

You in IT, also - Support and motivation of girls and women in the IT field

The goal of AJ Ty v IT activities is to ensure equal access to the IT education for all girls and women and help them to enter to the tech job market. From the reason of the negative stereotypes about the suitability of IT positions for men, women are more oriented towards human and social fields of study and work. However, their quality in the implementation of technical professions is at the same level as male colleagues. As a result of this stereotyping only a small percentage of girls chose as a direction of study the STEM fields (science, technology, engineering, math).

Our activities bring a new dimension in IT education for girls and women where the form of involving purely girls' groups is beneficial for their greater motivation. Our research has shown that the reason for refusing computer science classes by girls were mixed classes with strong boy's dominance.

The low number of girls studying technical paths logically graduates on the job market when their lack is critical. At the same time, it is specifically technical and IT positions that are financially better evaluated, which results in significant pay gaps in women's and men's assessments. The rise of the number of women in technical positions requiring higher qualifications will create a stronger group of women with higher incomes. Our ultimate goal is therefore economic autonomy and empowerment of women in society.

The main benefits for girls and women are primarily to gain access to quality education, and then to increase their value in the labor market. The benefit to businesses and the whole society is to obtain high-quality human resources that are dramatically missing in the technical field. This situation increases the need for some companies to limit their production capacities, which in the end may lead to a slowdown in the economic growth of the whole country.

For older women for whom long-term academies are designated, the greatest benefit is their further growth and development. At the academy, they will acquire basic IT skills that will enable them to get new jobs or move professionally higher in an existing job.

Realized activities:

We implement activities for three main target groups, broken down by age. These are girls from 8 to 14 years old, 14 to 19 and then girls studying at college, women after graduation, already with experience in the work process. The distribution of the target groups is mainly due to the other methodologies used, the content of the teaching, and, last but not least, the communication set-up with them.

The specifics in communications are just the youngest girls, which are not appropriate to reach out through social networks. The communication mix needs to match the address and engagement of the participant, but we also need to get the attention of a parent who is important in this age when approving individual activities for girls. In this age group, we use a lot of Scratch, which is ideal for them. Favorite workshops are also dedicated to programming LEGO robots.

The most popular and most used form of our work with high school students are practical workshops where we teach girls the basics of programming languages and other topics. It is essential for us to find a topic that we can present in an interesting and fun way to show the girls that IT is not boring. For example, we like to use micro-bits programming when girls can pick up the device in their hands and thus see the result of their work immediately. We

program light-emitting diodes with them, which we then put on clothing. We cut telecom cables and make our own phone connections. We disassemble the laptops to see the equipment inside. We are talking about what tracks are left behind on the Internet and what is important for safe behavior on the Internet. We do the basics of websites together. We create a digital font. We engage them with learning IT skills and, above all, helping them to understand what everything technology can involve and where they can be implemented.

Women and girls after college, after maternity leave, or already involved in the work process, are mainly focused on acquiring IT knowledge to help them move in their careers. Our 50-hour long learning academy is focused on data analysis, testing, machine learning, excel, and more.

Separately, there hold the popularization activities aimed at presenting role models of women in the IT. Our discussion concepts Frida Talks Tech happens in Košice and Bratislava, twice a year in every city. The audience has about 100 participants and aims to motivate other girls and women to choose IT careers through the stories of individual speakers. At the same time, the activity serves as a networking platform.

A special target group is for us the parents of girls who play a decisive advisory role in selecting the direction of their daughter's study. Therefore, we have prepared a separate explanatory material for parents about why their daughters should study IT. At the same time, we are preparing a website for parents to answer their questions. It is essential to lead them to think about this direction.

Over the past year, we began piloting teachers, computer science teachers. As they are closest to the girls and can significantly influence them in their next direction, it is important for us to motivate the personality of the teacher and bring them joy in computer science. Our goal is to help teachers create interesting content as well as helping to build a full lesson. As part of the Academia Programming Program, our trained teachers are now leading school girls to work with micro: bit.

Organization funding is provided through grants and company contributions. However, these are not easy to get. The age group of older women who already have their own income contributes to the long-term education courses with the financial amount we use to cover the costs of the courses. At the same time, if resources exceed, we use them to prepare other activities for younger age groups that have all workshops for free.

The results

During the six years of our activities we managed to increase the number of girls on IT faculties of Slovak universities to 12%. The latest statistics from the STU Faculty of Informatics and Information Technology in Bratislava say about 17% of successfully completed bachelor's girls' degrees.

At the same time in the secondary schools, where we do our activities, the interest of girls in computer science seminars is growing, and their number is also increasing in "maturita", the final exam from informatics.

In recent years, we have been able to open the topic of women in the IT area on public, to bring more attention to it. Women in IT are still specific, very few, and if they are, we little talk about them and we know little about them. If the girls do not have any positive role models that could follow, we will find it difficult to convince them that IT can be a way that gives them a sense of life.

Aj TY v IT is an important element in our society, because it brings a new look at the possibilities of women and girls' professional orientation. We managed to open a discussion about women's potential, and at different levels we are discussing that our society cannot afford to miss such precious talents. Our goal is to reach at least 30% of the girls in the IT faculties, and at least 40% of women working in IT positions. From our experiences we can confirm, that we can achieve these goals.