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Craft and design (slöjd)

- sociocultural reproduction and new creation

Abstract

In a multicultural society the students come to craft and design education with different cultural and social backgrounds. The students' and teachers' experiences are reproduced and transformed, and produce new knowledge about human activity. This article is kept together under the theme sociocultural reproduction and new creation and contains main results from the Swedish evaluation of the subject craft and design (slöjd), results from students' and teachers' diary notes and the result of the analysis of the students' participation in the work processes in craft and design. A short report from the current craft and design research together with video recording from craft and design classes is treated from the same aspect.

Keywords: craft and design, slöjd, cultural traditions, evaluation, diary, video recording.

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In a multicultural society the students come to the craft and design education with different cultural and social backgrounds. Through human activity in the form of different experiences and conceptions, the knowledge of craft and design is maintained and developed on different as well as common valuation principles. Many of the educational and cultural traditions that were previously passed on at home have disappeared because of the change in society. Today the student's domestic surroundings can look very different due to various life styles. The effect of the craft and design training at school is generated differently in different homes. Attitudes and valuations from one's conditions during one´s adolescent years are considered in the craft and design training at school. Through human activity in the form of different experiences and conceptions, the cultural reproduction and cultural changes in both craft and design products and craft and design processes are reflected. (Johansson, 1995)

Due to the fast development of society and the changes in the curriculum, the content of craft and design education has in time been directed towards the complete development of the student. The historical background of craft and design as a utilitarian subject has contributed to the fact that the interest up until today to a large extent has been focused on the finished craft product. Skills, such as thinking, reasoning, and problem solving, have become more and more important, both in personal life and in order to handle future working life. Factors in society, such as the view on industry versus handicraft, issues of gender and equality, economic views on "buying-ready-made" versus "make-it-yourself", needs for general practical knowledge in daily life, internationalisation and environmental aspects, have also been of importance for the framing

of the craft and design subject. In *Slöjdämnet i förändring 1962-1994* (Borg, 1995), the author describes how the subject has changed and is still changing concurrently with the students' changes and the new demands of society. Whatever the changes, the dissertation points out three aspects which together could form the core of the craft and design subject; to make something in the material of the craft and design, the idea of the craft and design process, and the importance of the sensual experiences (p. 152). Further research is needed to be able to re-evaluate craft and design as a utilitarian subject and examine how "the utility" can be of both material and immaterial formal character.

In the Nordic network of researchers *Sloyd competence in Nordic culture (Slöjdkompetens i nordisk kultur)*, research in the life forming function of craft and design is presented and discussed. A basic assumption is that craft and design can contribute to both general and cultural competence, that it creates an identity and gives people a desired life quality (Lindfors & Peltonen, 1995). In Finland, models and theories within sloyd education and crafts science have been developed during the last few decades (Lindfors, 1995). New models have also been designed from the analyses of the craft and design at school as a system of activities (Malmberg, 1995). Those research results have, to a large extent, contributed to the description of craft and design.

Swedish evaluation

During 1992 The Swedish Board of Education performed a national study (NU) in grade 9 in order to evaluate the situation in the Swedish comprehensive school. Ten thousand students together with teachers, principals and parents participated in the study where all school subjects were included. The results of the NU study are available in about twenty reports. A great deal of information has been extracted from this evaluation. Research results from Swedish craft and design training have been made to a limited extent. Thanks to the NU, evaluation results appeared that showed what students and teachers think and how they perceive the craft and design training. Through this evaluation, craft and design as a

subject was made politically and scientifically public. The evaluation of craft and design also added new impulses and was brought forward as an example in several situations.

In addition to the main report on craft and design (Skolverket, 1993), the diaries that were kept by students and teachers were also analysed (Johansson, 1994). From these results, a deeper analysis was performed concerning knowledge and working methods (Skolverket, 1994). The report *The work processes in craft and design – working methods and knowledge* is printed in both a Swedish and an English version and is used in international situations.

