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START AUDIO

Interviewer: How was the session today?

Respondent 1: It was a really good, fun session. So, yes, I highly enjoyed it.

Interviewer: You enjoyed it? Anything else?

Respondent 2: I did enjoy the session. That was very interesting and a little bit challenging as well.

Interviewer: Yes, because we had more to improvise, right? Like, there wasn’t an idea from the participants and then we had to come up with an idea, how to actually do it.

Respondent 2: Yes.

Interviewer: But he prepared something, didn’t he?

Respondent 2: He didn’t really. We were surfing around, surfing on the internet trying to find some cool stuff was it, we could just show as an example of what you might want to do. He was like, “I like this thing.” It was a ball in the end and cylinder and a box below.

It was nothing made for a purpose. It was more like a statue or a little thing to stand on the table.

Interviewer: So he just chose it for the shape of it?

Respondent 2: Yes, it was like what is it going to be for? Is it going to do something or..? What is the aim of this project? I was like, “If I could just keep it on my table as a prize,” it was looking like a prize. So it was a globe on the top and…

Interviewer: So like a reward?

Respondent 2: To show the possibilities of the machines. I was like, I would be happy with that. It not necessarily has to do something. I was like, okay, I know they wanted to make something ourselves but it’s continued to be surfing on the internet, trying to find interesting shapes and then 3D printing it.

We didn’t even really make a box. We just downloaded their template. It could have just been easier. So we haven’t done anything, particularly, ourselves but we, mostly, learnt how to download stuff from the internet, choose more interesting shapes and the most stuff left to do is like just printing it, mostly.

I am not sure if he will be using this in the future. It will be like a stand on a table. Won’t be using, like, [P2] or [P1] [ 0:02:24], he probably won’t have any personal relationship with this item. But at least he will probably like it. He will like the shapes and he will probably like the aesthetics of this product.

Respondent 1: So did he build something that was just quite a nice object to look at? It didn’t actually have a purpose of doing anything?

Respondent 2: Yes, it was just an item.

Respondent 1: Just a nice item.

Respondent 2: Just a beautiful item.

Respondent 1: Yes.

Interviewer: Which is interesting because [P2], actually, did something that is not even for himself. He designed it for visually impaired people.

Respondent 1: Okay, what did he make?

Interviewer: So he made kind of a security temperature sensor to test either you can activate it by a distance sensor, so by waving it on one side or you press a button.

Respondent 1: [Samex 0:03:17]?

Interviewer: Yes. Then it takes the measurement from a temperature sensor and then it says either blue for if it is low temperature or it goes red if it is a high temperature. So, we can actually decide what is the threshold.

But, yes, the purpose of the whole box is actually not for him but he really said, “Oh yes, I want to do something for a visually impaired person.” So he is already designing for others.

Respondent 2: How did you assist him? What did you do?

Interviewer: I actually didn’t need to assist him that much. He had a clear idea what he wanted to do and then we started with the electronics itself, so we actually just went from one step to another. I started with the easiest one so just, first, bringing both lights to light. Then going over to connect a button, then connected the temperature sensor and then connected the distance sensor.

Then we had all the programme already there just to put it together and that was it. It was working out of the box. He, actually, just needed help where to find the PDF file that we had used with the tutorials, so we could check it. But the programming he did totally independent.

Respondent 2: Really? He did the programming stuff? He did the code?

Interviewer: Yes, yes.

Respondent 2: You didn’t show him what to do and just..?

Interviewer: No, I just notified him if something was not right, for example like if… Since he has never coded until last Friday, never before – he, kind of, for example if it was an ‘If’ statement, he was not aware that after a round brackets, there is the curly brackets opening. So I had tell him, “Oh yes, there is a curly bracket,” you know, kind of in situations, syntax teaching. So there was all of that.

Respondent 1: So he had the logic?

Interviewer: Yes, absolutely the logic. He – in the show and tell video he was going through it very thoroughly and could replicate everything there. We wrote also some comments in it so it would be easier to check after a while. After that, we did, actually, the planning for the packaging of the electronics.

