

Futurelab conference transcripts

Spaces, Places and Future Learning: Using innovative technology and practice to re-imagine learning spaces

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Learning is all around you

Dan Medicoff, The SEA

Dan:

Thank you very much. Thousands of children will wake up across the UK today and they'll head to a cultural venue as part of an organised school trip, and the experience that they'll get at that venue is largely the same experience that I would have received when I was a kid in the 60s, and it's not like that experience is really bad, but we just feel like with all this technology out there, it can be a whole lot better. And when kids walk through the door, they're given a clipboard, a pen and a piece of paper, and it just feels very Stone Age-like, so a couple of years ago we had an idea. What if we could construct or connect the physical world of objects, places and people with the internet and do that via a mobile phone, that is, what if we could connect the physical world of places, people and objects via a mobile phone, and when we applied that to the experience that children have in cultural venues, we were able to come up with a service called OOCL, which is all about reinventing trips to cultural venues. Now for ten points can anyone tell me what OOCL is an anagram of? Cool, my last audience came up with look, so you must all be below 18. What we wanted was kids to be able to look at objects in a different way and to think the experience was really cool. We couldn't call the service 'COOL' because if you call something cool then it's really uncool, so we ended up with OOCL. So what is OOCL? Well, not to put too fine a point on it, it is simply a much better museum education experience, and we tried to do three things. One is to help students to discover the information that lies behind an object, to really understand what it is that they are engaging with. The second thing, more important thing, is that we want students to be able to create their own interpretation of whatever it is that they're engaging with. We want them to be able to look at it but also to reflect on it, to discover more about what it is they're looking at. And the third thing is we want them to be able to share whatever it is that they've created, however they've created it, we want to give them the platform and tools to be able to share it, with their classmates, their teacher and parents.

So who is it aimed at? Well, when we first started this it was called My Art Space and it was aimed at art galleries, and as we started to work with the service, we discovered that you could plug any object into the experience and it would work, so we tried to move away from My Art Space because art really would put off science venues or history teachers, and so we wanted My Space, but somebody got there before us, so we had to find something completely different, which meant OOCL. So really it will work with any venue, science, history, art, indoor or outdoor, as long as there is mobile phone reception, it will work there. It doesn't matter whether you have a permanent collection or a temporary collection. In fact, you don't even need a collection, we are running it in Urbis which is in Manchester, and they have a venue but no collection, and they treat the City of Manchester as their collection if you like, so kids go out on walking tours of the city.

It really works well with Key Stage 2 and above, below the age of 8 or 9 and kids really don't understand what it is they're doing, and so we tend to focus it on slightly older students, and it doesn't necessarily need to be about students and teachers. It can be parents on the weekend or during non-term time, the parent can be a surrogate teacher and the parent gets to interact with a cultural venue, because most cultural venues are built for adults. It is an adult environment built for adults, so the language is very adult and this allows children and parents to engage in a venue in a way which works for them, and to hand the mobile phone to the child and allow the child to use very familiar technology to interact with the venue in a way which works for them.

So what I'm going to do is show a short video, it is three minutes long, which will take you from the beginning of the experience to the end, very quickly and then what we'll do is run a demonstration of how it would work if you were a class of 36 kids going to a cultural venue. So I'll just run it now...

[Video clip]

Here we go, so how does it work? There are three stages to the experience: before the children go to the cultural venue, while they're there and when they come back. So they start off with all the pre-venue experience, the first thing the teacher does is to log onto the service and they create a classroom, and that is they just log the students that are going to go on the day and each of those students is given a user name and a password, and then those students can log on themselves, and start to see some of the objects that are in the venue, so they can start to do some pre-work. Probably the most important thing that a teacher does is to set the task, or set the goal for the day, because in our experience a well-framed goal will really improve the quality of the experience that the students have, and we've learned a lot from the gaming industry about how to set goals, because we have found that when a student is in a gaming environment, the game is working really well, the student is at one with their experience. When you see a lot of children walk around venues, there is a separation, a distance between them and the objects. What we want to do is to imagine they're actually part of the venue. I'll give you an example. This could be at the Science Museum, and we want the students to become astronauts, not to look at objects that astronauts were involved with but they will be astronauts. They are going into space. They can only take ten things from the science museum and they have to decide which ones they are going to take and then they have to explain why they are going to take them, and that becomes a very powerful motivator. When you see children engaged at that level, they actually start to believe they're astronauts.