The evaluation of craft and design has been performed in different parts. The evaluation instruments consist of a *Questionnaire 1*, a *Teachers' questionnaire*, and a process study which was carried out with the help of *Diary notes* and a follow-up questionnaire, *Questionnaire 2*. The study was carried out with the same purpose and questions whatever the craft (textile craft, woodwork and metalwork). The evaluation of craft and design has taken place within a nationally representative sample where 1,314 students have answered Questionnaire 1 and 101 teachers have answered the Teachers' questionnaire. Two hundred students and their teachers have kept diaries during a ten-week period and 182 out of those 200 have later on answered Questionnaire 2. The non-response was small and can almost totally be explained by normal absence. The validity and reliability of the evaluation instruments are examined nationally and in the Nordic countries. The goals of the curriculum in Lgr 80 and the content of the main parts formed the basis for the design of the evaluation instruments. The evaluation had as its purpose to illustrate how the intentions of the curriculum showed up in the teaching in a practical way and to give an idea of the students' knowledge, skills and attitudes. (Skolverket, 1993)

In the NU evaluation, both perceptions of knowledge and attitudes about craft and design were presented. The main report shows that the students have a very positive attitude towards craft and design. The students also think that they have learnt to work independently, to solve problems and to feel joy about something they have accomplished themselves. Craft and design is one of the subjects in

the evaluation, where the students feel that they have some influence. The survey supports the statement that craft and design is an important resource for the Swedish school. Many of the goals of the curriculum are realised in craft and design. (Skolverket, 1993)

Diary notes

In the report about the diary notes (Johansson, 1994), the results from the deeper studies of students' and teachers' diary notes from craft and design are presented. The purpose of the diary writing was to give a better and more varied picture of the work in the classroom for craft and design through the students' and teachers' own words, to evaluate the work process in craft and design and to let students and teachers describe the normal craft and design teaching during a regular ten-week period without placing the students in a test situation. The students described what they had done, what problems they had encountered and how they had solved them, how they felt and what they thought their feelings depended on. The diaries became a self-reflection of their own work. The diary notes consist of 1,614 diary situations. Through repeated readings the material fell into different categories. An ambition has been to try to understand the whole that each diary reflects and to describe, through categories, the message that is presented in the text.

Solution of problems, perceptions of knowledge, feelings of participation in the work process, comfort and well-being, emotional experiences, interaction patterns and thoughts about diary writing were described in the diaries. The documentation of the craft and design training has not been done in this form before. It is interesting to have the work in the classroom described by the people present. By allowing the students to write while still in the classroom, the evaluation took place as part of the daily activity. The environment – the classroom, the equipment, the machinery, the smells and various sense impressions, the friends, the craft objects – is present while writing. The diaries have surpassed the expectations from the evaluation of a subject like craft and design by keeping diaries. Students and teachers describe in an excellent manner during a ten week period the inner and outer activities

taking place in the classrooms and also illustrate students' and teachers' understanding of their own craft and design activity. The diaries are permeated with the fact that the students like craft and design, that craft and design teaching can be very different and that the working methods vary. The craft and design process is well described and the problem-solving is best described when the students have worked with products where they have used their own ideas. Getting the work in the craft and design classroom documented in both students' and teachers' own words can give a renewed understanding of what we believe and take for granted takes place in the classroom. The report should be seen as a contribution to basic research concerning craft and design. (Johansson, 1994)

In the diaries that were kept during a ten-week period in craft and design, the students and teachers very well describe both the craft product and the craft process in which that product is made. In craft and design the students visualise their craft product made within the near future. The craft object will perhaps be used or given away as a gift. The object may also be saved for the future, the work gets an identity as a "cultural product" interaction between human beings. The craft process – to choose, plan, carry out, and evaluate – in school then continues as a process at home. The craft object and the knowledge one has received through the process of the production is valued at home. In the diaries, the students describe how the process continues both inside and outside school. In older times, the parents spent a large part of the day together with their children. The children were taught in the same surroundings, where the knowledge was to be used. Today, work - school - leisure time are separated from each other in a completely different way. The diaries show the students' various valuations of their craft work. Perceptions and valuations from the home environment can influence the way a student looks at craft and the way a teacher treats these valuations at school. The student's social aptitude is dependent on the level of development, but also the traditions and leisure activities they have learnt at home and in their environment. Knowledge and cultural traditions are reproduced and created anew. (Johansson, 1994)

Below you will find two examples from the 1,614 diary notes:

Slöjdtillfälle 2

Idag har jag fortsatt mitt arbete på ett skåp (komb. skåp o hylla, egentligen) som jag påbörjade i 9:an. Skåpet skall "pluggas" ihop. ⇒ [sketch]
Jag stötte på problem när det gällde ihopsättningen - pluggningen. Övre delen är lite ojämn och nästa gång kommer jag borra hålen, där pluggarna sätts, djupare. Då kommer jag vara färdig för att limma och sätta samman. Smålyllor och skåpsluckan återstår sedan.

