

**EQUALITY in INNOVATION,
INNOVATION for EQUALITY**

How to get more girls in technical education

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I would like to share with you how Tullängsskolan (Tullängs School) have worked on attracting more female students .

Tullängs Upper Secondary School was a vocational trade school before. It had a bad reputation and found it difficult to attract new students, alongside this it had the threat of closure hanging over it. With the help of local politicians some money was found to renovate the school. I started to work at Tullängs in 2001 as Artistic leader. As far as I am aware there is no other school in Sweden which has such a position. My job was to start up a Culture House in the school and to make the courses offered at the school attractive to a new group of students.

By the time I started they had already decided to strip out the existing building which had been used as a welding and sheet metal workshop. Naturally there was a lot of discussions around this new investment. What had once been workshops was now to be a culture house filled with class rooms and workshops for all kinds of arts: painting, pottery, music, dance, theatre, photography and film. Alongside this a new library was to be incorporated into this area. The library as with the whole Culture house was to be available to the local surrounding community. It was also important when we received the new funds that we worked closely together with the other schools and day care

centres in the surrounding community. One of the aims was to make the school a meeting place for everyone.

Part of my job was to integrate Culture and Aesthetics into the daily life of the school and the other subjects. The aesthetics subjects should strengthen and enable the students learning process. All students should have the chance to express themselves in different practical and aesthetic subjects. The vision was that all the students would work both with practical subjects and art based subjects no matter what it stood on the timetable. All students in Sweden study 50 hours in the aesthetic subjects no matter what, alongside their main subjects.

My first task was to employ teachers of the different arts, as there had not been anyone before. We soon realised that this was not enough in order for the new work method to be successful. So that's why we developed a new direction in the Technology and Construction program. We introduced Construction Aesthetics into the Construction and Craft course. Girls (it is nearly always just girls on this course) work in overalls and learn the basics of carpentry as well as working in a more creative form in pottery and glass.

In the Technology Programme we started two new areas: Firstly Technology and the Humanities, Secondly, Industrial Design. We considered starting an aesthetics course within the Technology Program but we soon understood that this course would just attract female students and the desired result was a mix. Thus Industrial design it was and on this course today about 50% of the students are female. On this course the students study the technical foundation courses for example Workshop technology and then go on to learn how to build models, the models should be aesthetically pleasing. They can also study Digital art which also has nearly 50 % female students. You can't escape the fact that design sells in today's world.

When it comes to the Technology and the humanities Course as far as I am aware it is unique. There is no other course like this anywhere. It was my wish that this course should be called Culture and Humanities, but I had to concede on this point. That a side, I am very pleased that today at school the students can study technological subjects and at the same time study the humanities and aesthetics combined. On the Tech and Hum course the students can also read amongst other things pedagogy and leadership. This involves learning how to explain technical details to others. On this course around 50 % of the students are female.

An extra finesse within the Construction and Technology course is that the students can also choose to take more maths and physics points thus giving them the possibility of going on to University. We have noticed that this is a very good initiative for the students and the school as a whole has it attracts many motivated students.

Of course it is more difficult to reach the other students who are not on the fore mentioned courses. However in a small way I reach them through another part of my job, organising events. I usually invite authors as well as theatre and dance groups to the school. Another event I organise every year is the Culture Workshop day for all the staff. A day that the staff enjoy which also enables them to get to know each other better and to feel at home expressing themselves in the arts. When the Culture house was newly built we also organised further education for the teachers. The idea was that the other non arts teachers should also feel at ease in the Culture House and the arts. We have had open workshops which means that students can come and get help outside the ordinary timetable.

It is important to show that Culture and aesthetics are subjects for all the students hence why at the end of every term we have an exhibition where examples of the students work are shown in our assembly hall - Café Innova. We have punch and snacks which adds to the atmosphere making it like a real exhibition.

On every Friday we have what you might call Friday entertainment. During morning break the students play in the school café. Other school's students are also invited to play for example the Music College in Örebro. In this way we can see first rate performances for free as the students are happy for the extra stage experience.

We try every year to collaborate with an artist. This idea's roots can be found in the renovation of the Culture House where some funding came from the Culture Job centre where nine artists received an offer to create a sculpture. The thought behind the collaboration is that the students can see and be part of the Artistic process. Naturally some artists work more actively with the students than others. In the Leaf by Rickard Brixel the students and teachers on the Machinery Course worked on the foundations of the statue. The piece can actually rotate, it even has sensors which enable it to talk, well whisper really, when anyone walks pass. Students who were studying Swedish on the Car mechanics Programme wrote poems which were recorded to everyone's delight. Maybe it was too successful, unfortunately it scared a woman who walked pass the sculpture at night. It's quite understandable really, I mean who wouldn't be scared walking passed a statue at night and suddenly hearing love poetry. The result of this was that the statue was turned off. So just now The Leaf is resting its voice, though we are working on it being turned back on again. As a replacement to the whispering the students on the Electricians Programme are working on a way to light the sculpture. We want the artistic work to continue even if the professional artist is not at the school the whole time.

We work with different kinds of international projects, like Leonardo and Grundtvig. Now we want to start a Comenius Project "How to attract more girls in a male dominated education." About a year ago we had the preparation meeting in Turkey - Cankiri a small town in the north of Turkey. Once there we visited a School of Technology with 1000 students two of which were girls. We were distinguishly received and landed on the first page of the local newspaper. My

view is that even if we can't continue with this project we have in any case come along way landing on the front page of a foreign newspaper. It's a start!

Some of you are maybe wondering Why should a computer technician or a Machine Operator learn about Culture /the arts? My answer to this question is that I am convinced that a student succeeds much better in their studies if they can receive a broad education and have the chance to test different ways to express themselves. In my opinion the student will be a better computer technician / person if they have the chance to develop different sides of themselves. Students become more versatile and develop in different ways which is a must in today's world when it is not enough just to be technically good but you must also have exceedingly good social skills.