R: I'll just keep that there, so uhm, basically the whole point of having this chat is that it's a really cool idea, but it's a pilot program so it's gonna be a bit rough around the edges, so It's looking at why people wanted to get involved, why did the schools wanted to get involved, why do students get involved. What worked, what didn't work as well that we can change next year, and then kind of... yeah, how can improve the process? How can we make it work a bit better? Because it was a very short period of time to get it sorted, done and delivered.

A: hmmm

R: So, if we could have the benefit of it being whenever in the year, what you do, whether it's teaching... or something else, like, what can we do to benefit... and take the good bits from what we've done this time?

A: It's a lot of land to cover-

R: Yeah... sorry it's more of a chat than anything... so, let's start out with motivation.

A: I think it's a really good idea to get somebody in, who, yanno, is teaching- or is learning to teaching... i don't know whether your skills are in computer science or what you're doing quite high up at university? So it's great to have somebody in because I wasn't... uhm, trained with computer science, so for me personally i think that's great that you come in with that knowledge... uhm, and... whilst having the knowledge of the computing science is great, it's to have the knowledge of how to teach classes at the same time as well, because.... yanno, you need to have them hand-in-hand

R: yeah

A: And, yanno.. I found that uhm, you know like... Resources that you sent us, back- I could have done with them a bit earlier to have a chance to, go over them and have a look at... I would have also for you to just have come into the school and observed beforehand.

M: Yeah, yeah that would have-

A: Instead of just being thrown in with this class of pupils who didn't know who you were, if you'd have just come in, maybe if you just- if you're working three lessons... maybe six lessons? I know it's extra time and expense... or maybe even, not necesssarily with that one class, you'll probably be better with just a day in the school? Shadowing different classes, shadowing different teachers, to pick up on.... how a lesson is taught? So, what I would like maybe suggest is the fact that you could go, and come in for a whole day, and I'll put you with somebody, one of the better teachers who've got great crowd and behaviour control, and you can sit and make notes and can think about what works and what doesn't work... and how that would work with you as a person as well, not oly does it give you a bit of confidence within a classroom, but it also gives you loads of ideas as to what you can do, and like... teacher training, we would have never been put in front of the class to teach without the observation period so, i do think the course would benefit from an observation perioud... Maybe not that one class, but a whole day? Just-

R: Yeah

M: Yeah

A: Because different subjects... Maths? To see how they do things in maths? That sort of thing! So, more observation period, and then, you gain some of that confidence. Certain little things, you know, uhm... you just need to stop and wait for them to have your attention, I found a lot of the time, I really don't want to put you down StudentLordLawson, because I think you're very brave for what you've done, it was just little things... the odd like... this is the sort of feedback I would give to a teacher who's been training, and you're not, so I really feel bad to give you anything.

M: No , it'll be fine!

A: You know, with kids, you just have to stop and have their undivided attention to teach them and things.... uhm, and.... break things down into little chunks and demonstrate as well... sort of like "hey can we all just do this together"

M: Yeah, I learned that as I went on, needing to demonstrate-

A: You did! You did some demonstration in the last one, so you've come on from nothing to something in three lessons.... uhm, so you have done really well, but it's just that stop and wait for the kids to listen to you. Cause, uhm, uhm... half of them, just you say, were just so distracted. Some of them are even just wanting to get on, and they're not even caring what you're saying because they just want to get on and.... the minute you stop talking, they're like "oh I don't know what I need to do!" And you think "If you'd have just listened to instructions then you'd know what you needed to do. Uhm... So, I just... wrote stuff down because I have a shocking memory. I think that's pretty much what I said, uhm... I said in the second lesson you're more confident addressing the class, so I'd seen you come on there, even in the second one. Transferring files over, you didn't demonstrate how to do that, and it was touch... Even though I'd gone over it with them before...