So, I promised him to do soldering on the shield for the \_\_\_[0:05:47], so we can have just like… Put it on top of the \_\_\_ or fake \_\_\_ and put it inside the box. So, next time, we actually just need to design the box.

I think he really wanted to have all the three technologies in there. Because he started today with the electronics, we did the laser cutting for the top of the box and next time he wants to 3D print the button.

Respondent 2: This is really nice.

Respondent 1: He is coming back tomorrow?

Interviewer: No, that is on the 27th of July. So that is the last session and after summer [Crosstalk 0:06:18].

Respondent 1: That is the last session?

Interviewer: Yes. So no session tomorrow, that was cancelled. It would have been then but he goes already [Crosstalk] holiday.

Respondent 1: Okay.

Interviewer: No, but it is interesting. So, for you it was he designed something for… Then designed something for himself.

Respondent 1: Yes and he was already halfway through the process. He had an idea already. So in terms of how much I had to help with that, I guess, it was quite a lot. Because he kept saying, “Oh yes, it’d be faster if you do it.” So, I just thought, “Well, okay then.”

So using the keyboard and the mouse but I let him… We worked out where he does the mouse, I do the keyboard which worked quite well. So we just had to resize, illustrate a file to create the box itself. Then we laser cut that out, superglued it together, put in the wooden insert which he made in the last session, I believe. Then, we started going about drawing up some hooks and designing those so that it could hold the box inside of his wheelchair arm.

He is very… He has got an eagle eye because I missed quite a few small details which he picked up on which would have rendered like the actual prototype pointless because I got the measurements wrong. He was like, “Wait there, hang on. You’ve missed this.” It was like, “I have, how embarrassing.”

Interviewer: He is really…

Respondent 1: How embarrassing, yes. No he is really-

Interviewer: Point on, isn’t he?

Respondent 1: Point on, spot on.

Interviewer: Yes. I also noticed yesterday when I was working with him that he often reminds you of stuff that you kind of forgotten in the rush.

Respondent 1: Yes, exactly. That is exactly what he was doing. He just kept reminding me of the things I had missed.

Interviewer: So he was actually making sure, he was in control, yes?

Respondent 1: Yes, he was guiding me. Because even at one point I forgot to change the size of the line width and he was straight there, he went, “Oh no, before you print you’ve got to change the line width because the line’s look too thick.” I went, “Oh yes, they are too thick.”

So no he is very clued up about what needs to be done. He thinks things through.

Respondent 2: Yes. So probably [P4] is the one who is least independent, is he? Maybe if one of you was working with him, he would create better stuff. But in terms of my knowledge and his knowledge, we were designing well together, we really understand each other, what… I was understanding what he wants, I was trying to create his idea, bring it to life.

But, maybe, he has a lack of electronic knowledge. He might probably have wanted to add some electronics to it but he didn’t ask me about it.

Interviewer: So, he actually was not thinking at all, himself, about electronics, was he? I think he was really focussed on 3D printing. It definitely was something, the 3D printer.

Respondent 2: Yes. He has a good eye on aesthetics. He really loves aesthetic things, he likes beautiful things – that is true.

Interviewer: Whereas [P2] is more the functional guy, he was like, “Okay, it should work.” That is why he probably likes the electronic and I think he really enjoys programming, he really does.

Respondent 1: Sounds like it, definitely.

Respondent 2: This is more like me. Because I also like practical things that actually can help with something or what works. I like aesthetic things but I prefer them to be functional.

Interviewer: Functional as well, right.

Respondent 1: In that respect, [P1], he wasn’t so bothered about how it looked and stuff, he just wanted something that was going to work. Which is why, you know, I was saying, when we were designing the hooks and things like that, he wasn’t so bothered about spending more time on rounding the edges because he knew there wasn’t much time to finish. He just wanted to have something which he could have, which he could use – especially for use at the weekend, this coming weekend.

Respondent 2: But was it him who chose the colours or the material, right?

