

METTE GÅRDVIK
Høgskolen i Nesna

**It doesn't help to call a professor if your washing machine is leaking:
The Norwegian Minister of Knowledge, December 2009**

ABSTRACT

The purpose of this study is to create a holistic understanding of society's need for developing and safeguarding children's knowledge and skills regarding handicrafts.

An investigation of a fourth grade class shows that over half of the students had not learned to tie their shoes.

The Norwegian educational guidelines from 2006 divide each course into five basic skills to be developed. The five skills are reading, writing, arithmetic, verbal expression and use of digital tools. Arts and handicrafts is a practical-aesthetical discipline that makes use of several tools to help develop students' basic skills. As arts and handicrafts teachers at the college level, we have seen an increasing trend towards the hand's fine motor skills being underdeveloped in favour of the computer keyboard.

The study concludes that children have underdeveloped fine motor skills in handicraft techniques and are not getting enough training in this area; therefore, the hand's formative abilities appear to be forgotten.

Keywords

Arts and handicrafts, arts education, hand's formative abilities, conservation of handicraft skills

INTRODUCTION

A society in growth has need of a well-rounded population where the hand's abilities are upheld. A human being's logical, practical and creative development becomes worthless if the hand cannot perform the will of the mind.

Leonardo da Vinci said, 'Where the spirit does not work with the hands, there is no art' (Sirkel-Teknisk kunstmagasin 2008). Our society and its technical developments are based upon previous generations' knowledge and fine motor skills working together as one. The Norwegian Minister of Knowledge, Kristin Halvorsen, has realized that there has been too much focus on society's need for university degrees. Norway now needs more labourers in the handwork sector, and their education must begin at the primary school level (Moe 2009:4). Matthias Øhra, project leader for Teacher Training for Elementary School at Vestfold University College, says that the world demands more theoretical knowledge than before, and this is why it is important to teach all students basic skills. More practical-aesthetical disciplines must also be offered, since a theory-based school will not assure that students learn and develop in different ways. Students need different methods and the school must do better at giving students feedback and assessment of the work they do (Moe and Tessem 2010).

In Norway, the dropout rate in secondary school (age 15–18) is formidable. After five years, 45 per cent of those who started secondary school in 2003 had not completed the program (Moe 2009). All students have the statutory right to attend secondary school, however, around 10 per cent of the students do not have a good enough basis to benefit from their education (Moe and Tessem 2010). Society is dominated by people with academic backgrounds, and we have lost the pride attached to handicrafts. Halvorsen is now focused on the need to increase interest in vocational education as she declares, "It doesn't help to call a professor if your washing machine is leaking" (Moe 2009).

In this article, I will explain that efforts to prepare students for middle school and secondary school must start as early as primary school and kindergarten. I want to address this issue by looking at how a 5 year old learns to tie a bowknot and by assessing a second grade classes' Easter decorations against the Norwegian educational guideline LK '06 (Læreplanen Kunnskapsløftet/Knowledge promotion). I will also elaborate on the kind of comprehensive knowledge one develops and learns through the use of handicrafts. My investigations are based on Halvorsen's qualitative approach using participant observation where detailed data are collected about people and situations, thus increasing the ability to understand the behaviours and situations as perceived by those being investigated (Halvorsen 2008: 128). The study is influenced by my subjective experience as an art teacher at the university level and as a mother of a 5 year old. Reflections and comments from nursery school personnel and a primary school teacher will be used to reinforce and support the content. The purpose of this study is to create a holistic understanding of our society's need to develop and safeguard children's knowledge and skills related to practical handicrafts.

PRACTICAL SKILLS AND KNOWLEDGE

Norway's current education policy is very result oriented, and focuses primarily on five basic skills that are to be an integral part of the individual subject's basic education (Kunnskapsdepartementet 2006): verbal expression, reading, writing, arithmetic and the use of digital tools. This policy clearly lacks inclusion of the practical-aesthetical disciplines. Ann Bamford concludes in *The Wow Factor* that arts subjects are of great importance for a holistic education of future generations (2006: 139–42). She shows a need for further education of key personnel such as teachers, artists and other educational staff who are on the ground floor of the educational system. Arts education is justified in cultural, social and aesthetic goals, but is often not considered as an important part of the overall educational policy.