M: It was simple stuff, I just didn't remember-

A: I know, I know- And when you came in for that session, I did say that they'd find it tough just to download the file and save it to the documents, and that was evident in the lesson

R: So yesterday i was doing a microbit uh... workshop at the university, so everybody from first year undergrad to final year phd student, and they struggled to download the files [laughs]

A: There you go! We've got no chance! [laughs]

R: Like... I think everybody... one of the best ones, Year 4s? Cause you just go, "everybody click here" and because they don't know how to do it they just follow the instructions-

M: [muffled] -yeah I work with younger kids and thye listen to everything-

A: Yeah, they hang on your every word, don't they?

R: One of the thing's I've found is to do a really short starter activity, make the microbit shown an icon, and then you get them to download it, so it's like a really quick- it sets it up for the rest of the lesson.

M: Yeah...

R: Just a really short starter activity...

A: I found that your worksheets were very confusing, the kids just didn't get them at all.

M: Yeah, some of them were just like... they were just sort of-

A: -doing what they wanted to do?

M: They didn't have... they were on a different editor...

R: Did you not manage to unblock the editor? I mentioned

A: we did eventually.

M: Yeah I made a quick version on the... like... the ediotr that worked here, and it quite work.

A: Yeah, i think the worksheets that they... I think it was this one wasn't it, and they had to follow these instructions and there was different wording because they were using a different editor.

R: Ahhh.

A: It was just like...

M: I think there was ones, if you were like,

A: It was classes as something

M: It was a while or something

A: That brings confusion for like

M: Those ones were missing stuff

A: The flowchart

M: The middle bit wasn't right at all

A: So had you made a mistake on these?

M: Yeah...

A: And that happens! It really does... I have been teaching for a few years now, and sometimes I'll do something, and I'm thinking "oh no I've made a mistake" and it is... it does happen

R: Hmmm

A: So maybe just double check

M: Yeah...

A~: Just printing on blue, they couldn't see it hardly

M: Yeah

A: Also, this is a little... this one is the biggest, so they got stuck into it a bit-

M: The words are too small

A: They didn’t understand what they had to do... a lot of, sort of, uhm... they didn't know what the desired output was, they didn't know what they were doing... there was a lot of confusion with the worksheets. But this one, the one you created for lesson 3, those step by step instructions, they were-

M: There were a lot of words

A: I know you felt it was a much better lesson, and I felt it was as well. Once they got over the... the- they didn't realize the instructions were here. I don't if they thought it was another one of these worksheets or...

M: They other ones weren't as-

A: -detailed-

M: -Detailed, yeah. Cause it said, like, you need to do this but it didn't say how you need to do that, so I think there was a lot there.

A: This one you designed is much nicer, and it's got, sort of, step by step, and I think a lot of them were saying "oh I don't know what I'm doing" and then I said "read your instructions" and suddenly they were like "oh right". And... in the... you could feel the lesson start to pick up pace, and uh... we even had a CLIMB visit off the boss, the headteacher-

R: Really?

A: Hmm, he popped in and went "oh this is great this, it's fantastic this!"And I said "aye why did you not let us have the BBC in to film then?"

R: [laughs]

A: ...but never mind, never mind [laughs]. Yeah, so it has improved from the beginning through, three lessons, great progress.. Like I say, i think your confidence, you would have... if you'd have done a bit of observation beforehand, your confidence would have been even more at the start at it would have gotten higher. Uhm, but no, well done.

R: Yeah, that's one of my questions- students- I usually do these interviews individually because it's difficult to get student and teacher in the same room at the same time [laughs]. One of the big things we want to do is to support schools with computer science, but the other benefit is the students get to have these experiences that you don't usually get to have... like going and teaching... uhm, so how- like, if youw ere to look back at your skills at the start and now, what do you feel would have improved the most? What was the msot beneficial to you from taking part in this?

M: Well, I'm kind of glad you brought that up because I'm not a computer science student... I do chemical engineering, which is completely different to computer science so everything is a bit newer... to me in comparison to other computer science people. But i think, like you said, the thing is more how to... my confidence, like, I've buitl a lot of confidence and speaking to the class and I feel more comfortable in the setting... uhm..