There is another example for you, this is to imagine they're at the D-Day Museum and they're an historian. Maybe an historian isn't as glamorous as an astronaut but there you go, and they have to look at the objects and decide, was the D-Day a triumph or a disaster? So they take a position and go around collecting evidence to prove or disprove one side or the other. Here is a simpler one. This is running at Urbis in Manchester. The kids are outside in the city and they have to go around collecting objects which demonstrate that the city is a beautiful place to live in, and then they have to explain why they have collected these objects.

So they're at the venue, the teacher has framed the enquiry or the goal and the kids are given a handset. It is a mobile phone, just like this. It is a very standard piece of equipment. You probably all have got one. Kids are very familiar with it. It is a Nokia handset, running over the Orange network, and when it is loaded, when they turn it on, that is, it can only do one thing. It can only run OOCL, so kids can't use it to make a phone call or send text or do anything else. It is almost bulletproof and there are only four things they can do with it when they're on it. They can collect an object, record a sound, take a photo and write a comment, so we've tried to constrain the number of things that they can do when they're in the service to make sure it's as simple as possible and it can't fall over, because what teachers don't like and what venue managers don't like is when 36 kids are confused about what they need to do.

So what I'm going to do is log us on to my space, here. Before I do that...I'll set the scene first. You're my class, I'm the teacher. We're off to the Science Museum and there are five objects in the Science Museum, I printed this to make it simple, and we're going into space and we can only take two objects with us, so we have to decide what two objects we are going to take, and I have got a space craft, some action snacks if you need to eat, 'I am Spock', which is a book by Leonard Nemoy, some kerosine and an I-Mot phone, 'I' conveniently stands for intergalactic. So of those five objects...you are going to be my volunteer. Can you choose two objects for me, tell me what letters you want. A, C. OK. So

do you want to just come up here for a second. You try this. So here's the handset and I just want you to collect an object, so at this point... it is very hard to demonstrate what is actually happening in the film, because there is no way of projecting it, but I'll try and do it here. So there are the four things that they can do. There is an object... take a picture or record sound? OK, so take a pic and presto... and this is where we hope it works.

Male audience member:

OK folks. I've got a picture of Leonard Nimoy here and 'I am Spock', an actor in the cult sci-fi television series Star Trek. "Is this what I want to collect?" So I say "Yes". "Please tell us where you want to collect this object and say when done".

Dan:

This is a little aide memoir about why the book? Why did you want it? How is this going to help you survive in space? A short one.

Male:

OK, entertainment.

Dan:

Or you could just say, "It's neat". Shall I do it? OK, so "It's neat". This is very unsatisfying for everyone else, because they can't see what we're doing. And if you could just read what comes next. This is a "Did you know?" so it prompts the student to look up the object in a different way.

Male:

It says, "Did you know he was cast as a member of the Starship Enterprise, even though he had a fear of flying?"

Dan:

That's good. You then find out, "Did you know that John, Mary and Sue also collected this object", the book, and go and speak to them about why they've collected it, so it's trying to encourage collaboration while they're in the venue, so you're not undertaking this experience by yourself. You're working with your classmates. So you've got to collect the second object now, can you... collect an object and type the code? Snacks... that's good.

Male:

OK, "Is this what you want to collect?" Food, freeze-dried food was developed by NASA for extended space flights, yes or no? Yes it is. "Please tell us why you want to collect this object and say when done". OK, to eat. "Did you know it requires no refrigeration and has a shelf life of two years but is not nearly as good as mom's?" Oh, and why not speak to those people who also collected it, and there are four people here who have also collected it.

