource school and how networking and interaction developed. The third phase was to identify and understand the elements of the development of networking and expertise sharing in and between the resource schools.

The theory behind the study – theoretical frame of reference

This section is concerned with the essential theories behind the study. Ideas of learning in social context we rely on the theories of Vygotsky (1978; 1982) and Engeström (1987; 2004). The frame of Vygotsky's and Engeström's theories is the Culture-Historical Active Theory of Vygotsky 1978 and Leontjev (1977). Vygotsky discovered that language is a very important tool in learning. Individuals can form their consciousness and develop their ability to understand abstractions through social interaction. Vygotsky argued that the development of humans' higher mental functions first occurs in the social context. In the theory of the Zone of Proximal Development Vygotsky described the difference between what a child can do without help and what he or she can do with help. Engeström has developed the theory of Vygotsky and located it within a dialectic approach.

Engeström shares Vygotsky's views of language and other tools in cultural development. In his theory of Learning by Expanding Engeström focuses on transformation in work and organizations. The research combines micro-level analysis of interaction with historical analysis. Working through developmental contradictions the researcher can make a model with organizations.

Developmental Work Research (Engeström 1995; 2004) enabled us to look for a progressive way to develop networking and expertise sharing in and between the resource schools. Figure 2 (Engeström 2004, p. 61) shows the cycle of expanding learning. At the beginning of the study the researcher made an ethnographic analysis of the current situation in the resource schools.
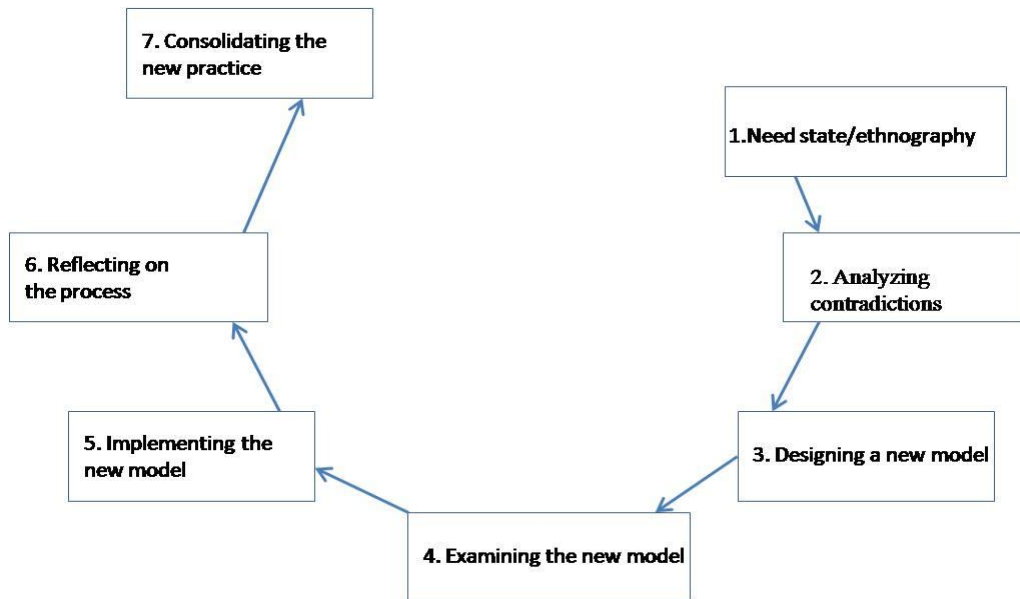
Figure 2. The cycle of expansive learning (Engeström 2004, p. 61)

The cycle progresses as follows. For need state (1) and analysing the situation of the resource schools (2) observations, interviews and a document analysis were made. At the beginning of designing (3) and examining the new model (4) we organized a consultation with the head teachers of the resource schools. The new model was formulated using the data collected. In the consultation the target was to find the most important elements of expertise sharing between teachers by discussing and analysing the new model in group interviews. Several interviews with experts were conducted. The next steps were to implement the new model (5) and reflect on the new practice (6) in and between the resource schools.