Children's health and sociocultural values have clear advantages when they are given an art education of high quality. High quality is characterized by a strong partnership between schools and arts institutions outside the schools. There is also a difference between what can be called education in the arts and education through the arts. Education *in* the arts is referred to as the teaching of fine arts, music, drama, arts and crafts, while education *through* the arts concerns using the arts as a pedagogical tool in other subjects such as reading, writing, arithmetic and technological skills (Bamford 2006: 140). Teachers are given special training in children's reading, writing and arithmetic skills, while arts classes are often taught by teachers with little or no arts education. Herein lies the problem, as Varto succinctly states:

To an art educator, aesthetics is to a large extent about viewing skill on the broadest possible scale. A skill cannot simply mean knowing how to do something, mechanical repetition without a sense of context. Skill always entails understanding operational principles, ethics and responsibility. It also involves being able to communicate that skill to others, to guide and to teach. (2008: 8)

Professor Liv Merete Nielsen (2009: 11) puts focus on the importance of articulating arts and handicrafts' legitimacy as an independent subject in school. She writes about the special relationship in that the practice of and training in arts and handicrafts is very old, while the research is young. The science of arts and handicrafts has, in many cases, been reserved for theoretical subjects, while the practical subjects' status has been more secondary.

Director Johan Peter Paludan of the Danish Institute for Future Research, argues that children will soon cease to be taught handwriting in school. 'We live in the era of the computer keyboard and handwriting has been reduced to something you find on reminder notes' (Dagbladet 2010). In the future, communication will take place either verbally or by using the keyboard, and sooner or later teaching of normal handwriting will become superfluous.

The broader world of handicrafts

Reform 94 was the first major reform in the Norwegian educational system in the 1990s. The reform mandated, among other things, that all young people aged 16–19 years are entitled to a three-year secondary education. However, it cut back basic courses in handicrafts from 112 to just thirteen (Nou, 2003).

Studies in crafts such as organ building, hairdressing, cuisine, car reparation and carpentry were collected into a common study.

Glass artist Tanja Sæter took training in a craft that is largely industrialized and no longer available in Norway. In order to become a glassblower, she had to travel to Sweden to attend the glassblowing school Kosta in Lessebo Municipality. Sæter leads a project designed for young people called 'Super Is As Super Does', which is aimed at creating interest in experimental glassblowing, design and art. Sæter has instructed hundreds of 15 year olds in glassblowing: "Meeting the children at such a special age and seeing that they have such a wonderful time when blowing glass is an incredible experience. I can actually tell, by way of their enthusiasm, the kind of teacher they have – if they are open" (Holtan 2010: 28).

At the Theatre Academy in Stockholm, first-year students rehearse plays from the end of the nineteenth century (Isaksson 2008: 28–29). Female playwrights often wrote about women who were doing handicrafts, and students therefore have handicrafts on their curriculum. Handicraft practitioners teach this craftsmanship and knowledge, and students have received training in knitting, crocheting and embroidery. The experience of meeting the handicraft practitioners and learning their techniques has given theatre students a new form of understanding, experience and knowledge to use in their acting profession. One of the male students was very sceptical of the lessons, but they have taught him patience and given him insight into professions that largely make use of the hands to create artistic expression. Theatre students work a lot with their bodies in the form of movement, dance, speech and song, while emphasis is often not placed on their hands. The handicraft teachers taught the students that handicrafts could be a medium to provide an outlet for emotion, involvement and interest (Isaksson 2008: 28–29).

Handicrafts are often an important part of professions we tend to think of as purely theoretical. An ear, nose and throat specialist with 40 years' experience in the subject told me in a casual conversation that he was tired of new assistant doctors who have no experience in handicrafts. He had wanted, on more than one occasion, to ask his assistant doctors to show him something they had made before being allowed to perform surgery on the inner ear. He said that on the day of surgery, he dared not drink coffee because the requirements for fine motor coordination and precision of the hands are so great. When you drill a hole three inches in the stirrup to insert an implant of 2.5 mm, one's hands cannot shake. He continued by stating that assistant doctors should, as a bare minimum, be able to whittle an oarlock. One of Norway's leading neurosurgeons, Geirmund Unsgård, says in an article about working as a brain surgeon, 'If you make a mistake, you'll never get the chance to fix it' (Oksnes 2010: 18–33).

TYING KNOTS AND CUTTING HENS

Shoe Tying Rhyme:

Build a teepee
Come inside
Close it tight so we can hide
Over the mountain
And around we go
Here's my arrow
And here's my bow!
(DISboards.com 2010)

In order to show examples of children's development of motor skills, I will use observations from everyday life, kindergarten and primary school. To tie a shoe or embroider with needle and thread challenges children's and young people's motor skills, knowledge and experiences. In one observation, at a school a week before Easter, fifth grade students sit inside with their ski boots on, before going skiing in the second period, unable to re-tie their laces should they remove them. Over in the fourth grade class, half of the students need help tying their shoes.

A 5 year old learns to tie her shoes

This observation is of my own daughter and her efforts to learn how to tie a knot. My daughter is a bright 5 year old who is quite intent on doing things herself. She knows what a knot looks like in that something goes over, something goes under and something must be pulled before it is held. She has observed others for some time and then tries herself by repeating the motions. She puts a lace over, under and then through and wraps it around before she finally tightens. The knots usually unravel. She only wants help when she needs her shoes tied or while playing, when she will say, 'I need a knot here'.

