ITTP-21CS

Integrating technology in the teaching process, path towards building 21st century skills

Carla Sofia da Rocha Silva, PhD

Artificial Intelligence Systems Researcher

By Nika Homar and Gaber Cencelj, GSŠRM Press Group

Kamnik, 11th March 2019

Erasmus+ is a program that is based on teachers exchanging knowledge and finding new ways to technology. The main topic in the project ITTP-21CS is ICT, that focuses on the technological impact on teaching and how to use technology to the teacher's advantage. First the teachers must comprehend how they might improve the teaching practice, most still think that the only right way for the students to learn is some chalk and a board, possibly not chalk precisely but you can get the idea. Technology in the classroom is a controversial idea. Now why is that so?

We had the pleasure of meeting the inspiring Carla Sofia da Rocha Silva, who works as an artificial intelligence researcher at the Institute for the development of new technologies near Lisbon in Portugal.

As a student in secondary school she was interested in various topics from psychology to mathematics. She then enrolled at the Coimbra university studying geophysical mathematic for five years and then three more years specialization for master's degree and another five years for PhD. For her master's degree she came up with an interesting idea. She was well aware of the problem that the university was facing the lack of motivation from students to complete their study, so she made a program, an algorithm that could predict which of the students were going to drop out. It predicted the success of a student based on some variables such as student's habits, their social life and so on. After gathering the information with the mathematical model she pointed out some individuals that were having difficulties and brought them to the psychological team where they were guided and the project was a success. She said that was the turning point for her, she became aware of how she could help people, she found a way to help and do good for others, something that it seems she values quite highly.

Recently she has been working on a robot that has feelings. Her name is Fi. Here is an instance she gave of what she is doing, she put it like this »I asked her to tell me a joke, so she did. Because I didn't laugh, she started crying and she also said that I don't like this joke. «

She poses an interesting question about what is an emotion or what is a feeling. Is it something that exists in us and is a part of us from when we become conscious or is it rather something that society has taught us, how we are supposed to act in a given situation? But then again what is consciousness? Her opinion falls in line with the later. She believes that like humans are taught to feel robots can also be. In short, she said that programming is very similar to teaching.

We perceived her as a very curious and dedicated person, that is something that shows in her work, in the way she speaks and acts. She also said that there's another very important characteristic she possesses, she is not fearful, which is a very important trait for someone who works with technology where there is constant change and progress. Progress is good but if it can't be understood it can be frightening, for instance, humankind is closer and closer to creating artificial intelligence (AI) and even though we understand that it represents something good for humanity, we become more and more weary for what the future will bring.

So out of pure curiosity I asked why by her opinion are we so scared of AI.

This is what she said: *Why are we afraid of the dark?*

Because we are afraid of the unknown. The basis for fear is hidden in the fact that we don't know what to accept and because we don't know what is coming, we don't know how to react, (maybe like a programme we are afraid of failing... Error).

Besides work Carla also has a family and when I asked her about her family, she pointed out that she works a lot, her work requires total dedication, but you could sense in her voice that she is very grateful for them. Her two children are interested in what she is doing and although it has taken a lot of time for them to understand what their mother does, she sees a big part of her in them. From what she was saying I got the idea that they are just as curious and fearless as she is.

Talking to her made me think why someone like her is participating in such project. And I understand now. This ICT project has to start somewhere and in this case is started with the teachers and their understanding of the technology around them. They must know how to use it to their advantage and most importantly not be afraid of it. Only then it could be used for all the goods it brings.

She is here to educate the educators, so they won't be afraid to use all the tools they have at their disposal to better educate the generations to come.