



The work in the classroom for sloyd

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Abstract

The article takes as its starting point the practice of sloyd [slöjd] in the Swedish comprehensive school. There has been little scientific documentation of the work in the classroom for sloyd. The lack of research results contributes to loose assumptions and unfounded opinions about the subject. The issue of this article is firstly to give an account of how pupils, teachers and parents, within the Swedish Board of Education's national evaluation perceive sloyd work and the subject sloyd. Secondly, the issue is, based on research carried out in the classroom for sloyd, to provide an insight into what pupils to some extent do and thereby can learn in sloyd when they work in the classroom. Within the framework of this article – and by 'Opening the door to the classroom for sloyd' – I will describe the work in words will, hopefully, contribute to a greater insight into what learning is possible.

On Sloyd work in the Swedish comprehensive school

The Swedish Board of Education was responsible for a large evaluation of the comprehensive school, *NU-03* (Skolverket, 2004, 2005). The evaluation was carried out in 2003 for the 9th grade with a nationally representative selection of schools. The aim was to obtain knowledge of the comprehensive school's development in the 1990s until today and to give an overall picture of the goal attainment in the comprehensive school by subject and from an overall perspective. The evaluation instruments were largely similar to those used in the previous evaluation in 1992, *NU-92* (Johansson, 1994, 1995; Skolverket, 1994). During the two evaluations of the subject Sloyd, a process study of the pupils' and teachers' diary entries was also carried out together with a follow-up pupil questionnaire (Hasselskog, 2004; Johansson, 1994, 1995; Skolverket, 1994, 2004, 2005). Below, is a summary of how pupils, teachers and parents,

in their answers to questionnaires in NU-03, perceive the subject sloyd in comprehensive school and the work in the classroom for sloyd (Skolverket, 2005).

In NU-03, the pupils' opinion of the subject sloyd is by and large very positive. Sloyd is regarded as one of the most enjoyable subjects at school at the same time as both parents and pupils say that sloyd is one of the subjects they consider to be least useful. The pupils say that they are very committed, are very interested and feel that they have great influence. They like the lessons, take pleasure in the work and state that they have built up their self-esteem, they have developed *personal qualities* during the sloyd lessons. The teachers feel that their role as teacher is fun, developing and interesting, but at the same time they feel stressed. Sloyd is a subject where the pupils on the other hand seldom feel stressed. In sloyd, they can work at their own pace, they feel that they can work without being compared with each other, and that failure is permitted. The pupils try to do their best in sloyd and they think that they are allowed to show what they can do (Skolverket, 2005).

Compared with other subjects, the subject of sloyd has a unique position in the Swedish

comprehensive school when it comes to *pupil influence*. They state that they are allowed to take their own initiatives and responsibility in sloyd. In the results for the subject sloyd in the previous evaluation (NU-92), the analyses showed that different levels of influence had an impact on the prerequisites of learning (Skolverket, 1994). Furthermore, pupils' influence of their sloyd work has increased in NU-03 (Skolverket, 2005).

In NU-03, the teachers state that they focus on *readiness to act* while the pupils disagree. On one hand society development have resulted in our increased dependence on other people's knowledge. We have become spectators, watching what other people do in magazines and TV. We have instead developed a need for knowledge and the readiness to act is to a large extent a matter to be able to choose, value, evaluate different alternatives and reach a decision. On the other hand there is a greater interest in clothes, furnishing and do-it-yourself in the home. Then readiness to act is to be able to use tools and machines and materials and utilising one's own experience in new situations. Readiness to act is, of course, not only connected with the subject sloyd, it is also developed in the school as a whole and in the pupils' everyday life (Skolverket, 2005).

The evaluation shows that the focus in today's teaching of sloyd as regards *knowledge of sloyd* is on techniques, tools and materials. However, the pupils find it difficult to see the importance of knowledge in sloyd. The pupils state that sloyd is one of the subjects they consider to be least useful. One of the contributions of the subject is that the pupils can acquire knowledge of materials and tools and that they have to experience the whole production process during the work on transforming materials from ideas into finished sloyd objects. The pupils' work from idea to finished object can offer unique opportunities for discussion, understanding and concrete action based on environmental and resource management aspects (Skolverket, 2005).

