

# **The Survey Program in Sweden – A Gender Perspective**

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**Key words:** Education, Gender Perspective, Survey Program, Master of Science.

## **SUMMARY**

The educations in Master of Science in Engineering in Sweden have historically attracted mainly male students. Still a majority of the students following these educations are men, but a change seems to be on its way; the number of female students is increasing. The same tendency is also notable in society outside university where women have an enterprising attitude and compete about higher positions in leading companies.

The education in Master of Science, Land Surveying and Management, at the University of Lund has received an unique new study plan adapted to the modern society of today in a way that we are convinced will entice more female applicants. The terms are now based on projects, which will offer the students a more developing and preparing education for the future career as a surveyor. In addition the different subjects are joined into special projects that will give the students a thinking connected to reality.

We are convinced that it is the width of the Survey Program, where technology is not the main element normally associated with the educations in Master of Science in Engineering, that is the reason why more women are attracted to apply. The main subjects law, economics and technology gives the variety and chance to develop that is what the women of today tries to obtain. The Survey Program attracts the female applicant and changes her attitude to technology as the projects introduce engineering in a different and more realistic way.

## **SAMMANDRAG**

Civilingenjörsutbildningarna i Sverige har sedan start främst lockat manliga studenter, en förändring är dock på gång såväl bland teknologer som i övriga samhället. På ett flertal stora företag i Sverige har kvinnor börjat visa framfötterna och gett männen konkurrens om de högre posterna.

Civilingenjörsutbildningen Lantmäteri på Lunds Tekniska Högskola har fått ett nytt unikt upplägg, anpassat till det moderna samhället på ett sätt som vi tror lockar fler kvinnliga sökande. Terminerna är numera projektbaserade vilket ger studenterna en utvecklande och förberedande utbildning inför kommande yrkesroll. De olika ämnena fogas samman i särskilda tematerminer som ger studenterna ett verklighetsanknutet tänkande.

Vi anser att det är L-programmets bredd, där tekniken inte har den primära rollen som man annars förknippar med civilingenjörsutbildningar, som lockar oss kvinnliga studenter. De tre

huvudämnena juridik, ekonomi och teknik ger den omväxling och utvecklingsmöjlighet som dagens kvinnliga student eftersträvar. L-programmet lockar den kvinnliga sökaren och förändrar även hennes inställning till tekniken då projektarbetet introducerar detta ämne på ett annorlunda och mer arbetslivsanpassat sätt.

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## **1. INTRODUCTION**

We are two young women at the moment studying a Master of Science, Land Surveying and Management, at the University of Lund, Sweden. Fifty percent of our class is women and we have asked ourselves the question why? Compared to many other technical educations the percent of women is high. What makes the women of today to choose this education? We want to describe and share our opinions about the new study plan at the Survey Program in Lund in order to try to answer these questions and give the gender perspective of this education in Master of Science.

We are proud of this unique education and to be a part of the development that forms the surveyor of the future.

## **2. THE SOCIETY OF TODAY**

The educations in Master of Science in Engineering in Sweden have historically attracted mainly male students. Traditionally men were supposed to study technical subjects while women were supposed to concentrate on more humanistic fields of studies. It was not until 1870 that women were allowed to get a matriculation exam. Still a majority of the students following these technical educations are men, but a change seems to be on its way; the number of female students is increasing.

Nowadays several companies have women as members in their boards; women have become more enterprising. This inspires young women and results in more female applicants to universities and even to technical institutes. In the Survey Program the number of women nowadays are equal with men and sometimes even in majority. In our grade, students of year 2001, 48,6% of the students accepted to the education were women and during the last decade the female graduates of the Survey Programs in Sweden have been 52,6% out of all graduates.

## **3. THE SURVEY PROGRAM IN LUND**

The Survey Program at the University of Lund in Sweden has received a unique new study plan more adapted to the modern society of today, in a way that we are convinced will entice even more female applicants. The Educational Board for the Survey Education in Lund has been inspired by the Survey program in Aalborg, Denmark whose terms are based on projects instead of separate courses. These projects are supposed to connect the education to reality by combining the three main-subjects technique, law and economics. Our grade is the first grade in Sweden trying this new way of education.