Craft situation 2

Today I have continued my work on a cabinet (really a combined cupboard and shelf) which I started in the 8th grade. The cupboard will be pegged together. (drawing). I got problems with the assembly – pegging. The upper part was a little uneven and next time I will bore deeper holes where the pegs are supposed to go. Then I will be ready to glue and assemble. After that the small shelves and the door remain.

Slöjdtillfälle 3

Idag har jag justerat. D.v.s. gjort hålen djupare som jag pratat om. Det var lite komplicerat (kanske) men jag klarade av det och är nu färdig för att limma ihop skåpet. När jag väl gjort det så tror jag att en stor del av det allra svåraste är avklarat. Men det vet jag ju som sagt inte, mycket återstår ju ännu.

Craft situation 3

Today I have made adjustments. That means I have made the holes deeper as I said before. It was a little complicated (maybe) but I managed and I am now ready to glue the cupboard together. Once I have done that, I think that the worst part is done. But I can't be sure, there is much left to be done.

Slöjdtillfälle 4

Idag har jag puttsat sidoytorna och börjat limma, för ihopsättningen (pluggningen). Jag har inte stött på några större problem, jag är ganska säker på hur jag skall till väga nästa gång. (sidobrädorna, d.v.s. en av dom, var lite opassbar och gjorde ihopsättningen lite ojämn, men [redacted] (läraren) slippade ner den lite och problemet var löst.)

Craft situation 4

Today I have smoothed the side surfaces and started gluing before assembly (pegging). I haven't encountered any serious problems, I am quite sure of the way I am going to handle this next time. (The side boards, i.e. one of them, was a little uneven and that made the assembly uneven, too, but xxx (the teacher) sandpapered it a little and the problem was solved.)
(Boy, woodwork and metalwork)

Jag fick lite problem med knäppningen men fick ingen hjälp så jag gjorde på mitt sätt. Vilket också gick bra.

I had some problems with the buttoning but I didn't get any help so I solved it my own way, which was all right, too.
(Girl, textile craft)

The students' way of describing their craft training also shows their ability to plan and to plan ahead. Schön (1983) says in his book *The Reflective Practitioner* that knowledge appears when you reflect on your own actions. Schön means; that once you notice the situation, you can keep a dialogue with the situation itself and thereby re-evaluate it. The above mentioned example with the buttoning shows that in spite of the student's lack of sufficient knowledge at the moment, the student has the courage to test her knowledge in new situations. When producing craft objects, problems are not always

predictable and the problem solving varies and new decisions have to be made.

About working methods and knowledge

In the report on working methods and knowledge (Swedish Board of Education, 1994), different working methods and perceptions of knowledge in craft and design are described. In a deeper and comparative analysis, parts of Questionnaire 2 are compared to the results of Questionnaire 1, the Teachers' questionnaire and the Diary study. Through the students and teachers who participated in all evaluation instruments, "The Diary group", students' and teachers' participation in the work processes in craft and design has been specially examined. The analysis shows different working methods in craft and design and how the working method affects the learning possibilities created in craft and design.

From the results of the main report and the diary study, the following questions were asked:

- Why are the students happy in craft and design whatever the kind of craft?
- How is the student's learning process affected by different working methods which make various degrees of participation in the process of craft and design possible?
- What variations in the teaching in craft and design can a more detailed and comparative analysis show within the diary group concerning different schools and craft and design groups?
- What differences exist in different working methods and perceptions of the teacher-student situation and how do they influence the students' participation in the process of craft and design?

In the abundance of differences that appear when every teacher alone or together with others, teachers or students, plan the teaching and create working methods, two groups can be distinguished:

- One group where the student feels that he/she **has large possibility** of influencing the craft and design teaching.
- One group where the student feels that he/she **has little or no possibility** of influencing craft and design teaching.

Through the results of these groupings in the different questions of the evaluation, we can conclude that the student's possibility of influencing is of great importance to the school work. Large possibilities of influencing lead to great involvement, good learning, and large awareness of the subject's as well as one's own possibilities (Swedish Board of Education, 1994).