The Learner's Support System held several seminars aimed at helping teachers in the resource schools to develop their networking and expertise sharing. The seminars functioned as interventions in the cycle of expanding learning. The resource schools developed their activities in expertise sharing in their major strengths.

In this study, a large amount of data was collected using various interviews. The interviews, observations of seminars and documents were the basic material for *the method of accounts*. For reflecting the process the method of accounts was used one year apart. We will describe the method of accounts next.

The method of accounts

The roots of the method of accounts go back to criticism of exact science in social psychology in 1970. Harré and Secord (1972, p. 30-32, 57) asked in their book *The Explanation of Social Behaviour* "Why not ask them" when they criticized the sociological way of doing research. They tried to show the new direction — ethogeny — of social psychology. Social behaviour cannot be interpreted mechanistically nor can human beings be measured exactly as it they were passive objects. The main data for social science can be obtained from people themselves. Individuals' own accounts of their behaviour provide information on the meaning of their actions.

The experiences of networking and expertise sharing of teachers were studied using the method of accounts (see Laitinen 1999). The data was collected from interviews with experts, thematic interviews with teachers and special needs teachers, group interviews with head teachers, reports, observations of seminars and documents. Using the data, two different accounts were written by the researcher one year apart. These accounts were commented and amended or rewritten by the teachers of the resource schools. Through the accounts we could make a micro-level analysis of the teachers' experience of networking and expertise sharing. First, the accounts were used to analyse the contradictions between resource schools and second, for reflecting the process of development of networking and expertise sharing and, furthermore, for consolidating the new practice.

Results

Three components of networking

Using the method of accounts and considering the construction of the accounts in the cycle of learning by expanding, three components of networking and expertise sharing were found. In addition to this we traced out the process of the development of the network.

Three components of networking and expertise sharing emerged: *1) cooperation, 2) supportive structures for interaction and 3) collective expertise.*

The forms of cooperation used were visits, inter-school training events and visiting lecturers. The staff found them important and empowering. One teacher described his experience:

> I realized how many ways teachers put their hearts into cooperation! Naturally I also felt willing to share my know-how.

The expertise was shared successfully when the Learner's Support System itself, the project coordinator, the pedagogical support teachers, the joint seminars, discussion

forums, visiting lecturers, training sessions and visits supported the action. They were deemed significant for passing on information and absorbing new operating principles. One head teacher described his experience:

> The best thing is that dealings with other resource schools gradually increase new practices.

The feeling of collective expertise sharing was reported to enhance cooperation within schools, between schools and between different professionals. One head teacher described her experience:

> I understood how significant empowering atmosphere of meetings of head teachers were. It turned out that head teachers could observe the development of their school from a distance — good distance compared with everyway school work. I realized that head teachers too often work alone.

Another head teacher described his experience:

> In future we'll need more professional leadership in schools.

Furthermore, the established borders of administration were crossed. Communal ways of working and meetings motivated staff to develop their work, enabled the reflection and evaluation of one's own school and revealed expertise in schools allowing others to see teachers' pedagogical methods. They also added open discussion and frankness to processing conflicts at work.

A new vision of being a teacher can develop in open and flexible environment. It challenges school system to find the real core of work in schools and to find solutions to the various needs of pupils. Expertise sharing and networking create new levels of pedagogic competence.

Networking as a process

The development of the network was described as a three-step process. The first phase was where the staff in an individual school tried to find a solution of their own and where they became aware of the need for pedagogical development and of their own expertise and inadequacies. The second phase was re-evaluating one's own school culture. The support of the head teacher and growing confidence in displaying one's own expertise supported the development of starting up networks. In the third phase the experiences of networking encouraged staff to continue changing the school culture.

