

Andrea Sella 28th April

Transcribed and cleaned up in one hour for first split up into sentences. Then further short edit to tidy up: I am starting to put new sentences on a separate line to make it easy to skim read for key points.

Basic details

I am Andrea Sella Professor of Chemistry at UCL. I now use video in one form or another and all the courses that I lecture on.

So I lecture to a very large number of students on courses for chemistry for biologists to course of about 300 students. The second course as a first year core course in chemistry so it has about 150 students. Then there's a much smaller course which only has 50-55 students here of which is in the fourth year.

I made videos and they all for the consumption. I have actually experimented with students making their own videos and that's fine, except that you really have to allocate a large amount of time to the students.

Without apportioning quite a big chunk of time just to get them basic training. You get away from actually learning chemistry. You're getting more and filmmaking and it's fun but not where I want to be.

I have made videos on thermodynamics generally. On specific issues - thermodynamics. I have made little videos about different aspects of MR spectroscopy.

I have put together little videos online chemical kinetics on inorganic chemistry.

How video is used in teaching 1

Q2: The pedagogical context 1.37

I've started using video really because what I wanted to do was to in a sense provide richer material than what I could provide through print or on the other hand, classic lectures or seminars alone .

These are kind of stand-alone resources that the students might be able to use either to prepare for a much more interactive type of session like lecture flipping, or alternatively, at the end of a section to really provide summation, a kind of broad brush picture of what I think is important about the material.

These was something that I can do outside the classroom setting. So, for example, I went to give a 10 minute summary video that was actually filmed in an apple orchard in Somerset.

To really talk about the first and second law of thermodynamics for biologists in a big context.

It's really in a way to shake things up, to make things different, and to break that kind of formal "I am a lecturer - you are at the student "kind of thing.

To make things perhaps a little bit more to use the Eword "engaging".

How video is used in teaching 2

Q2: The pedagogical context 2.46

I'm very bad at educational theory and to be honest never really had any formal training to my shame.

Everything have always has been kind of spontaneous response to a particular problem and typically it's done on, "Just yet let's see what happens". On a kind of experimental basis.

Do students watch this stuff? Do they actually use it? What is the response? Is it completely ignored? Afterwards, I can go and talk to them in lab setting.

I'd say "Did you watch the video?" "Did you think it was good?", and ask the students and they are surprisingly candid. They'd said "Oh God, once I got past the 40 minute mark I

thought that we see now getting a bit much.” or “That was really good ,because you gave us a kind of five-minute summary which we found helpful.”

Examples of video made (the academic as producer)

Q2: The pedagogical context 3.48

The kinds of videos I've made have really ranged from something done outdoors in a field or whatever using a camera and some sort of selfie stick or tripod and to do it sometimes friend. All the way down the something very, very basic, simply making a sound recording. In many ways I would regard those really as being a continuum, which goes from something which is rather more elaborate to something which you can really do from your desk.

I don't think we should be too precious about distinguishing between audio and video and whether you capture this or whether capture that.

In the end, it's really the message which is the important thing and the medium may be more or less elaborate.

In some cases, I have put together a revision type video which summarises the kind of big ideas that are associated with a set of lectures. So we have a summation, a recap which really tries to get across the big picture.

It is not necessarily something which specifically helps you to answer a particular exam question. But on the other hand talking about thermodynamics, you really want a economic quick big picture view of what the First and theSecond Law are all about.

Those you know, you can edit a little bit, and you can write the equations out and embed those in the picture. That's a certain amount of work.

At the other end, will be quick things you can do at your desktop. Either, to introduce a particular topic and this is not necessarily lecture flipping. But for example if you have a lab course or something like that you might do a five-minute introduction to a particular practical, which really talks from the big picture right the way down to the specific things. that the students are going to be doing and why they should care. Why it should matter There have been instructional videos, where I've actually shown students how to do a particular thing. I've done very few of those and my task over the next two weeks will actually make a bunch of these for an advanced lab course.

I think those are really useful because those are much more appealing to that YouTube generation as were old f****ts really need to wake up and kind of catch up.

Then finally, there's one other kind of podcasts which I started doing, which is really I think quite important, because..

Before I say it I should say what it is. It's the kind of podcast where immediately after you have marked something. Particularly final exam papers.You actually go through the exam paper and you actually point out what people did right ,and what people did wrong, and whether they got the big idea.

Now this is, of course, important to the students who have just written an exam paper to really get across the idea. I like to help with a series of: Feedback on your exam paper even though we won't give it back to you. So, “Hey next year perhaps you will take those ideas away”.

That is really important for students in successive years, because they just give the model answer. Instead you kind of tell them, “This is what you should have written”. You actually give them something much more broad brush (and useful for the future).

Most students who answer this question, typically missed this point, but on the other hand they did get this right, and so on. You can give them kind of ideas without spoon feeding them.

The great thing about using audio, video, type techniques is the spontaneity .The fact that so many more ideas come to you, when you're speaking. And you can make little asides in a way which is much more difficult than on the written page.

Advice for colleagues: talk to students

Q3: How video is used 7.43

I think be the most important piece of advice that I will give people is to realise that first of all you are not speaking to your peers. You're actually speaking to students, and if you talk to students - in fact if you try to your peers and you asked them how had they learnt about the camera latest piece of software or whatever, almost they say invariably. "We went to YouTube".

If you look at a lot of YouTube videos, the production values are not necessarily that brilliant. They are often quite spontaneous and off-the-cuff.