Dan:

OK. You can sit down now. There are other things that we can do. We can take a picture, so I'll take a picture of this water, because we're going to need something to drink and I'll save that. What I'd like you to do is to just press the button 'Start' and say why it's important for you to go to space. Make it up. OK, and stop and you can play it, "I've always wanted to go to space. It looks like a nice place. Lots of atmos..." Excellent, OK. Come back to the website, and hopefully all the objects that we've been collecting... So, I'm a student. I'm logging into the service and I go to my store room and all the things that we had collected are in my store room. There is my book, "It's neat", there's my food, something to eat, and the sound, so I can play the sound... Go back to my store room and we will try one more time to get the picture. OK. So if I go to my store room again, and there's my photo. So all the objects, as the student is going around, all the objects that they're collecting with their handset are instantly being uploaded to their website, so they get to see all the objects that they've collected on that day. You also are going to see what's in the class store, so I can see what all my classmates have collected and if I think my classmates have collected something that is really neat, that should be in my presentation,

I can copy it over and it gets attributed to them, and I can see what's in the venue. So if we were in the Science Museum, I can see all the objects that the Science Museum has put into the service, so here are the five objects again, the phone, the book, fuel, food and the space ship and if I didn't collect an object that I really wanted to collect, I can also copy it over at this point as well into my store room.

So the store room has three levels, my store room, my class store and the venue's store, and what happens is we then go and create a gallery, so it's much as you do in a cultural venue. You have objects which are sitting in store rooms and you pull them out every once in a while and create a gallery, so you can make a number of interpretations of the things that you've collected. So what we're going to do is create a gallery, my first gallery, so this is the first time this student has come and all the objects that they've collected at the gallery are in my gallery. See the preview... So that's really good. And in the store room we can edit all the material, so I can take the photos out of a service, edit them in Photoshop and reimport them. I can add text to them. There are a ton of things that we can do and also it's more or less like PowerPoint, so each student can tailor the nature of the presentation, in other words, they can change the colour, they can change the frame, the font and so forth. The idea is to get them to create a presentation.

So, we've finished at the venue and they've gone back to their classroom, and what they can do is they can either work individually or collaborate as a group to create their presentation. They then publish that presentation to their teacher, and the teacher can evaluate it, and then the teacher can decide to feature that gallery, and by featuring it they decide that it is of sufficiently good quality and there is nothing inappropriate inside of it, and it becomes available on the internet, so anybody can have a look at it. What the venues do is they take those feature galleries produced by students and put them on their own website, a connection back to the venue's website.

So let's go back to where we started. How is this different from a clipboard experience? The first thing that we see is that traditional venue experience is all around the curator, disseminating information about objects. The purpose of this experience is that it allows the student to create their own interpretations, so they're not just relying on a curator. They're looking at objects and describing them in their own words, in their own way. The learning takes place before, during and after a venue and a lot of teachers like the fact that it gets consolidated, so all the learning that takes place in the venue, they get to work that information again back in the classroom and synthesise what it is they learned. There are also multiple learning styles, so if the kid is particularly strong speaking or orally, then they get to describe the things that they are looking at with a voice. If they like images then they can take pictures and so forth, and I think the thing that teachers like the most is that there is a physical product at the end of the day, something tangible that gets created. So it's not just a nice day out, but with all this time and effort to go to the Science Museum, teachers like the fact that at the end of the day there is something that is created, that can be shared and that can be shown to parents.

Mobile phones are not the only device that you can put into a cultural environment, so what else is there? Mainly PDAs, and we could have put this onto a PDA but it is a very different experience and a very different approach. PDA we see as basically about consumption. Adults want to consume information when they're at a cultural venue. I know of my own personal experience, when I go there I want to get as much information as I can. If I see an object I particularly like, I want to be able to drill down into it. OOCL is not like that. There are only two levels of information you can get. The first one is the description and the second one is a "Did you know?" There is no more information at the point of experience and the reason for that is we wanted to focus on the creation aspects, so all the tools, collect a photo, write a comment, take an image, are around creation and then the tools on the website allow the student to take those objects and turn them into a presentation, so it is a very different focus. That is the fundamental difference between the two.

If there are any venues in the audience, it is actually quite straightforward to get this up and running. All you need to do is to populate the museum store, that is to choose the objects that you want to put into the service, and most venues choose two or three hundred objects, and then write a bit of content around them, and the content usually starts from the content you've already got for adults and you would repurpose it for children.