One night, my daughter stands in front of the mirror and puts on her robe. She snaps the buttons and when she comes to the belt, she does as she has observed. She folds the belt over, under and through before she squeezes it all together. 'There! Now I can tie', she says. The belt holds up a moment before it unravels. She is clearly motivated and tries several times before she asks for help. We begin to tie a bowknot with a loop by discussing the practical action. I point and she ties. She removes the knot, and then repeats the action several times. She exclaims proudly that she can tie a knot and runs off to show the rest of the family what she has learned.

The next day in kindergarten, I ask her whether she has told the others that she can tie her own shoes. My daughter does not respond but is keen to show what she can do. She grabs her laces and ties both shoes before she jumps up and runs out. Her kindergarten teacher praises her, saying she had no idea that she was that good. Being her mother, I followed the entire process and know how little effort I put into helping her to master this. With just a little guidance, she figured out most of it herself.

I then asked the teacher whether they teach the children to tie their shoes. She answered,

No, we do not. It happens perhaps a few times during spring when the children start coming with sneakers, but most children have shoes with Velcro. It goes faster when we tie their shoes, but it's a shame because it hinders them from learning themselves. We could easily sit down with four or five children and say that now we are going to practice tying our shoes.

The teacher has worked for over ten years in primary school and kindergarten, and her experience shows that children have become much more dependent on help no matter what they do. 'Children's independence is gradually decreasing, and I see myself how silly it is that I tie the children's shoes without teaching them to do it themselves. I am going to discuss this with our staff on Monday' (preschool teacher at my daughter's kindergarten). Another preschool teacher then refers to her teenage daughter who can tie up packages and the like but cannot tie her shoes herself because she is unable to make the knots tight enough.

A second grade class makes Easter decorations

This observation is from a conversation with a second grader who made Easter decorations. Each student could choose between making an Easter bunny



Figures 1a and 1b: The Easter bunny (photo by author).

(Figures 1a and b) or two chicks to place on the eggs. The teacher had finished models and the students were given cardboard templates, wool felt, ink and glue. The teacher helped to lay the template on the fabric, trace it with blue ink and cut out the parts. The parts were then assembled and glued before students drew on the face with black waterproof ink.

The students also made decorations to hang in a window. The decoration consisted of a large hen and five young chicks cut out of cardboard (Figures 2a and b). The teacher had prepared for the class by laying out



Figures 2a and 2b: Window decorations in cardboard (photo by author).

coloured construction paper and templates of chickens. The students chose the colour of cardboard, and then traced around the ready-made templates. Afterwards, they cut out the shapes, drew in the eye and coloured the beak and head. The chicks were cut out and hung by yarn under the hen. The adults made holes with a hole punch, and the children cut small lengths of yarn. Some of the children managed to thread the yarn through the holes and tie firmly, but many needed help. Easter decorations were not displayed at school, but sent home with the students.

FINDINGS

My 5-year-old child's approach to learning to tie her shoes herself was self-initiated. She had observed others and tried but failed to crack the code. The thick belt of the robe was the triggering factor as it was well suited for small hands, and she could control the process by looking in the bathroom mirror. She had a visual understanding of how it should look. The repetitive actions helped her to transform the visual image of a knot into experience based knowledge and skill. This is the same learning process as with other practical skills where you have to repeat actions to recognize, experience and transform. Forms of knowledge such as motor skills are obtained through familiarity and experience, and are important elements in this respect.

Norwegian Arts and Crafts has competence goals for the second, fourth, seventh and tenth years of primary school. The main subject areas supplement each other and must be considered as a

whole. Classes are given in 60-minute units. In the competence goals after year two under *design*, the aim is that the students shall be able to make simple objects and designs in paper and textiles by tearing, cutting, gluing and braiding. The main subject area *design* represents a continuance of the artisan tradition and deals with the designing of objects. It comprises both working directly with materials and working with sketches and models (Kunnskapsdepartementet 2006).

The second grade class' Easter bunnies were made as a result of the teacher's direct interpretation of the competence goals of the curriculum guidelines. The task given provides few motor skills challenges other than to apply a finished template to felt, trace it, cut it and paste it together. A functional analysis of the Easter bunny shows that it fits over an egg, and the wool felt keeps the egg warm. However, students used paper glue instead of textile glue so the shape is therefore stiff, edges break and it will develop holes. The bright wool is traced with blue ink lines for cutting and the bunny's face is drawn in black permanent ink. The bunny's ears are glued on with front and back pieces, thereby reducing the area that will cover the egg.

The assessment of materials and function as a whole could be improved so that the children could also learn to assess quality. When asked whether the students were allowed to make suggestions, the second grader told me, 'I looked at the other one that was exactly the same and knew how it should be'. He then added,

We received help drawing around the template on the felt and the adults helped us to cut out parts. I managed to glue on the nose myself, but many needed help with the gluing. I drew on the face. I could see how it was done and the adults told me what I should do."