NU-03 focuses less on areas such as equality, economic and environmental perspectives as well as aesthetic and functional values. The pupils' work from idea to finished object can offer unique opportunities for discussion, understanding and concrete action based on environmental and resource management aspects. *Gender questions* have a special position in sloyd as a subject. The teachers do not see any differences between girls and boys when it comes to the pupils' interest in sloyd. The pupils feel that the sloyd teacher treats boys and girls in the same way. The teachers feel that sloyd as a sub-

ject contributes to increased equality. The Sloyd subject is usually divided into two types of sloyd with only female teachers of textile Sloyd and only male teachers of wood- and metal work. In their teaching, the teachers meet pupils who, when they are allowed to influence the choice of type of sloyd, are mainly of the same sex as themselves. The pupils' state that the learning environment in sloyd is open and tolerant, irrespective of ethnicity, sex and cultural or social background (Skolverket, 2005).

In NU-03, considerable importance is attached to the sloyd process and the pupils' creative, independent work. The work starting from the pupil's own ideas arriving at finished objects through the whole production chain is a characteristic *way of working* for sloyd as a subject. The pupils state that they have developed when it comes to solving problems and that they have learnt to reflect on their own work. Problem solving in sloyd is based on problems that are unique to each pupil in every assignment. Sloyd is the subject where most pupils answered that they "work independently" (Skolverket, 2004, 2005). Pupils are allowed to talk while they are working together, and they can help each other. Analyses of the diaries in NU-92, NU-03 and results from video recordings made while the pupils are working in the sloyd classroom (e.g.

the video extract concerning laying out patterns in this article) show that considerable interaction takes place even though the pupils are working on their own sloyd objects (Hasselskog, 2004; Johansson, 1994, 1995, 1996, 1999, 2002, 2005; Skolverket, 1994, 2005).

However, despite these positive references to how pupils experience the sloyd subject, the legitimacy of the sloyd subject seems to be weak. In NU-03, when parents were asked to rank the five subjects most important for their child's development and learning, only 4.2 percent chose sloyd as one of these. Sloyd and chemistry are the school subjects least valued by the parents (Skolverket, 2004, 2005). The parents' answers in NU-03 can be compared with Johansson's study (Johansson, 2002), which also concerned parents' conceptions of their children's knowledge of sloyd. When the parents in the study were asked to comment on the usefulness of the knowledge their children had acquired in sloyd at comprehensive school, they answered e.g. "hopefully, purely practically useful", "good complement to more theoretical subjects" or "the practical teaching is important as it balances the theoretical teaching". A dominating conception of knowledge of sloyd held by the parents was that the knowledge was considered to be 'practical' and functioned as a compliment

or counterbalance to 'theoretical' knowledge. Unfounded assumptions have been built into the words. In comparison with other school subjects, the parents said that what characterised sloyd was that the pupils learned to work with their hands. The parents in the study linked the use of knowledge of sloyd to specific professions such as pre-school teacher, sloyd teacher and carpenter, but not to other so-called 'practical' work such as in a dental practice, a kitchen or round an operating-table or in a car repair shop. According to the parents, the contexts for utilising the knowledge and experiences gained from sloyd lessons were mainly in the home and they said that the knowledge might *possibly* be useful later in life. In addition to the collective view in which the knowledge is emphasised as being 'practical' and a complement or counterbalance to 'theoretical' knowledge, the parents referred to their own opinions and experience from school and sloyd lessons.

Pupils and teachers write about work in the classroom for sloyd

When the pupils in NU-03 were asked to describe the subject sloyd in no more than three words to somebody else, they used words such as "free, nice, social", or "tough, fun, exciting" or "different, fun, not too easy or difficult" (Skolverket, 2005). In answers to open ended ques-

tion, the subject was described as being "a free subject where you don't just sit in front of the blackboard", or "I think it's a fun subject. You're allowed to decide what you want to work with. It's also fun working with one's hands".

In diary texts, written over a period of time, pupils and teachers describe in more detail the work done in the classroom. Writing a diary about the work done in the classroom during the sloyd lessons was introduced in conjunction with the Swedish Board of Education's evaluation of the comprehensive school in 1992. Today, writing a diary during the sloyd lessons is common in school and the method has also been used in research and in NU-03 (Hassel-skog, 2004; Johansson, 1994, 1995, 1999, 2002; Skolverket, 1994, 2005).

Karin, 6th grade, who is going to woodwork and metal work lessons, writes in her diary during the lessons about her work on a pedestal for a flowering plant (Johansson, 2005, p. 104):

Lesson 1.

Today, I've been sanding my pedestal with sandpaper. I helped Regina to glue her pieces of plank for her stool. Regina put glue on the outside so we got very sticky but we managed in any case.

Lesson 2.