The issue of motivation has been discussed in the comprehensive school for a long time. The comprehensive school only moves the students to the school (Persson, 1994). It is not enough that the students spend time in school without feeling motivated and involved in their school work. Are the students allowed to contribute to their learning or are they only given the possibility of attending? A kind of goodwill from the teacher to "give" everybody the same basic knowledge has usually consisted in supplying the average student with education. Bergqvist (1990) has taken an interest in the students´ and teachers' different interpretations of tasks and the purpose of those. To be taught without learning anything and to learn something without being taught are illustrated in the dissertation. Should the student only take over, "lodge" someone else's knowledge or should we make it possible for the student to absorb and "own" his/her own knowledge?

Students' influence

It is true that the craft and design main report showed that the students felt that they could participate and influence craft and design in principle whatever kind of education they "met with". This was the starting point for the report about working methods and knowledge (1994). With that report the students' influence on craft and design teaching is evaluated. In craft and design, we have evaluated something very special that has not been (could not be?) evaluated in any other subject, namely total student influence.

In the "traditional" education group, **"teacher-teacher"** (Swedish Board of Education, 1994, p. 33), a teacher-dominated teaching takes place. As a suggestion, all the students shall sew a pillow case (they may choose for instance colour and fabric) or all the students shall produce a door sign. A small room exists for the students to choose for instance colour, which – in spite of the teacher-dominated teaching – can make the students feel that they have participated in the decision. In a teaching other than craft and design, it could be a question of working with a task decided by the teacher, a task that everybody must work with, e.g. "lion, the animal".

The next group, **"teacher-student"** (Swedish Board of Education, 1994, p. 33), is by tradition a common form of education both in craft and design and in other subjects. Here the students use their own influence on tasks or working areas/themes decided on by the teacher. In craft and design, this could mean that you work with areas like "storage furniture", "clothing" or "knitting". The students can use their own influence but on the teacher's conditions so that the teacher has a certain control that the students have worked on and learnt approximately the same thing (?). In a subject other than craft and design, this teaching could represent "own work", where the student is allowed to work with his/her own choice of fish, e.g. "the shark", within the working area "fish", or write their "own piece" about a country within the working area "the Nordic countries". To work on "one's own piece of work" is something that is used quite frequently in large parts of "modern" education. This form of teaching has been put into practise in craft and design for many years, but now we have more and more (!) dared to abandon it for the following group:

Here the, in craft and design unique group **"student-student"**, is presented (Swedish Board of Education, 1994, p. 33). It is a group where the students are freely allowed to work out their own ideas. In this group the student has an influence on the whole process, from the choice to the possibility of making decisions all the way from his/her own idea to the finished product. In the national evaluation, craft and design is a subject where the effects of this kind of teaching could be evaluation.

The working methods have changed and are changing in the entire school. Above all in the lower grades of usual classroom teaching, the students often work on for instance the "task of the week" or their "own work" within a working area. This is a step in the right direction, but this working method rather belongs to the type of education that in the report is called "teacher-student". The teacher is most often the one who has decided the working areas or when the task should be accomplished. This working method (teacher-student) has for a long time been used in craft and design. In craft and design we have now "gone one step further" and allowed the student to work completely from his/her own ideas (student-student). The result of the deeper analysis shows that the "student-student" group achieves the highest results in more or less all the knowledge and attitude questions that exist in the evaluation instrument, while the "teacher-teacher" group shows the absolutely lowest results. In the problem-solving environment of craft and design, there are working methods that make the students feel comfort and well-being as well as meaningfulness. Developing the best of the working methods in craft and design can give, not only craft and design but the school's total activity, possibilities of a deeper involvement. Does involvement depend on the fact that the student receives knowledge in a situation that is perceived as "real" by the student?

Classroom research in Swedish craft and design

The national evaluation has provided many valuable results. In the evaluation students and teachers have well described how they look upon and what perceptions they have of craft and design. In spite of the evaluation, basic research is necessary in order to map out the activities going on in a craft and design classroom. There is a great need to describe the activities in which the students are involved during their craft and design training in order to make people aware of the lif- forming dimensions of craft and design.

Swedish classroom research into craft and design has not been widely documented. In classroom research, mostly subjects in a conventional classroom environment have been treated, possibly

with elements of teamwork or laboratory lessons. It is usually the interaction between teacher and students that is studied in a teacher-controlled communication (Granström & Einarsson, 1995). The reason that lessons in so-called training subjects have not been observed more may depend on the fact that the noise level is usually higher than in other subjects, and besides, the students move around more in the classroom during those lessons (Öhrn, 1990, p. 73).

