"The Sunny Mario Robot Head" Workshops at SciFest Joensuu, 11-13 May 2017

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What were the workshops mainly about?

We had a group of around 12 students aged between 13 to 15-year-old, who were divided into smaller groups and were asked to build a robot head out of the given materials and technologies in a timeframe of one hour and a half. They were given different sorts of materials like paper, plastic, glue etc. to be put together using the Arduino electronics platform and Raspberry Pi as the programming software.

What was the impression from the students? Were they quite firm with computing?

Their experiences varied. There were mostly boys who had had a little more experience as a result of extra courses at schools, but a lack of knowledge and experience was to be observed among all. Almost all of them seemed very excited and eager to learn new things but the knowledge gap was present in almost everyone. Their excitement and interest could also be observed by the many questions they were asking. Sometimes even questions difficult to answer.

What is your general assessment of the workshops? Were they a success?

I was amazed at the results. I thought one hour and a half would not be enough but they actually managed to go through all the stages of ideation, planning, and creation and come with results also in such a tight timeframe. Sometimes these stages were mixed and they immediately started with trying out materials before any ideation or planning had taken place, and I am not sure if this is only to be observed among teenagers or would also happen to adults. However, the mixing of the stages did not interfere with the results and almost all of them seemed content to share their result at the end. Even the groups that were not so successful seemed excited when moving to other tables and checking the results of the others.

Can you think of any other barriers or things that were rather tricky? What needs to be considered for future workshops?

I don't think there were any specific barriers. One of the things that need to be considered is providing help and answers in a timely manner. The ones that faced difficulty on something (mainly programming) and did not receive help on time seemed to start being disinterested. Another important thing to keep in mind is that they find all needed materials on the table and don't lose time or concentration moving around and trying to find them. Lastly – and maybe it is only my impression – I would say that the setting should be organized and calm. A big hall with too many people and a lot of noise might make the students less concentrated in their work.

How do you see such workshops supported by the eCraft2Learn project platform? Do you think that people who work together in a workshop should have a sort of community sharing platform?

I think the platform should include some simple and short videos explaining some basic knowledge, like for example how does electricity (plus/minus) work, since there is a considerable knowledge gap in these regards. Building a sort of community sharing platform could only be a positive thing. The students could be motivated by watching the results of others and come up with own ideas.