Today, I measured the legs for my pedestal. I'd thought of having it a bit higher, but it would have been wobbly. Malin wanted me to paint a bird on a piece of wood for her because she couldn't do it herself. So I did it for her. I also showed Regina how to plane her stool.

Lesson 3.

Today, I've been sanding my pedestal legs and drilling holes in the in the seat and I found screws. I helped some of the others with small things. I also didn't do it in the same as the teacher showed Linda. But it worked out OK too.

Lesson 4.

Today, I drilled large holes in the stool so I can push the legs into place. First, I glued the legs and then I screwed them. Since glue has dried on the top, I'll have to sand a bit more.

Lesson 5.

Today, I finished sanding the stool and it's finished. So now I'm thinking about what to do. While I was thinking, I helped Regina to sand her stool legs so that they fit in the holes drilled. By the way, I've sanded the legs for my stool smooth too.

Carl, who teaches woodwork and metal work, writes in his diary about the work in a sloyd group in the 6th grade (Johansson, 2002, p. 112):

Mattias took the shelf and set off for the painting room. He so wants to get it finished now. But I was forced to ask him to sand the back piece. The girls with the enamel are managing just fine now. Jonny got started with a CD rack after a short discussion. The two boys building a CD rack are really independent; today, they soldered and have begun to install the engine. ... The girls with the mirrors have been plugging the joints and have sawn the back piece. I discovered I didn't have enough mirror glass. Has to be fixed, without money. Must talk to the caretaker, they sometimes find some in the refuse storage room.

Sandra, 6th grade, who is going to textile craft lessons, writes about her work on a "vest dress" in her diary (Johansson, 2002, p. 153).

Today, I started on a vest dress. We had to make it a bit shorter because otherwise it would have been too low-cut. I hope I'll get it finished next time. It wasn't specially difficult. I haven't anything learnt new, not that I've noticed.

The above three diary excerpts are only examples of how pupils and teachers can describe sloyd work in their own words. Each situation is unique and each person writes about his or her experience. The first diary excerpt above shows that Karin's work on her own pedestal is accompanied by considerable interaction with other pupils. In the diary texts, we can follow the pupils' reflections about their work, although they seldom write about what they have learnt. In the third diary excerpt, Sandra writes: "I haven't learnt anything new, not that I've noticed", but even for a person familiar with patterns and sewing, the work on "making shorter" because of the low neckline using a paper pattern or part of a pattern involves the coordination of several abstraction processes. Sandra's comment, that she hasn't "learn anything new", is interesting in relation to both the results from the national evaluation and to the excerpts from the diaries above. It raises a question as to what is it that parents and pupils related to when they answered the questionnaire from NU-03. The issue of this article is to explore what it is that pupils do – and thereby are given opportunity to learn – in a school subject that is highly appreciated but not educationally valued by pupils and parents.

Video documentation of work in the classroom for sloyd

Diary entries give a rich picture of how pupils and teachers describe their work during sloyd lessons, but what the pupils write that they do does not necessarily correspond with what they in fact do. One goal of my research was to in greater detail study what pupils do and how they work during sloyd lessons (Johansson, 1996, 1999, 2002). With the help of video recordings of the work in the classroom for sloyd, the integration between both verbal and non-verbal activities such as eye contact, gestures, body language and movements can be documented and analysed (Atkinson & Heritage, 1996; Erickson, 1992; Goodwin, 2000; Silverman, 1995). Video recordings enable the complexity in interactions to be documented and utilised for repeated and detailed analyses.

Detailed analyses of video-recorded sloyd activities in school show that a large amount of verbal and non-verbal interaction (body language, gestures, facial expressions and joint actions) takes place during pupils' work in the classroom for sloyd. The pupils solve the problems by means of social interaction, even though they are working on their own projects. Several pupils participate and interact in sloyd activities, taking as their starting point their own and each other's

knowledge and experience. The pupils talk, watch and show when they switch between helping and being helped. Sloyd activities offer unique opportunities for learning via participation with elements of the sort of communication that characterises master-apprentice situations. The master is not always the teacher, the pupils themselves take turns assuming the role of being knowledgeable. The activities are developed in interaction between persons, the situation and the surroundings both in and outside the school and between the lessons over time. To a large degree, the communicative aspects of sloyd share an unconscious form of knowledge, which both teachers and pupils can be made aware of (Johansson, 1999, 2002, 2005).