Coming into the classroom for craft and design during a lesson, the activity can to the outsider probably seem like a somewhat confused and mobile environment. The students most often move around freely. It is allowed to walk around in the room in order to fetch tools, go to machines, pick out material, etc. Different furniture makes the classrooms for craft and design different from the conventional classroom environment and also because it is equipped with for instance machinery, tools and various materials for the craft products. In addition to colour and form experiences, the students stay in an environment that is rich in colour and visual sensations, smells and noises. The students are mostly allowed to work and talk at the same time. Even if the students work with their own tasks with interesting problem solutions, there is a wide pattern of interaction with other students. It would be interesting to examine more closely how traditions of knowledge and culture are generated in craft and design. What does the students' world of experience look like in a subject like craft and design? How are the student's life forming functions developed in the sociocultural environment of craft and design? What are the students doing during craft and design classes? What competence can they achive?

Video-recorded lessons in craft and design

Parallel with my work as a crafts teacher, I studied pedagogics, psychology and additional training in craft and design. When I worked in the comprehensive school during the 80´s and 90´s I had a great many pupil teachers. I then got the opportunity to sit down in the classroom and observe and experience craft and design in a different way than when I worked as a teacher. I noticed many

exciting situations that went unnoticed until I started to study them in detail more.

While video recording in the classrooms for craft and design, I felt a little like a junior stage teacher, Birgitta Kullberg, who wrote a thesis for a doctorate about the way children learn to read – how they "crack the code" (Kullberg, 1991). Despite the fact that she, during several years as a junior stage teacher, taught children how to read, she did not get the opportunity to discover how they did it until as an observer in the classroom, she started to study what happened.

In an effort to describe the complex environment of the classroom for craft and design, a pilot study has been made by using video-recorded lessons in textile craft, woodwork and metalwork during the spring term of 1995. The purpose of the recordings in that pilot study is to find out how it is possible to collect information in order to analyse the situations the students are involved in. The video camera is used as an aid to register craft activities audiovisually. One ambition is to see how, with the aid of the video camera, you can catch more details and then analyse situations several times in order to discover things you would otherwise have let pass unnoticed. Is it possible to document the content of craft and design training through video recordings? A video recording is, of course, not an exact recording of what happens. Analysis of the situations will be interpreted by the one who observes, based on pre-understanding, valuations and attitudes (Ödman, 1979). The video recordings are not meant to be a complete observation of an authentic reality, but must be seen as a sample from a complex whole. One purpose is to try to catch some of the communication processes in which the students participate in a complex crafts environment, where several processes may happen quickly and simultaneously (Johansson, 1996).

In the video recording of the pilot study, it clearly appears that few students sit still at their places. The students fetch tools, move over to machines, ask friends for advice and contact the teacher while at the same time observing the teacher instructing the others. Most students work together with other students during the lessons. The teacher is not the only one instructing. The students learn from each

other and communicate and share experiences while developing their knowledge. The students find it natural to help each other and to solve many problems together. The fact that they do not work solely with their own tasks does not seem to matter to the students. Many students observe others and probably take the chance to learn at the same time. Involving themselves in the work of a friend, they interrupt and help without actually being asked to do so. Experiences are reproduced and transformed and made into new knowledge of human activity (Johansson, 1996).

Some areas of experience

From the pilot study, two areas of experience which the students can be part of in craft and design are described. The data from the pilot study has been collected during the spring term of 1995 and consists of video recordings from eight lessons in grade 4, grade 5 and grade 8 of the comprehensive school.

From the lessons in woodwork and metalwork where the students are 10 years old and in grade 4, the following extract is made:

Extract 1. Enamelling

In woodwork and metalwork, a couple of girls enamelled jewellery in an adjacent work room. It is actually Ulla who "needs" to be in that room, but Lena stays next to her the whole time, polishing her metal jewellery, which she is also going to enamel later on. Lisa is also there "looking on".

Part 1

Who	*Does what*	*Says*	*Others*
ULLA	Takes out the cans with colour pigment	Which one should I take first? Blue?	No one answers

ULLA	Takes the can with the red pigment. Dusts it over the piece of metal.	I'll take this one.	
LENA	Polishes and observes Ulla		
LISA			Lisa is standing in the doorway watching
ULLA	Dusts blue colour	Would you, please, fetch the teacher? I think this is going to look great.	Lisa fetches the teacher

The teacher comes in and says the colour pigment must be put back into the can or the colours on the paper underneath will mix. They have to throw away the mixed pigments. Everybody watches Ulla throwing the pigment away. Lena takes the chance to ask "is this okay" before the teacher disappears.