Respondent 1: Yes, he chose all that, yes.

Respondent 2: It is really interesting that he stuck to the \_\_\_[0:10:46].

Respondent 1: Yes, well I said I offered him all the other ones and-

Interviewer: [Crosstalk 0:10:50] explanations \_\_\_, yes.

Respondent 1: So he said it would like, he said, “It would look nice in contrast to the green [Crosstalk] we used, which is quite nice.”

[Aside Conversation 0:11:01 – 0:12:12]

Interviewer: Okay, anyway. So I guess, just to go through the questions, this will help with this project. What worked well? For me the programming worked well, really independent, yes everything worked quite well. It is just the dexterity of [P2] to put the components into the bread board.

Respondent 1: For me, working with [P1]. How we divided up tasks, basically, just with what he was capable of doing. So if there was something where he could have an input on it, for instance like drawing the illustrated files, choosing the colours and all that sort of thing.. Obviously he did that and I helped out where I could and let him be in control. I just, sort of, would do more of the physical movements for him. So, it was just me acting it out but that worked well.

Respondent 2: Yes. So, he guided you well?

Respondent 1: He guided me, he guided me yes. He got exactly what he wanted out of it too.

Respondent 2: That is good. Me and [P4], we worked well together designing stuff and trying to measure it and deciding what measurements have to be applied and what methods will we use and what shapes we want to put together.

Interviewer: What didn’t work so well?

Respondent 2: Didn’t work – 3D printer, maybe mention that again. We would finish together today a sphere piece and probably the middle one. If he wouldn’t refuse to work because it was just, who wouldn’t refuse to work the 3D printer.

Interviewer: Make him work.

Respondent 2: I was just saying, “\_\_\_[0:13:49] as if it was a person. Look how cheeky he is twinkling at us.” One blink, blink, blink. He is, like, giggling, yes?

Interviewer: What didn’t work for you?

Respondent 1: I guess, well, no, I think everything did work as well as it could have. I mean things that didn’t work so well, you know, when I was obviously trying to show him things and if I was to hand him something, he would have struggle with that. But that is not something that didn’t work well, that is just how it is.

Interviewer: Yes, and you learn how to hand over things?

Respondent 1: Exactly, yes. So, I guess in terms of actually putting it together and things like that, that is something that he couldn’t do. But I don’t think that is a criticism of what didn’t work well, that is more the reality of the situation.

Interviewer: Yes.

Respondent 1: So, I think it worked as well as it could really. There wasn’t many major obstacles or problems.

Interviewer: So I guess we have already talked about the challenges and the support we gave. Do you think all the participants really had the feeling, "Oh I did it?”

Respondent 1: I believe they did, yes. Like I said with [P1], he made all the decisions, he corrected me, he guided me. I was just acting out what he was telling me to do. So, yes, he chose the colours, he designed it, yes, definitely.

Interviewer: It is just so funny because in the end he always says so many times, “Thank you, thank you,” as if he wouldn’t… I mean, he did it.

Respondent 1: No, he did it.

Interviewer: He did it, yes.

Respondent 1: Yes, you suggest things but at the end of the day he says, “Okay,” or, “No,” it is up to him. I said, you know, “Do you want to make the hooks for the ball holder different? Do you want to change them?” And he said, “Yes, I want to change it, so it looks like this.”

So I drew it on paper and he went, “That’s how I want it.” So I went, “Okay.”

Interviewer: Oh cool.

Respondent 2: The same works for me. [P4] picked the colours, [P4] decided what kind of shape it was going to be. [P4] chose the main changing decisions about, “Okay, we can look at Plan B or Plan C if the 3D printer refuses to work again.”

He did the design, I was just like showing him some stuff and he was making the decisions.

Interviewer: Same for [P2], he did it all independently. So he had a strong idea, strong execution everything. So not much needed, so he…

Respondent 1: Strong compiling.