An example of pupils' work in the practice of sloyd is given here in the form of parts of an excerpt, *Laying out a pattern*, from a video recording in 8th grade (see Johansson, 1999, p. 103–108, and 2002, p. 79). The excerpt is taken from work in a textile craft group of 15 pupils. The activities taking place in the classroom for sloyd are intensive and varying. The pupils move about freely and talk a lot with each other. Nevertheless, the impression is one of a calm group of involved pupils. The pupils are working on varying assignments and are at different stages. Some of the pupils are sewing an article

of clothing such as a blouse, a skirt, a dress or a simple jacket. Other pupils are knitting and crocheting and one pupil is doing patchwork. During each sloyd lesson, all the pupils help in readying a common warp for a loom.

Malin, who, according to her diary, is going to "sew a dress in sloyd", has cut out her paper pattern (the pieces of the pattern for the front and back sections). *Malin* is standing at the back of the classroom at a large cutting-board

and is going to fasten the pieces of the pattern to the fabric, which is folded in two, with pins before cutting. Another pupil, *Anna*, is cutting out her pattern for a skirt at her workplace at the front of the classroom. The teacher (*LÄR*) goes to the cutting-board. *Maria*, goes to the cutting-board and waits for help from the teacher. In the following two parts of the excerpt from *Laying out a pattern*, *Malin's* and the teacher's work are described in *Part 1 (a-b)* and *Malin's* and *Anna's* work in *Part 2 (a-d)*.

Excerpt: Laying out a pattern

PART 1:a

Who	Does what	Says	Other
1:1 Malin	Holds and pulls at her tape-measure	<i>How do I measure? Why do I have to measure?</i>	The teacher is standing on one side of the cutting-board
1:1 LÄR	Moves the box of pins (which consists of a weight with a magnet holding the pins)	<i>The thing to do now, this, getting things grain line</i>	
1:2 Malin	Pulls at the tape-measure	<i>So that ... What is it?</i>	
1:2 LÄR	Shows with her hand along the length of the fabric. Points along the grain line of the fabric	<i>Well. In this fabric, you have the grain line going like this. Like a warp, just like on that loom there</i>	<i>Maria comes up</i>
1:3 LÄR	Points with her hand across the fabric	<i>Then you have the weft, which goes like this, in the other direction</i>	

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Who	Does what	Says	Other
1:3 Malin	Looks at the teacher's hand		
1:4 LÄR	Points at the arrow, printed on the piece of the pattern, show the direction of the grain of the fabric.	<i>Now we have to get this arrow you've drawn in the middle here.</i>	It's the arrow showing the grain of the fabric
1:4 Malin	Points with her finger along the fabric	<i>It must be the same as the grain line</i>	
1:5 LÄR		<i>Yes, exactly</i>	
1:6 LÄR	Shows with her hand over the arrow on the pattern showing the grain of the fabric	<i>So now this line has to ...</i>	
1:7 LÄR	Shows with her hand along the outside edge of the fabric	<i>... must be parallel with this line</i>	
1:5 Malin		<i>I see</i>	
1:8 LÄR	Keeps her hand on the outside edge of the fabric	<i>Do you know what parallel is?</i>	
1:6 Malin		<i>Yes, we do it in maths</i>	
1:9 LÄR		<i>You do it in maths?</i>	
1:7 Malin	Points at the arrow printed on the pattern. Takes a step backwards and waves her hands back and forth		A pupil is whistling in the background
1:10 LÄR	Shows, measuring with her thumb and forefinger, the beginning and end of the arrow printed on the piece of the pattern compared with the outside edge of the fabric.	<i>Same measurement there... as there</i>	

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Who	Does what	Says	Other
1:8 Malin	Picks up the tape-measure	<i>Should I measure the seam allowance, or what?</i>	
1:11 LÄR	Place the palm of her hand on the pattern	<i>Yes. First, you fasten it with pins... and then ...</i>	
1:12 LÄR	Lifts and places the weight with the pins on top of the pattern	<i>... you do the seam allowance</i>	Anna comes up and begins to work on the cutting-board
1:1 Anna	Stretches across and takes some pins from the weight with the pins		

Anna has moved from where she was working before to the cutting-board and is now standing there fastening the pieces of the pattern for her skirt to a piece of fabric; she is facing Anna on the other side of the cutting-board. A third pupil, Maria, is helping Anna to fasten the pieces of the pattern to the fabric while she is waiting for the teacher. The teacher and Malin continue:

