

The History of the Technology Subject in the Swedish 9-year Comprehensive School

Prof. Ulla Riis
Linköping University, Sweden

The History of an Optional Technology Subject

In 1962 the 6-year obligatory Swedish primary school was replaced by a comprehensive school of 9 years length. Proceeding this was a great political dispute over the question of streaming. Conservative forces wanted to differentiate from year 7 into theoretical lines of study and practical ones, thus simply reproducing the school system to be left within the school system to be erected. The most radical forces wished no streaming at all.

The solution was, of course, a political compromise and in reality pupils were divided into three streams of which only one prepared them for further studies. One of the two remaining streams was a technical one, chosen by some 45% of the boys and by less than 1% of the girls. The subject technology played an important role, taking up not less than 28% of the total teaching and learning time during the last three years in school. A look at the curriculum clearly shows that this technology subject was "learning to labour", the subject prepared boys for work within traditional industry.

In 1969 the curriculum was revised and the streaming was abandoned in the formal sense. In reality, however, the "technology stream" remained, only the teaching time was reduced to some 11% of the total teaching time during the 7th, 8th and 9th years of compulsory schooling. Still technology was chosen by some 45% of the boys and by almost none of the girls.

Obligatory Technology Decided in 1980 – But What Should Be the Content?

In 1980 the curriculum was once again revised. This time something radical happened: Technology was turned into an obligatory school subject and was to be taught in every grade, from grade 1 to 9. The underlying political motives were four:

- technological literacy was seen needed in a technological complex society
- equality between the sexes
- the need seen to make every school subject less theoretical and more practical and relevant for everyday life
- recruitment a driving force

The revision work was carried out by the National Board of Education and the directives for the revision were discussed in parliament and issued by the government. It was stated that parts of the optional technology subject ought to be transformed into an obligatory subject.

The National Board of Education had to find solutions to two problems:

1. Which should be the *content* of the new and obligatory technology subject?
2. Which group of *teachers* should teach obligatory technology?

The NBE set out to solve the second question first. By doing so the board, as it turned out, never would have the time to deal with the first question. The second question, as it turned out, would generate a great deal of conflict and consume most of the time available. One consequence of this was that not much obligatory technology was taught in the years to follow: Not only was a syllabus lacking, but moreover, little was done to support the implementation in general.

Back to the controversy of teacher groups. Three groups of teachers quickly “signed up” at the National Board of Education and proposed that they be given responsibility for the obligatory technology subject.

First in line were the teachers of optional technology, stating that it was simply a subject of theirs which was now made obligatory and that they were the only ones around with the capability to teach technology.

Secondly there were the teachers of craft and design, the Swedish *slöjd*. They pointed to the fact that they were in the midst of renewing their subject. *Slöjd* was formed as a subject in the 19th century when Sweden was still an agrarian society

and when craft in the sense of handcraft and practical manual skills were needed in everyday life. The renewal dealt with adjusting *slöjd* to the needs of children in the late 1970s, living in urban environments and surrounded by a multitude of mass-produced artifacts. The spokesmen stressed the design-concept and pointed to the benefits of an extended subject in the line of Craft, design & technology.

Finally there were the teachers of Science. Their arguments were three: Science and technology is a unity, technology is what practical work in the physics laboratory is about for the first thing. Secondly they pointed to the fact that international research results had shown that practical technology could stimulate pupils' interest in theoretical Science. Third, it was seldom said but understood that the recruitment motive was and is a strong one in any modern society like Sweden, with several and strong aspirations to be and to stay an important industrial nation with many and well trained engineers and scientists.

The fight between the three groups of teachers clearly illustrates the multifaceted genesis of technology and the differing ideas of the content of the subject: To the teachers of technology, technology as a subject is about nuts & bolts, to the craft teachers creativity and manufacturing along with an esthetic and a cultural dimension were important aspect of that which they saw in the subject. To the Science teachers Science and technology is a unity and forms two sides of the same thing. This is a widely spread idea, and a strong one.

Outside the groups of school teachers there were some few advocates for viewing technology as part of history and of civics education. They were few, though, and at that time, the late 1970s, quite marginalised.

Thus – the subject of technology has many roots and several advocates with varying ideas about the objects of study within technology and about the ways of teaching and learning within this subject.

An Epilogue

You may still wonder about the outcome of the fight between the three teacher groups. The National Board of Education started out with the notion that Craft, design & technology was the new subject to be formed.

However, action was taken from the associations of Science teachers, and this action was addressed to the political level. The decision was – in reality – made in the Ministry of Education. The National Board of Education received some kind of signal from the political level and changed their action in accord with this. Technology was coupled with Science. In a formal sense, the question was solved and the Science teachers were to teach the new and obligatory technology subject. The volume of technology teaching done in the 1980s was small, however.