Interviewer: Strong compiling in there, yes. I thought it was really interesting when I asked them about if they would be interested in teaching us in a workshop. Everyone was so confident in that. They said right away, “Yes, sure, we would like that.” Even [P1] said, “Yes, yes,” and he has the most issues.

When I met him first, he hardly dared to speak, like, he only said yes and no. Because he just knows that people have a hard time understanding. But he seemed right away, “Yes, I would like to.”

Respondent 1: Yes, but no he has come on along way then.

Respondent 2: Have you noticed a confidence in these participants? They are very confident. They really have some confidence, it is really, like, I don’t feel them to be shy or anything.

Respondent 1: Well your participant was confident enough to ridicule me about the laser cutter.

Respondent 2: Yes.

Respondent 1: But yes.

Respondent 2: He does that, he does that. Yes, [P4] can be quite cheeky. Yes. You were supposed to clean up after yourself.

Respondent 1: I didn’t know you were using it after and I was about to go back in so…

Interviewer: What happened there?

Respondent 1: We did the first laser cutting and we just wanted to put the box together because he was quite excited to see how it would look. So we just came straight back in. I didn’t do anything with the laser cutter because I thought, “Okay, we’re going to be in there within about half an hour/45 minutes anyway.” I didn’t realise you were laser cutting.

So I would have cleaned it up.

Respondent 2: No, I wasn’t meant to be mean on you. I was actually, like, in a rush to do their project and [P4] was like, “But we also have a project.”

Interviewer: Our project is also important.

Respondent 2: Our project is also important.

Respondent 1: Yes, no, I didn’t realise that the 3D printer wasn’t working and I wasn’t expecting you because I was concentrating with [P1] so I didn’t know you were on it. I didn’t know you were on it.

Interviewer: How did you enjoy that we were all working on different projects but altogether in here? How did you like the atmosphere? Was it stressful? Was it good? Was it..?

Respondent 1: No, I don’t think it was stressful. Everyone was concentrating on their own project and, yes, people were working in pairs in that respect. But every now and again people were talking to each other and bouncing ideas off and if someone made something, like, when [P1] made his box, everyone went, “Oh, yes, it looks like.”

Interviewer: So you were showing to each other?

Respondent 1: Everyone provided a bit of feedback on it, in a sense, I guess. Everyone saw it.

Interviewer: Yes.

Respondent 2: I think all three groups were working really independently, creating their own atmosphere of the group. So even if some of them would be arguing between each other, it wouldn’t…

Respondent 1: It wouldn’t affect the other groups.

Respondent 2: Affect the other groups, yes, at all.

Interviewer: No, I really liked how it looked here. Like, whenever I came into the room, like, “Whoa, yes, there’s really something happening.” It is like a mini hackathon and I really enjoyed that.

I think it was a good decision that we had three computers, three pairs and working like this. I think that was really good.

Respondent 2: I agree.

Interviewer: Good. Any..?

Respondent 2: I only wish we could have a third pair of eyes to look at the projects, sometimes, just walking around and suggesting things, some illustration.

Interviewer: Yes. May be we should, for the last session on the 27th, like, okay we have 3 people working with the people. But also, maybe, someone who is doing a little bit of the documentation work. Because it is quite hard to always think about, “Oh yes, take some photos, do some little videos and…”

Respondent 1: Yes, I must admit, yes. Because when I… I took the camera into the workshop I didn’t actually take any picture because I was concentrating on just talking to [P1] or actually setting up the laser cutter or the PC so.

Respondent 2: I have seen the camera, like, lying there to me. But I had no time to take photos.

Interviewer: Yes, I took every now and then a couple of photos. I think the most in here but…

Respondent 1: An extra person to deal with that might…

Interviewer: That would be quite good then, especially for the final session.

Respondent 1: Exactly, yes.

Interviewer: Alright. Any other comments? Ideas?

Respondent 1: No, I thoroughly enjoyed it.

Interviewer: Thank you.

Respondent 2: That was good.

Interviewer: Thanks for all your help. It was awesome.

Respondent 2: Yay.

END AUDIO

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