The results so far? Well, it's up and running in three venues. It has been running since January 2006 in trial mode at three venues, the D-Day in Portsmouth, Urbis in Manchester and the Study Gallery in Poole. They are three very different venues. One is a contemporary art gallery, one is a history museum and one is an outdoor venue. And we've chosen those so it could be shown to work in environments, and it is being evaluated right now by CETADL which is the Centre for Educational Technology and Distance Learning, and it's been accredited by Quick Online so that teachers can use their e-learning credits to pay for the use of the service. So the question then becomes, "So where next?" What can we do with this platform once we've built it, and we're concentrating in two areas. One is why don't we take the venue out of the equation? So basically the handsets sit in a school and the school and the teachers can use their local environment as their venue. So we have trialled this with the Girls' Day School Trust and they take children on school trips, one went to the Isle of Wight on a biology trip and they had to collect objects related to what they were learning and then write a story about their day out, or the weekend out in that case.

Outside the education field we can also apply it. We are running trials in Scotland, helping teenagers with diabetes who tend to go off managing their condition in their teen years. There are disproportionate incidents of diabetic coma and so some doctors at Ninewells University were looking for a solution which would work for teenagers, so we invented a mobile web application, which basically allows kids... normally they get a meeting quarterly with their doctor, and this allows them to daily send data on their blood sugar level and how they're feeling to their doctor, and the doctor then can respond by a text, with either a change to their regime or some motivational messages. So we've taken OOCL and put some cognitive behavioural therapy engine behind it, which is to say if you have this sort of situation and you're feeling this way, this is what you should do, so it's an overlay of some CBT therapy.

Who is behind OOCL? Well, there are two organisations. The C is the company that I work for, which is a interactive design agency. We don't create promotional campaigns and so forth, we create services using new technology, so we're trying to deliver something that is already being delivered today in a better way or generally trying to create new services. And the other organisation is Culture Online which is part of the DCMS, and they provided the initial seed funding for the project, and they've helped to frame it, decide where we focus our energy, and they push us really hard to make sure we achieve what we said we'd do.

I think that's the end of my presentation. If you want some more information there are three ways to get hold of me. You can visit the website. You can call them or you can send me an e-mail, and I'd be happy to answer any questions that you've got.

Q:

My question is about peer review. We saw in Steve Moss's presentation downstairs some ideas about how kids can interact between themselves, and the question is did you consider putting that sort of facility into this website, so the students themselves could look at each other's galleries and collections and comment on them?

Dan:

Yes we did. You have to strike a balance. There is a balance between privacy and also collaboration, so within a classroom I can share it with my classmates, and I can collaborate with my classmates, but until the final presentation has been published by a

teacher, it can't go beyond that small community. So that's the balance we've had to strike, and the service was designed with the three educational officers of the venues, and so there's been a lot of input, and a few teachers, into the getting that balance just right.

Q:

Our temporary collections and exhibitions and theatre things are aimed at a slightly older age range. We do have school groups, but generally it is foundation and university level, and I'm just wondering what you think the upper age level would be for something like this. Do you think it is more suitable for a school age?

Dan:

That's a question. We'd like to think it goes all the way up, but what we've found is that it works best up to the age of around 14 or 15, and we are thinking about how we can modify the experience such that it would work with older students and university students, so to use it as a tool to gather evidence and then to create stories, but the way it is currently constructed, it works best with younger children.

Q:

I was interested to hear if you had run into any issues to do with copyright in the museums and galleries and how you overcame that?

Dan:

Yes, that's a very important question because children are being able to take images in a lot of venues where historically they've said cameras aren't allowed. This is an issue we've bumped into quite a few times, and the best way to get around it is to make sure that all the images you have, you have agreement from whoever owns the copyright to be able to reproduce it. The biggest concern is reproduction of the images that you are taking and the way the photo works on a camera is that it ends up with a very low resolution image, so they can't be used for a student to reproduce print quality. And our final, last option is to disable the camera function, so we can always stop students from taking photos and so we usually address it. It is not an issue which you find in history and science museums. It is mainly around art galleries.