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PART 1:b

Who	Does what	Says	Other
1:13 LÄR	Places her hand on the piece of the pattern for the front	<i>The smart thing to do is to begin with this and place it first</i>	Malin holds the tape-measure while the teacher is talking
1:14 LÄR	Moves the piece of the pattern for the back	<i>But then we might have to move this later</i>	
1:9 Malin		<i>OK, so there's room for it</i>	
1:15 LÄR	Points to the arrow on the front section	<i>Start measuring there. Then you can take the second one</i>	
1:16 LÄR	Pushes and moves the piece of the pattern forwards	<i>Then you should have a seam allowance of 1 cm</i>	Another pupil is singing in the background
1:17 LÄR	Holds the pattern in place with her hand	<i>But you have to fasten it with pins here</i>	Maria and Anna are talking
1:10 Malin	Slides her fingers along the tape-measure. Takes a pin	<i>Should it be marked with chalk?</i>	
1:18 LÄR		<i>Yes ... you mark it</i>	
1:11 Malin	Takes a piece of tailor's chalk from the drawer in the cutting-board		
1:19 LÄR	Points to and moves the pieces of the pattern	<i>Although you'll have to fasten these with pins first</i>	Maria is helping Anna
1:12 Malin	Holds up the tailor's chalk and throws it onto the table	<i>Yeah, yeah ... I just ...</i>	

The teacher now leaves with Maria, who had been helping Anna while she was waiting for the teacher to help her. Malin begins to fasten the piece of the pattern for the back to the fabric with a pin on the bottom edge of the

back section. Anna leaves the weight with pins on Malin's piece of the pattern, which means that she has to stretch across the table every time she wants to get a pin. Malin drops her tape-measure on the floor after the first pin and

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continues to fasten the piece of the pattern, but without measuring. The fabric is folded double and placed lengthwise on the cutting-board, but not parallel with the edge of the table. Anna goes off to fetch a pair of tailor's scissors. When

she returns with scissors, she begins to discuss the arrow showing the grain of the fabric with Malin. After Malin's and the teacher's work (part 1:a-b), Malin continues to work with Anna (part 2:a-d):

PART 2:a

Who	Does what	Says	Other
2:1 Anna	Points with the tailor's scissors at the grain line arrow on the pattern and points at a fold in the paper pattern	<i>That line ...? Or this line ...?</i>	
2:1 Malin	Laughs and points	<i>It's this one... No, it's which...</i>	Anna is about to begin cutting her fabric, but stops

Anna starts discussing with Malin again. Malin continues to measure at the bottom of the paper pattern for the back section. Anna starts to cut

out the parts of her skirt. Malin talks to herself while measuring:

PART 2:b

Who	Does what	Says	Other
2:2 Malin	Measures at the bottom of the pattern for the back section with the tape-measure	<i>... 23 ...</i>	Anna is cutting
2:3 Malin	Measures at the top of the pattern for the back section with the tape-measure	<i>... 29 ...</i>	

Malin continues to talk to herself. Anna is cutting. Anna stops cutting, looks and interests herself in Malin's work once again:

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PART 2:c

Who	Does what	Says	Other
2:4 Malin	Measures to the edge of the table	... 33 and a half ...	
2:5 Malin	"Gives up" and leans over and lies on the table, looking at the rest of the class		Anna is cutting
2:2 Anna	Stops cutting and takes the tape-measure from Malin. Measures at the bottom of the paper pattern with the tape-measure	Is this the line?	
2:6 Malin	Leans forward	Uh ..., I think so ... Yes.	
2:3 Anna	Points at the bottom of the paper pattern	Is there supposed to be a seam allowance here?	
2:7 Malin		Yes, it should be 1 cm	
2:4 Anna	Points at the bottom	Is there supposed to be a hem here? ... It should probably be 4 cm ...	
2:8 Malin	Covers her mouth with her hand	Ah right ...	
2:5 Anna	Looks at Malin	There probably should be a hem at the bottom	
2:9 Malin	Calls to the teacher	Is there supposed to be a hem at the bottom?	Anna and Malin look up at the teacher, who is standing some distance away
2:1 LÄR	Answers	Yes, There should be a hem at the bottom	

Malin is talking with some other classmates, but Anna pokes Malin's shoulder to get her attention. Anna sets out the paper pattern "in the right way", along the grain line allowing for a seam allowance of 1 cm from the edge and a seam allowance of 4 cm for the hem and measures:

PART 2:d

Who	Does what	Says	Other
2:6 Anna	Shows and measures with the tape-measure from the Trådriktning's arrow on the pattern to the edge of the fabric	... 28 and a bit ...	Malin is watching
2:10 Malin	Looks at Anna	What? I measured all the way down to the table	

They both stop what they are doing and look. They check the measurements and alter and finally, together, fasten the pieces of the pattern with pins.