The three-step process is shown in Figure 3 (Jyrkiäinen 2007, p. 138), with one axis *Expanding object* and another axis *Expanding cooperation*. The school culture was changing in a more open direction when financial support and meetings between various professionals enabled the construction of networks.
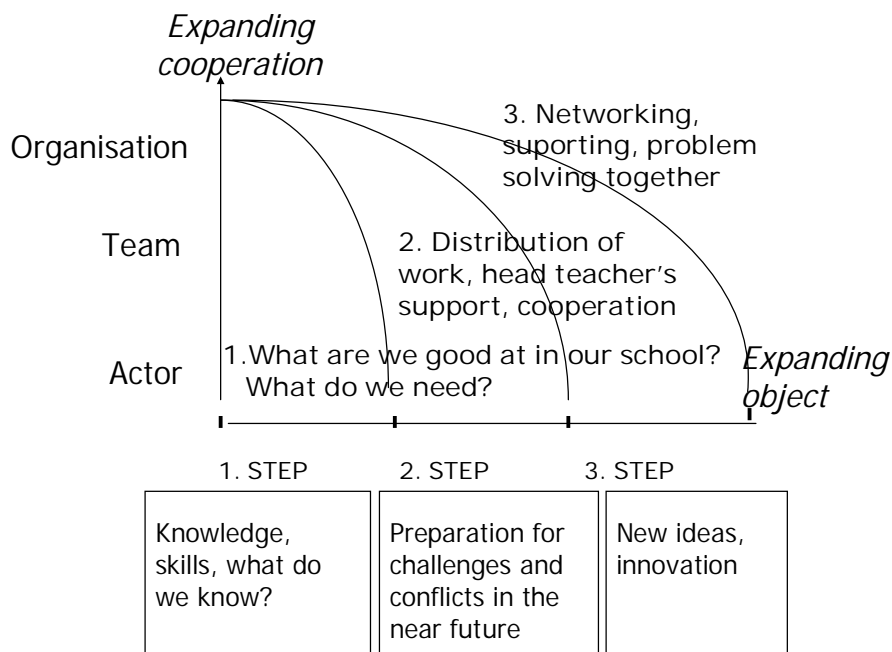
Figure 3. The development of the network as a three-step process.

New pedagogical ideas and innovations need different kinds of support. Actors in schools must not be left alone. The challenge is to find the best way to support the professional identity of teachers.

Discussion

Global social challenges will change the community and the culture. Finland has been a culturally homogeneous country, and it has moreover been exemplary in taking care of its minorities. There are two official languages, Finnish (spoken as a mother tongue by 94 % of the population) and Swedish (spoken as a mother tongue by 6 % of the population). Other minorities are relatively small. In the PISA data, for example, non-native students and those not speaking the language of assessment accounted for a mere 1.8 % of all Finnish students (compared to the OECD average being 4.6 %) (Välijärvi et al. 2007). The need for and the mobility of the foreign labour force will increase the cultural diversity in Finland. With the prospective increase in the number of non-native students and multi-cultural teaching groups, Finland too may be expected to be faced with entirely new educational challenges.

Carrying out the principle of equality, on which Finnish education policy has been largely premised, will be a demanding assignment. Efforts to provide all population groups and regions of the country with equal educational opportunities will need

political decisions and innovative pedagogical solutions. The changes of the social life, the multiculturalism, the principles of integration and inclusion, among other things, will increase heterogeneity in teaching groups. Teachers know that no student can be excluded and sent to another school, and they are worried about the demand to cater for individual needs of different students in large heterogeneous groups. The growing differences between schools and the increasing number of students with school problems cause strain. The increasing problems cannot be solved with expedients in special education. At the time of writing a political debate was in progress about the size of groups in schools.