A: Scary the setting you're in

M: Yeah, the scariest setting... it's kind of taught me how to address the class, and how to break things down easier, for them to understand... cause, I thought some of this was simple, because I'd been on this side of computer science, but it wasn't quite as broken down enough for them.... for them... then talking to other people doing the microbit compteition, they're acutally computer science, and they had the same difficult that I had. I think there's probably, more than mine, because this is how I'd learned it, and they'd already got the knowledge of how to do-

A: So

M: So I think it's mainly the confidence that It's helped... it's... been fun just basically going, a normal uni life, but- [laughs]

A: Something a bit different, a change is as good as a rest

M: Yeah...

R: Uhm, that's great, I just want to go back to the preparation bit, that's been on my mind

M: Definitely

R: The way it fell over easter, with schools off over two weeks, and students away for four weeks, and then coming straight back, and any later being an exam season... is your course three or four years?

M: Four.

R: Four years... I was wondering what you thought about trying to get people in when it's not impacting deadlines and exams and things... Thinking about... I hadn't thought about the shadowing day, it's a really good idea, what about keeping it as three sessions where we could propose that it's part of the competition, in the same way of the two page proposals, and then maybe do two lessons where you're observing... and then you get to know your class and then you can rework and work you lesson with the teacher and then deliver something.

M: before the proposal? My ideas were basic enough, but other people had ideas like making laser beams and interacting with... building robots and stuff, and it was kind of like... three lessons on... a thing with children that haven't really had the chance to work with-

A: I found that when I came into that sesion and spoke to student teachers, who are going through their proposal and I'm thinking "Really?"

R: Yeah

A: I cannut understand that, I think it was too much for students

M: The whole, competition system was like "com eup with this really ambitious idea" but then, through my experience with kids, I kind of knew that you wouldn;t be able to get something as big as that... I think that... like, maybe do the competition with the idea, but also the actual lesson plans are created to be... how would you do this over... six lessons, or...

R: Yeah

M: or more lessons

R: ANother thing is, again, that is uh... not many people knew what the microbits could do... So there was one that was a really cool idea, it was using infrared lasers for tag, and I was like "I'v enever seen this before, does it work?" And they were like "I dunno?". Of course, people marking it, who decided what went through, they said "that sounds like a great idea!" So, it's not possible, I had to- Like- yeah. It wasn't...

M: It wasn't sure-

R: You could do other things, calibrating the compass and figure out if you were pointing at each other. So i think there's something about setting expectations...

A: Yeah, if you're thinking about outputs then it's fair enough. You can make amazing ideas like you said, all these fantastic amazing- but, there's no... there's far too many steps to get there to do that.

R: Another thing... It's kind of nice to bounce off ideas, but uhm... if- so what we did was we went to schools, asked them to take part, we got a bunch of students and paired them up. It would be really interesting if the schools were already in closer, with a prompt? So like... some kind of resource that you wanted to teach something around... logic, or loops, or something? And then I came into your class, and do a session like I did before, where I generated questions where pupils said that they wanted to learn how to make a spaceship or something

A: That's it, you can go in again, knowing what you knwo now and knowing what's capable of acheiving in three lesson, you can give them options into what's possible. So, If, you say the schools almost commission a lessonsa ying "we want somebody who'll make three lessons around this, or something that'll mean this". I dunno, something like "python loops and spaceships"

M: When I was writing my lesson plan, I was looking at what schools wanted to do... like, the uh... the different aspects of it, and i foudnt hey had to have an initial stage to say... this is like, this is the outcome that we want as part of coding,.... for me... uhm

R: I think it would be interesting if students... if schools commissioned the ideas, and then students could see these five ideas and say "oh I want to apply to this bit" and then the teachers can say "I like this person" and then the BBC "I like... this people go through the competition" so schools have more control-

M: [muffled]

R: So I think something very simple

M: [muffled] something like an idea space

A: Rather than actually doing

M: More like a performance, when I was doing the application, I actually thought- well they don't seem as fussed about the content, they just want the ideas and stuff. I think that's a big part of it, I think it needs to be more concerned about how it's going to be delivered than the idea itself.

A: Yeah, yeah that's what we would do. We go get these ridiculously random ideas, like what you've had, and you just canny get there.