Contributing, participating and creating meaning in the work

The activities involving how the different parts of the pattern are fastened along the grain line and with space for the seam allowance are accompanied by mutual interpretation. Pupils and teachers contribute and participate on the basis of their own experience, for example, by referring to maths lessons (1:8 Lär; 1:6 Malin). The teacher communicates both verbally and non-verbally by talking and, at the same time, instructing with her hands (1:3 Lär; 1:10 Lär). Gestures and actions are coordinated, for example, when the teacher uses the pincushion as a weight to hold the piece of the pattern in

position so that it remains aligned with the grain line (1:1 Lär). The pupil Anna observes this action, with its built-in knowledge (that a magnetic weight with pins, in addition to storing pins, keeps the thin piece of the pattern aligned with the grain line by virtue of its weight). She then has to stretch with some discomfort across the table to get pins (1:1 Anna). Malin is partially aware that she has to take into account space for the seam allowance and she tests this with the teacher (1:8 Malin). Despite the teacher's talk and instructions as well as reference to the warp being set up in the loom in the classroom for sloyd (1:2 Lär), Malin begins to fasten the pattern haphazardly with pins and without considering the fabric's grain line and the grain line arrow on the pattern when the teacher has left. Malin finds it difficult to coordinate the grain line arrow on the paper pattern with the fabric's grain line, instructions to take seam allowance into account (1:16 Lär; 1:8 Malin

and 1:9 Malin) together with using the tape-measure as an aid to achieve this (2:2-5 Malin). Malin knows that there should be a 1 cm seam allowance (2:7 Malin), but Anna's question concerns a wider seam allowance for the hem [4 cm] (2:3 Anna; 2:4 Anna). The teacher is nearby and answers that there should be a hem at the bottom (2:1 Lär), but she does not say how many cm the hem should be. Not until Anna measures (2:7 Anna) does Malin realise that she has measured out to the edge of the table (2:10 Malin) instead of to the edge of the fabric and the problem is then solved together with Anna. The pupils help each other, Maria helps Anna (see the comments after part 1:a) who, in turn, helps Malin (part 2). Anna takes the initiative to involve herself in Malin's work (2:1 Anna), but Malin at the same time invites other pupils to contribute and participate when she, for example, leans over the table and lies looking out over the class (2:5 Malin). What is learnt, and who learns what in the work?

The pattern-laying situation is complex in several respects. The activity should be seen as a situation involving a group of 15 pupils and in a classroom for sloyd with its artefacts and language. It contains both physical and linguistic tools, resources that are mediated through interaction when the actors discuss, exchange

experiences and create a collective understanding in the work. Experience is reproduced and recreated through verbal and non-verbal communication in the form of words and actions together with the physical tools, the situation and the surroundings (Johansson, 1996, 1999, 2002).

The transcribed video excerpts above serve solely as an example of what pupils do in the practice of sloyd, which is one of the aspects focused when analysing social practices. This activity is only a small part of the work process – from idea to finished sloyd object – involving "sewing a dress in sloyd". Research on the practice of sloyd in the school (Johansson, 1996, 1999, 2002, 2005) shows that sloyd activities are characterised by the coordination of several abstraction processes and decisions. One example of this is when Anna helps Malin with the grain line and when laying out the pattern. In sloyd, there are several tools such as a pair of scissors, a plane, an iron or material as such, which I call physical tools; but when I use the word tool, I also mean mental, intellectual tools (Kozulin, 1998, 2003; Säljö, 2000, 2005). In my research, tools are all the tools, resources, utilised when pupils learn sloyd. Sloyd's physical tools mediate thoughts in acts and the pupils communicate with the help of tools when they share their

experiences. Contemplated work is altered and developed by virtue of the choice of material and tools and changed conditions. Ideas and imagination are formed in activities involving the material, in interaction with others and the situation that is created. Sloyd activities are characterised by complexity involving several activities when the pupils work on transforming a material into a sloyd object. Experiences in the manufacturing process and through the sloyd object, as an artefact, are given meaning in the relationship created between objects, situation and context and the individuals who interact (Johansson, 2002).

