

The Potential of EE Women

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This is a picture of the professors in our department of Electrical and Computer Engineering. We learn both electrical and computer engineering in one course, which is unusual among NIT colleges. We can choose to become electrical engineers called “EEs” or information engineers called “IEs” after graduation. In fact, our graduates are highly regarded by companies.

Now, please look again. How many women can you see? That’s right. There is only one. As you can see, electrical engineering is a man’s world.

Though the number of female students at Kosen has been increasing, and is now over 20%, in our college less than 12% of students who study electrical and information engineering are girls. Looking at other colleges, where the subjects are taught separately, we can see that electrical engineering is much less popular among girls than information engineering. As I am studying the fundamental properties of semiconductors and want to become an EE, I’m worried about what my future would be like since there are still so few women in the field.

In order to visualize and compare the working environments of female EEs and IEs, I interviewed 4 female engineers working in Wakayama: Ms. Matsufusa, an EE who runs her own electrical contracting company; Ms. Sode and Ms. Hashimoto, IEs who work for a software company; and Prof. Xie, who teaches electrical and information engineering in our department.

First, I want to tell you the advantages as women in their workplaces. Both EEs and IEs remarked women are more careful about details and skillful with their hands. Also, because women seem to be easier to talk to and pay more attention to others, they are thought to be better at dealing with coworkers and customers. Now, let’s look at disadvantages. According to one EE women have less physical strength than men. Another problem the female IEs talked about is the amount of overtime. Long hours are difficult if you have a family.

Moreover, female engineers still face gender inequality. Let me tell you about two of the interviewees’ experiences. First, Prof. Xie talked of being criticized by male coworkers who would never speak that way to another man. Fellow women can also be prejudiced: “You are great. Now you’ll go home and make dinner, right?” Ms. Matsufusa was told this by a female customer at work. Even though she shares the chores with her husband, people assume women must do all the housework. I think most women are familiar with these situations, not just female engineers.

While women may encounter prejudice at work, companies are starting to see their value as engineers. For example, Ms. Matsufusa has started a much-needed service in which female engineers assist women living alone. Her trial was highly evaluated by the customers, many of whom feel more secure with a female EE visiting their homes. Her company is also thinking about investing in robot suits so that female engineers can lift heavy objects such as air conditioners and ceiling lights. The software

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company where the IEs work promotes women to management positions and supports female engineers with families by allowing flexible working hours. Through these interviews, I came to see there are advantages to being a female engineer and any disadvantages can be mitigated by technological progress and creative thinking. In addition, employment practices at companies are improving, leading to more progressive workplaces where women are valued for their skills. I think men and women are equivalent but not the same. We must respect individual abilities so that we can all complement each other.

Before, I was worried about my future, but now I'm even more determined to become an EE. I want to encourage younger generations of female engineers too through events like Kosen Joshi Forum and Girls' Kosen Stay. This presentation is also an opportunity to raise awareness.

In this way, we can change people's attitudes about female engineers and maximize our true potential.