In several education problems Finnish teachers are helped by a considerable degree of decision-making authority regarding school policy and management. Schools and teachers have a high degree of autonomy in pedagogical and curricular practices. Schools make their own curricula based on the Finnish national core curriculum. Teachers have a say in choice of textbooks, they can largely determine course content, establish student assessment policies, decide which courses the school should offer and allocating budgets within the school.

But then again, teacher's autonomy enables the teacher to withdraw in his/her own class behind closed doors. It is a danger that new generations of teachers will try to cope alone with the more complicated problems in their school work. In the Learner's Support system teachers were satisfied with the cooperation they experienced. The cooperation forms were implemented simply. Visits to different learning environments, discussions and collective education meetings were experienced as empowerment. The teachers had a chance to release for a while from their own work, to get acquainted with the work of a teacher in some other school, to consult, or to personally instruct colleagues in the area. It was significant in the meetings to realise the value of one's own and other's work, to discuss problems, challenges and achievements, and to disseminate practical ideas and intentions.

Similar results have been reported from the Learning to Learn Project (Hall et al. 2006), in which teachers and researchers addressed themes agreed in advance. Researchers described this cooperation as boundary crossing in the frame of the Theory of Expansive Learning by Engeström. Hall's group found that by supporting teachers to carry out their own work, teachers were encouraged to use "cultural implements" in work and study. The impact also reached the colleagues of the research teachers. The change that the teachers themselves experienced and carried out, also helped to change the environment. The focus of Hall's group was to integrate action research and teaching work in cooperation with university researchers.

On the Mentoring Project (Jokinen et al. 2006) researchers likewise created models to support novice teachers' learning at work and professional growth. The focus of this study was making mentoring a tool for supporting teachers' professional development. Finnish schools have no formal statutory system for inducting new teachers. Individual

schools can freely choose how to organise the orientation process. There are great differences between schools as to how induction takes place, so induction arrangements are casual and often there is a failure to provide any induction at all. On the mentoring project, novice teachers found their place in the work community when they were encouraged to exploration, experimentation and risk-taking. A common result with the Learner's Support System, the Learning to Learn Project and the Mentoring Project was the encouraging effect of scaffolding, interaction, cooperation and structures in the change of teaching and school. Collaborative working can be encouraged by building different partnerships – local partner schools where school staff can meet regularly to discuss pedagogical themes, mentoring groups or pairs within schools, councils or regional areas, as well as cooperative research projects between universities and schools, which can help to find and support the start-up of networks. Starting partnerships can be facilitated, for example, with the help of a coordinator, common training events and decreasing the number of lessons given by individual teachers to provide them with real opportunities for improving their professionalism.

This study offers a base for further research. The next questions include: 1) How could teachers' work be improved by networking and dividing flexibly and innovatively inside the school? 2) How should responsibility for school development be allocated? 3) How could the methodical experience of the present study be exploited and enhanced?

Conclusion

The teaching community is constrained by a powerful myth of individual competence, one of the factors that makes it difficult for teachers to share their burdens with colleagues. At the same time, the demands on the teaching profession are increasing. Teachers are expected to be able to take an active role in improving schools and their learning environments. They are also expected to update their professional skills, to cooperate with different stakeholders in the community, and to be active citizens (see Niemi et al. 2006). Additionally, the school organisations which face momentous problems, such as polarisation and marginalization, cannot sufficiently improve their performance in short term projects. In light of this study it is suggested that more resources should be allocated to the structures which support interaction in the school organisation. Building cooperation, partnerships and functioning networks requires initial resources so that creating new modes of action, confidential contacts and trusting relationships can achieve permanent changes. The renewal of pedagogical solutions requires financial and moral support, time and space in order to be widely adopted in everyday school life (Jyrkiäinen 2007).

Finnish teachers are highly educated, pedagogical experts. They are moreover well acquainted with various learning and teaching methods and also with educational research. Many of them are motivated to develop their professional skills through further education and training. School culture must provide support and opportunities to

use this creative and innovative human resource powerfully in the best interests of our children.

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