In my research, a sociocultural frame of reference is used as an aid in analysing and putting words to activities in sloyd lessons a sociocultural perspective of knowledge and skills means, among other things, that human activities, which include dialogues, different types of interaction, reasoning and the use of tools and artefacts, are focused on. The activities could be carried out in large or small groups or by individuals in social practices. A sociocultural approach is based on Vygotsky's ideas, which have been further developed by a large number of researchers (Chaiklin & Lave, 1993; Säljö, 2000, 2005; Vygotsky 1978, 1986; Wenger, 1998; Wertsch, 1998).

Reflection on the work in the classroom for sloyd

Although the above presented excerpts represent only a minimal part of the data, they still show that sloyd as a school subject offers rich situations for learning what various tools, techniques and methods that pupils are given opportunity to learn when working with the materials. The assignments given in school will result in objects or clothes that the pupils (or their family, friends etc.) will use themselves. In their work, the students communicate with each other about what they are doing. In these communicative situations, they become involved not only in their own work but also in other pupils' work. They become part of the resources afforded in solving each other's problems. Occasionally, they also substitute the teacher in supervising on how a work should be done. What is further important – within sloyd, it is not regarded as cheating when two or more pupils help each other in solving a problem. In fact, sloyd is a subject where the learning situations are very similar to such situations out of school.

Despite the largely positive picture of sloyd as a subject given in the national evaluation, the pupils find it difficult to see its usefulness as a school subject. The pupils are working towards goals that must be reached both in the syllabus

for sloyd and in the overall curriculum, but knowledge in sloyd as a subject is not regarded as important for development and learning. Nor are the pupils' knowledge and experience acquired in sloyd considered to be important for continued studies or a future working life. Qualities such as self-confidence and taking initiative and responsibility are described by the pupils as something covered by sloyd as a subject, but these qualities do not seem to be taken into account when the pupils answer questions about knowledge acquired in sloyd activities. Knowledge and skills are institutionalised in different activities, which develop their own ways of communicating and using physical tools (Wenger, 1998). The pupils are part of many social practices and learn how to act in them, as in the school's practice of sloyd (such as the extract about laying a pattern in this article). How and what pupils do and learn while working in the classroom for sloyd is, however, to a large extent hidden and unexpressed.

The attitude towards sloyd as a subject is cause for worry. The fact that the subject's knowledge qualities are not generally known is a problem that needs to be bridged before sloyd as a subject can become an important resource in the school's work as a whole. If this does not happen, sloyd risks becoming an auxiliary 'bric-à-brac'

subject as activities at the comprehensive school become more multidisciplinary in nature. In order to raise awareness, and make learning visible through doing, teachers and pupils need to set words to sloyd work in the classroom.

The scarcity of research results has contributed to reasoning about knowledge acquired in sloyd lesson being based on assumptions and experience of sloyd lessons rather than on research results concerning sloyd as a subject and learning. Existing research is relatively unknown and has difficulties in gaining acceptance and being applied in a practical context. The existing results of research on sloyd as a subject and work in the practice of sloyd can be utilised in a better way in order to clarify and bring out the contribution of sloyd as a subject in the Swedish comprehensive school. An important task facing researchers is to make known the results of research in this subject field. A newly started large research project, *Communication and learning in sloyd practices*, will enable continued investigation into the practice of sloyd (Borg, Johansson, Lindberg & Lindström, 2003). Documented results of more detailed studies of sloyd activities can contribute to the development of sloyd as a subject and to the role of the knowledge area in the comprehensive school.