One things you can try, is to be different, from the slightly more formalised setting.

My feeling is get out and record something. Try it out and see what works for you. What you are comfortable with, and then how you can find ways of actually hooking students.

Advice for colleagues: enthusiasm

Q3: How video is used 8.43

I'm completely unaware of how I come across. I have been told repeatedly in the fact that in my case and I do get invited to do radio and television quite regularly, I do get quite animated and the thing is that I don't see how you can try and get across an idea or concept without actually sounding interested.

You've got to be enthusiastic about it, because me it's not simply a question of us being paid to do it. It is the fact that this is our life this is our subject.

For me it's very easy to sound interested about their Clausius-Clapeyron Equation or something like that.

Advice for colleagues: media transferable skills

Q3: How video is used 9.22

I think one of the interesting things about doing radio and television work is the way in which should be taken some of you teaching experience to that .

But on the other hand, you can bring back the experience from the media work, in the other direction.

For me, one of the crucial things is the idea that you can paint quick pictures. That you can use little props which will illustrate things, even simply in sounds terms, and which are able to evoke in a sense an emotional response.

I think this is a really really important issue. We often I think of learning in some ways rather formally.

Actually why things you want to be able to do is to hook your audience emotionally in some way.

You want to surprise them. You want to perhaps make them laugh. You want to to just give them pause every so often. Rather than then really having out out of very sort of linear and formal delivery which goes from thought A to thought B to thought C.

Perhaps you can mix it up a little bit more. This is something which if you look at the way in which films are instructed. That breaking up of ideas into not simply manageable chunks, but also a juxtaposition of images with words is actually really quite important.

I think that's something that we, as teachers, can in a sense learn from, which can bring a lot to a teaching.

What is your kit?

Q3: How video is used 11.00

I don't have any kit. Some of these videos are really done with the internal camera of my laptop. I have a MAC and I just top straight at it. This is often a kind of responsive thing to a question which has come up from student or a forum to fill where there is a gaping hole or something

Revision videos again I do in that way.

But on the other hand, what I found is that just the very very simple hand-held camera yet the years to be those simple flip cameras or Kodak Z14 that those kinds of things.

Potentially even iPhone if I actually had my own arm with or without a selfie-stick you know or always you know that you can do it you feel a little self-conscious to begin with.

Once for other people never done it before once they've recorded it they realise the full horror of the voice and they feel terribly self-conscious. Well, you just have to smell the coffee, that's what you sound like too other. So you just have to live with it, because its not going to change.

Just do it ,and see what happens. However, one thing is that I been playing with at the moment, is trying to make the Point of View almost instructional videos, to go alongside some of the instruction manuals. For that it turns out that actually Go Pro works astonishingly well. The great thing is that students in your department will have that kind of kit.

What I've done is spread the word through Facebook or Twitter and so "Has anyone got a Go Pro that I could borrow for a couple days. Sure enough, one turns up, and is lovely to discover that interaction with graduate students who will let you try stuff.

Equipment: sound issues

Q3: How video is used 13.02

When I first started making the videos I worried a bit about sound. Would it be audible or whatever? It turns out that actually the internal microphones on Macs are great, if you're in a reasonably quiet office. On the other hand, the Go Pro, for example has an excellent internal microphone, which is more than good.

One of the things is that, if you start having to worry about "Do I have the right mic? Do I have the right lens? Do I have the right this and that?" then actually you can get yourself into a complete minefield of worrying to the point you don't actually get on with the project. My feeling is that you have to get to this strange place where you just try something.

Because ,whatever it is you try, when you look back in it you go hang on a sec, I've learnt something, and so just the very act of turning something that is rubbish, actually puts you into a kind of virtual cycle which will lead to do something better.

That said ,I am not trying to replicate BBC 4, what I really want is a very spontaneous feel because I want something which sounds informal to keep the students kind of connected with it .

If, on the other hand, I go into pompous professor mode then is going to be a problem.

Video in learning

Q1: Summary 14.27

There is no question that audio and video are only going to grow in teaching.

One of things, which is crucial, is to make sure that we have simple straightforward platforms that we can use in order to be able to make material available to students.

Now at the moment we have Echo 360 which works quite well, but it certainly has certain limitations particularly for Mac users .

I have encountered all kinds of problems (with it) and there is a real temptation think "Use YouTube", because YouTube is just "You can do stuff". "You can upload it". It's there. It's accessible and fast.

I think we need to think about some of those kinds of ideas is having a platform which is as simple to use as YouTube's.

One of the temptations is to try and impose limitations on this (video work) for a number of reasons. One is a fear of reputational damage to the institution of someone goes off message. There is also the sense the fear on the part of certain individuals this stuff might be taken out of context or misused. I think this really is a reflection of our age. If you take what people in their 20s they are prepared to put things out there really rather fearlessly without being too worried.

I think we have to A) Trust members of staff within the institution to go out there make video material because in the end in the reasoning they are doing it, is because they want to teach their students and they want to bring students learning forward.

You're not getting many rogue elements doing that sort of thing. So we have to 'chill' about the approval. So making the stuff as simple as possible is really paramount.

The second thing B) is that :“Yes it might be taken out of context, but it's kind of interesting with some platform like Lecturecast. I know this stuff has gone wrong in my lectures or arrive so things out.

To my astonishment in I've not had anyone say to me through Twitter or other platforms oh my god you say the F word. You know what I think students are not excited by that kind of stuff and there are plenty of other places where they can find that sort of thing.