The purpose of the first project was to understand how to build a highway, considering legal, environmental and geological aspects. The project was based on an old European highway in the south of Sweden that is in need of a reconstruction. The task was to find the most suitable route considering the different aspects. The name of the course is “Land Use and the Environment”.

During the project the students were working in small groups. Each group received different suggestions to a new route of the highway and was supposed to consider different aspects. The results were presented with reports and a final poster with the new route. Of course we had lectures that we could use in the work with the group, but we also had to find information from specialist literature, on the internet etc. This kind of co-operation with other students and the feeling of a meaningful project gave us a thinking connected to practical reality and showed us a possible task for a surveyor.

To work in a group with new people can sometimes be hard, especially when you have different opinions and desires. Working together demands a lot of time and sacrifices. Sometimes the work felt a bit ineffective. It was not always your own thoughts got presented in the end, as the whole group had to discuss and stand by the result. However, you learned how to compromise and accept criticism and we believe that this instructive project will develop and prepare us for our future career, as these situations are similar to possible occurrences in real life.

These projects continue the first three years containing different subjects relevant to the Survey Program. After the preparing years the education becomes more individual and we have one and a half year of certain specialisation remaining either of engineering, law or economics.

#### **4. WHY THE EDUCATION ATTRACTS WOMEN**

As claimed the Survey Program is the ideal education for those interesting in engineering, law and economics. The education in Lund combines these subjects in different projects and results in an MSc without being very technical. We are convinced that it is this width of the education in the Survey Program that is the reason why many women are attracted to apply. The combination of technique, law and economics gives a great variety and a chance to develop. This is what many of the women of today tries to obtain.

The Survey Program is quite unknown in Sweden; students have no or little knowledge about the education. It is therefore important to market the education in grammar school via brochures and Internet. Especially the brochures were decisive when we, as well as most of the girls accepted to the program, chose the education. It was the description of the unique combination of the three main subjects that attracted us. It seemed very interesting that the Survey program joined different kind of subjects since many women are interested in both science and civics. The new study plan with projects is also a reason why women are interested in the Survey Program as the projects introduce the subjects in a different and more realistic way.

The university also did arrange a day to get more female students interested in technical education. It is called “Girls at Technical University” and welcomes young women from the grammar school to meet and talk to technologists.

Moreover, it is important for many women to become MSc without studying just technical subjects but still get a technical academic exam. The Survey Program is considered “less” technical as technology is not the main element. The education attracts the female applicant and changes her attitude to technology. For example, in programming we have a female lecturer who inspires us and shows us that technique is not only for men. We were a bit anxious about the course in the beginning but we have now discovered that we manage and even have fun! However, we want to point out that we do not want the education to be too “soft”, after all it demands a certain standard to become a Master of Science.

Another reason why we think women choose the Survey Program is that it is a small education, which gives a fellow feeling. We believe that it is not only the education that matters when a woman decides what to study; the social factors are also important to her.

## **5. THE SOLIDARITY AT THE SURVEY PROGRAM**

The classes studying the Survey Program in Lund are comparatively small. This sets the level of the social life at the program, which is of importance when to choose education. At our institution there are only 30-40 students in each class, compared to other technical programs, which have about 120 new students each year.

The fact that we have most of our lectures in our “own house” gains the solidarity at the program; the students get to know each other very well. The atmosphere is very relaxed. You get to know older students, which in addition give you a larger understanding for the education. We have also had a few meetings with other Scandinavian students in similar educations. To meet and exchange opinions with other students is worthwhile; after all we are future fellow workers.

The small classes give the students a larger chance to get their opinion stated at the lectures, encourages students to ask questions and to have interesting discussions. The close connection with the lecturer gives everyone comfort, otherwise there is a risk that the male students get all the attention since they have a tendency to be loud. In our case the lecturers even know the names of the students. When you are a small group it is also easier to bring about a change if there are any problems with for example the lecturer or the projects.

## **6. CONCLUSION**

It is the width of the Survey Program in Lund that is the main reason why young women seems to be attracted to apply to the education. The combination of engineering, law and economics is the ideal education for those women interested in both science and civics. The solidarity at the program is also of importance for the women of today when deciding education as well as the reality-connected projects. The fact that technology is not the main subject at the Survey Program is another contributory cause.

## REFERENCES

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