References

- Atkinson, J.M., & Heritage, J. (Ed.). (1996). *Structures of social action. Studies in conversation analysis*. Cambridge, NY: Cambridge University Press.
- Borg, K., Johansson, M., Lindberg, V. & Lindström, L. (2003). *Communication and learning in Sloyd practices*. Research programme funded by the Swedish Research Council, Committee for Educational Sciences.
- Chaiklin, S., & Lave, J. (Ed.). (1993). *Understanding practice. Perspectives on activity and context*. Cambridge, MA: Cambridge University Press.
- Erickson, F. (1992). Ethnographic microanalysis of interaction. In M.D. LeCompte, W. L. Milloy & J. Preissle (Ed.), *The handbook of qualitative research in education* (pp. 201–225). San Diego, CA: Academic Press.
- Goodwin, C. (2000). Action and embodiment within situated human interaction. *Journal of Pragmatics*, 32, 1489–1522.
- Hasselskog, P. (2004). Elevers dagböcker som empiriskt material vid utvärdering av slöjdämnet i grundskolan. [Using pupils' diary notes as empirical material in the evaluation of the sloyd subject]. In C. Nygren-Landgårds & K. Borg (Ed.), *Slöjdforskning. Artiklar från forskarutbildningskursen Slöjd och bild i en vetenskapsfilosofisk och metodologisk kontext* (ss. 53–61). (Publikation från Pedagogiska fakulteten vid Åbo Akademi, Nr 9/2004). Vasa: Åbo Akademi, Institutionen för lärarutbildning.
- Johansson, M. (1994). *Slöjdprocessen. Arbetet i slöjdsalen. Dagboksanteckningar [The work processes in sloyd. The work in the classroom for sloyd. Diary notes]* (Research report no 11). Göteborg: Göteborg university, Department of Hand Crafts and Home Economics.
- Johansson, M. (1995). Dagboksmetod; kvalitativ analys och tolkning [The diary method; qualitative analysis and interpretation]. In L. Lindfors & J. Peltonen (Ed.), *Slöjdkompetens i nordisk kultur. Del I* (Techne serien: Forskning i slöjdpedagogik B:1/1995, 104–111). Vasa: Åbo Akademi, Institutionen för lärarutbildning.
- Johansson, M. (1996). Craft and design [Slöjd] – sociocultural reproduction and new creation. In L. Lindfors & J. Peltonen, Porko, M. (Eds.), *Sloyd Competence in Nordic Culture. Part III* (Techne series: Research in Sloyd Education and Crafts Science B:2/1996, 56–77). Vasa: Åbo Akademi University, Faculty of Education.
- Johansson, M. (1999). Sociokulturella praktiker i slöjden [Sloyd as sociocultural practices]. *Nordisk Pedagogik [Journal of Nordic Educational Research]*, 19(2), 98–115.
- Johansson, M. (2002). *Slöjdpraktik i skolan – hand, tanke, kommunikation och andra medierande redskap [Sloyd in school – hand, mind, communication and other mediating tools]* (Göteborg Studies in Educational Science, 183). Göteborg: Acta Universitatis Gothoburgensis.
- Johansson, M. (2005). Kommunikation och konstruktion i slöjdverksamhet. [Communication and construction in the practice of sloyd]. In Kullas, S. & Pelkonen, M-L. (Ed.), *The relationship of Nordic handicraft studies to product development and technology* (Techne series: Research in Sloyd Education and Crafts Science, B14/2005, 114–128). Rauma: University of Turku, Department of teacher education in Rauma.
- Kozulin, A. (1998) *Psychological tools. A sociocultural approach to education*. Cambridge, Massachusetts: Harvard University Press.
- Kozulin, A. (2003). *Vygotsky's educational theory in cultural context*. Cambridge, Massachusetts: Cambridge University Press.
- Skolverket, [Swedish Board of Education], (1994). *Craft and Design, Slöjd. The work processes in craft and design – working methods and knowledge* (The Swedish Board of Education, report, 58). Stockholm: Liber. (Johansson, M., co-author)

- Skolverket, [Swedish Board of Education] (2004). *Nationella utvärderingen av grundskolan 2003. Sammanfattande huvudrapport*. [National Evaluation of the compulsory school in 2003. A summary main report] (A summary of report 250, 2004). Stockholm: Fritzes.
- Skolverket, [Swedish Board of Education] (2005). *Nationella utvärderingen av grundskolan 2003. Ämnesrapport Slöjd* [National Evaluation of the compulsory school in 2003. A report on the sloyd subject (Slöjd)]. (Ämnesrapport till rapport 253). Stockholm: Fritzes. (Johansson, M., & Hasselskog, P. authors)
- Silverman, D. (1995). *Interpreting qualitative data. Methods for analysing talk, text and interaction*. London: SAGE Publications.
- Säljö, R. (2000). *Lärande i praktiken. Ett sociokulturellt perspektiv*. [Learning in practice]. Stockholm: Prisma.
- Säljö, R. (2005). *Lärande och kulturella redskap. Om lärprocesser och det kulturella minnet*. [Learning and cultural tools. On learning processes and cultural memory]. Stockholm: Norstedts Akademiska Förlag.
- Vygotsky, L. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press. (original 1930–1935)
- Vygotsky, L. (1934/1986). *Thought and language* (A. Kozulin, Trans.). Cambridge, MA: MIT Press.
- Wenger, E. (1998). *Communities of practice – Learning, meaning, and identity*. Cambridge, MA: Cambridge University Press.
- Wertsch, J.V. (1998). *Mind as action*. Cambridge, MA: Harvard University Press.

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