(second grade student)

COMPETENCE GOALS FOR DESIGN AFTER FOURTH GRADE

When I asked the second grade teacher whether they were doing yarn techniques she replied, 'Well, we twisted yarn in the first grade, so we've done that, and in fourth grade we do braiding techniques'.

The goals for design education are that the student shall be able to plan and make simple artefacts, and make simple objects by knitting, weaving, felting, sewing, nailing and fixing screws in various materials. They shall also be able to use simple appropriate hand tools when working with clay, textiles, leather and wood. (Kunnskapsdepartementet 2006: Competence aims after Year 4).

For the window decoration project, the students were shown a cardboard hen that they were asked to copy. The students traced around the cardboard templates, cut them out, glued them, threaded yarn through them and then tied the pieces together. The second grader again relates, 'It was not very fun with the chicken because I drew it wrong and did not know how it should be'. He cut the yarn, and the teacher cut out the small chickens. 'The teachers made holes for the chicks and I got help to cut the big hen. I drew the eye and beak, but on the backside you can see where I drew it wrong' (Figure 2b).

In the fourth grade, students are 9–10 years old, and if we recall how few of them could tie their own shoes, we see that their fine motor skills are being held back. The same group has, by contrast, a lot of knowledge on the use of the computer keyboard or mobile phone. Competent arts and handicrafts teachers have expertise that can contribute to initiating the development of students' skills earlier in childhood. An example would be the arranging of tasks through which second graders can design and develop their *own* egg warmer. They can learn to thread a needle, practice sewing simple stitches and sew the parts together instead of gluing. In addition, students can also develop self-reflection and go through a comprehensive process by placing demands on their own products. In many other situations, one will ask children's opinions, so why not in the aesthetic processes by which they learn to create using materials, tools and techniques? The main goal must be to develop children's creativity and creative skills, not stagnate them.

Competence goals in the curriculum guidelines are interpreted differently. Professor Liv Merete Nielsen comments on the level of education among the art and craft teachers in primary schools:

The teachers at the mid-primary level (fourth–seventh grade) rarely have training in this field, and some have not even had the subject in teachers education and then end up in the classroom with their only qualifications being from what they were taught in primary school.

(Degerud 2001)

The example with the Easter decorations shows that there are not enough motor challenges.

One of Scandinavia's leading family therapists, Jesper Juul, writes in an article on the competent school, 'Although there are piles of research proving that, for example, gymnastics and so-called creative subjects promote students' academic achievement effectively, these are being systematically reduced' (Juul 2010: 80–81). Some Norwegian kindergartens allow children to have their first experience with a whittling knife as young as age 4. By starting training in kindergarten, children establish respect and understanding, and also gain experience with the knife as a versatile cutting tool. These children have obtained a good start with expertise related to the design of hand tools even before the first grade (Gårdvik 2010: 77–78).

CONCLUSIONS

The subject of handicrafts together with the intellectual understanding of the challenges pertaining to them must go hand in hand. As far as the schooling debate is concerned, it is about what students should know in order to be able to meet life's challenges and also carry forth strong traditions (Nielsen 2009: 11). Computer technology dominates much of our everyday lives; however, we are dependent upon our hands to survive, and we need to lift handiwork beyond using a keyboard. Handicrafts education provides personal development, and serves the community we live in. Whatever one chooses as a vocation, or uses handicraft skills for, is subordinate (Gustavsson 2004: 17).

The ear, nose and throat specialist was concerned about assistant doctors' practical handicraft skills, and stated that all children should gain experience whittling with a knife as early as 4 years old. This concurs with the experience of the kindergarten that allows children to whittle with a knife at the age of 4. Not allowing children to practice tying their shoes or work with yarn impedes development of fine motor skills. Children in fourth and fifth grade who cannot tie their shoes demonstrate this. Handicrafts education in primary school has low priority in the Norwegian curriculum guidelines' five basic skills, where academic skills are central. An ear, nose and throat specialist and a neurosurgeon are both occupations where enormous demands are placed on fine motor skills, as well as knowledge and skills about materials, tools and techniques.

Tomorrow's dentists, carpenters, plumbers, hairdressers, electricians and even actors all have the need for a basic education in practical handicraft skills from kindergarten and primary school upwards. In the practice of their chosen professions, they will need good aesthetic sensibilities, a good knowledge of materials and proficiency of skill. In addition, perhaps a return to a broader education in basic arts and handicrafts skills could help reduce the high dropout rate in Norwegian secondary schools. In her quest for a washing machine repairman, Norway's Minister of Education has understood that our society's focus on theory and information technology must also include practical skills. It remains to be seen how she acts upon this important realization.

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