M [muffled] if you just have content that's very simple

R: Yeah, i think, if... if the schools have more control over what gets throuhg, that would... deal with

A: I think, I think it's the endgame... the end result. What is the end result. The kids like to see what the success criteria, the success criteria is that, they can see what they're aiming for... I think with this task, I think the kids, whilst they got engaged to creating the code, it got outrun... like "what does this do?", they didn;t know what the overall thing

M: [muffled]

A: They didn't know what the overall theory was, and i tihnk that could have been shared a little bit more. But like I said, they loved the coding and they liked putting stuff together, but fore example I run a lesson where you could make it, and we made a rock-paper-scissors game, and they obviously.... I started with a microbit with a rock-paper-scissors on it, played it with the students, that what you do create... pull some sort of "all right, so if i put all this code together then i can-" and then they start to transfer it over and then they can play rock paper scissors with one another.

R: yeah

M: Yeah

A: I think to have, a better aim...? That's what you say, the aim... yeah, then you- you know, then you know what you're... sort of like, what are they really coding?

R: So, in terms of the timeline, if it could be at any point in the year, could you see it being... better at a different-

M: Not in deadlines!

R: [laughs] well if you tihnk about deadlines... if it was November time say, because that's... sort of, you've got December deadlines, do you tihnk if it was advertised in September that... do you tihnk you would have enough time to prepare?

M: Well... uh... if you...

A: When do you start and finish exams?

M: June, they're gonna start soon.. And the others are in January

A: June and January.. Uhuh.

M: Well they're quite centred around... so maybe doing something at the end of the first semester? Releasing something in september time would be more helpful because... I have like, a lot of deadlines...

R: It's the same thing for everybody, deadlines, coursework deadlines the last two weeks of september, and then...

M: Exams in January

R: Exams from January. So do you prepare in November, keep contact over January, and the beginning of semester two... deliver? Or do you try and do it all in semester one?

M: Probably... [muffled]… get in contact with your school, and have some contact in between then.

R: One of the things I want to set up for next year, is... a bit of a partnership between students and schools, a little bit like the course when I came here

A: yeah

R: First semester would be shadowing, and being in a class for say an hour a week, and then second semester would be very much like this process but it would be part of the curriculum... so students could get credit for it, it would be built into timetables... uhm, that was another way-

A: That would be an option to be selected for an education

R: yeah

A: So what you're doing now is on top of everything else now?

M: yeah

A: Right, okay...

M: And I've got a job outside of uni too

A: That is tough

R: And that's why, with the deadlines, this has just about worked out, we;ve just about managed to squeeze it in... but then another school is saying "oh you know, we don't feel like students have dedicated enough time to it" and I'm having to say "well they're a dissertation student, you can't expect them to do more than this". It's a nice to have, the fact you've come in and you've delivered stuff is awesome. Like... genuinely yhat's such a cool thing for you to have done, but see..

M: So you'd do this as part of the CDM yeah?

R: Yeah

M: I know my class doesn't do the CDM

R: i think they're changing it

M: Like, you can do it for extra credits, because I've got no modules that you can swap for it. I could just.... not do it. So it would be helpful to have it as extra credit, or as... you can swap it out...

R: So it's gonna be a... an... yeah... it's gonna be an option through the CDM asa volunteer option. So yeah, you get academic credit and you can kinda do... like what I do

M: There's the NCL+

R: yeah I've been talking about that as well, so these are all things that are offered through the careers service

A: Yeah... I've come across them... I'm trying to think of what I did at unviersity along those lines, like an education module... can't think for the life of me what I did... but yeah, and that would be really beneficial, and get it in the timetable and get it credited to your degree.

M: You get something out of it then

R: You get money! [laughs]

M: But.. Like... [laughs]

A: So you get paid for it yeah?

M: yeah

A: oh good

R: yeah, so there's money and that's pretty much it, which is why I'm borrowing ideas from how this is working

A: Set something up

R: Yeah, set something up that's a bit more long term

M: Credits will work

A: You'll get more, if you know it's going towards your degree you're going to put more effort in aren't you.

M: yeah, and I think it's more respective of deadlines and things, then... [muffled] just deadlines, and doing this next week...

A: It's been a quick turnaround, it has!