Part 2

LENA	Shows her piece of metal	Is this good?	Lisa is standing next to her
THE TEACHER	Points at the piece of metal	No fingerprints?	Lisa watches
ULLA	Dusts the pigment		

THE TEACHER	Points to the edge of the metal jewellery with colour pigment	Put it on all the way out yo the edges. It doesn't matter if some of it ends up outside.	Lisa and Lena watch and listen

The teacher leaves and everybody now stands close to Ulla, who is going to add pearls to her piece of jeweller, before it is to be baked. Lena stops polishing and Lisa stands close by. There is complete silence and the atmosphere is tense. It is exciting. All of them get involved in the aesthetic experience about which pearls Ulla is going to use and how she is going to place them. Later during the lesson, Lena also continues dusting colour pigment on to her piece of jewellery. The students stand close by and learn both from the teacher and from each other. You can almost visualise how Lena in her thoughts goes back to the situation "put it on all the way out to the edges" while dusting, and she stops for a moment to check whether there is enough colour pigment on the metal jewellery. Knowledge is reproduced and created anew. Later on during the lesson other exciting situations occur as when the gas is turned on, when the students light the flame and the metal is heated and changes colour. It is both exciting and a little dangerous. All three girls observe and participate in the work. There are many life-forming experiences for a ten-year-old girl to develop her aesthetic ideas together with others, and to be allowed to handle dangerous items like gas and hot metal. (Johansson, 1996)

From a textile craft lesson where the students are 14 years old and in grade 8 of the comprehensive school, another extract follows:

Extract 3. Shoulder strap

A girl, Lotta, is sewing and turning a couple of thin shoulder straps for her nightgown. Eva is sitting next to her and is crocheting a waistcoat. Maria is in the group behind Lotta and she is knitting a waistcoat.

Who	*Does what*	*Says*	*Others*
LOTTA	Sits at the sewing machine and shows the shoulder straps to Eva	What shall I do to turn them?	Maria arrives
MARIA	Takes a shoulder strap and disappears	Have you sewn through them?	
LOTTA	Tries to turn the strap with a needle		
LOTTA	Turns around towards Maria	What? No.	
EVA	Turns around towards Maria		
MARIA	Picks at the end of the strap with a pin	But it is impossible to get this through.	Comes back to Lotta
LOTTA	Points at the strap with threads and needle	Yes, I understand. You fasten a pin and then you should thread it through this. After that you turn it.	

MARIA, EVA	Stop their own work and watch		
MARIA	Shows Lotta's shoulder strap with the small short side to Eva		Lotta gets up to go and fetch a large pin
EVA	Stops crocheting and points to the strap that Maria is holding	Is she going to get that through?	
MARIA	Puts the shoulder strap on the table		Eva goes on crocheting. Maria turns around and leaves.
LOTTA	Returns with a larger pin		The teacher arrives
THE TEACHER	Stands between Lotta and Maria	Is it supposed to be turned?	
LOTTA, MARIA	Both nod	Yes	

Approximately two minutes have passed. The teacher gives a helping hand and shows how to do. Lotta, Eva and Maria stand next to them watching. Several students take an active interest in this situation. Even the teacher has problems turning the narrow shoulder strap. Finally she succeeds. Lotta gets the chance to practise her dexterity with the difficult shoulder strap while getting

experience from a polyester material that is difficult to work. Dexterity and precision can be perfected using tools and the sewing machine. In the video you can see that it takes a lot of concentration to both sew and handle the shoulder strap. Impressions and thoughts are put into action. Later on during this lesson, Lotta irons the narrow shoulder strap and chooses appropriate ironing temperature and handles the polyester material with good materials knowledge.

The areas described above contain life-forming situations. It is up to the teacher to utilise and guide the students in an educational manner with their own pre-understanding as a starting point.

It is complicated to observe craft and design with all its aspects. To observe what goes on in the classroom with the help of a video camera becomes a kind of participating observation. The pilot study has provided us with information about what is lacking and what parts can be observed, that can be used in a larger study. A more detailed collection of information was made during spring 1996 where the students were observed during some time through video recordings, own observations, students' and teachers' diaries as well as parents' questionnaires. A rich and immensely interesting material has been collected and will be used in an exciting analysis (Johansson, 1996).

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