

Don't Lecture Me

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Transcript of a keynote speech by Donald Clark at *“Into something rich and strange”* – **making sense of the sea-change**, the 2010 Association for Learning Technology Conference in Nottingham, England. In the chair, Vanessa Pittard, Becta.

This text transcript is at <http://repository.alt.ac.uk/841/> [108 kB PDF]. A one hour video of the talk is on the ALT-C 2010 web site at <http://www.alt.ac.uk/altc2010/> and on the ALT YouTube channel at <http://youtube.com/ClipsFromALT/>. Alongside this there will be an experimental version of the video that includes the #altc2010 twitter stream at the time of Donald's talk.

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Aware of contradiction

Donald: If you come and give a keynote on the second, or even worse the third day, everybody's really whacked out. You know, they've had enough of lectures, they've usually got their mobiles out, and become completely contemptuous of the speakers. So it's great to be here on the, on the first day. Because I'm in a rather awkward situation here, because I'm going to really attack the lecture as a concept – it's a sort of hopeless pedagogic technique – but I'm here giving one. And of course I'm well aware of the contradiction, but that's the way of the world unfortunately.

I'm going to give my talk as a sort of narrative act: I have a sort of grudge to be here. I'm fifty-four years old, and thirty years ago, when I went to university for the first time, I went to do a science degree, and did physics, maths and chemistry in my first year. And I was quite a bookish kid, you know. I was mustard keen to go to university. Came from a sort of dark, small, Calvinist Scottish town. It was my ticket to freedom. Until I attended my first physics lecture, where a guy mumbled in without looking at the audience and stood for fifty minutes on three chalk boards, from left to right, drawing up maths, mumbling, barely comprehensible, absolutely hopeless. It was sort of devastating in a way, because I didn't think that was what I was in for. And I've been in physics lectures recently, and believe me, they haven't changed one jot. You know that; I know that; the students know that. So much so – I say I've come here with a grudge – that I actually changed at the end of my first year. I said, 'I've had enough of this.' And I changed to do philosophy.

Physics as narrative

I want to concentrate on physics today, because it's an absolutely fascinating subject. I believe in the scientific method. Strangely enough, hardly anybody who teaches physics seems to believe in the application of the scientific method to teaching. Hardly anybody who teaches in a university believes in the application of the scientific method to teaching and learning. Precious few know anything about it, fewer still make the effort to read or look at the

research. And this is a problem, a big, big problem for students and institutions as we know them.

Now, I'll tell you a story, start with a little physics story. When a mustard keen student like me, at seventeen, eighteen, went to the University of Copenhagen, and he had to sit his entrance exam. And one of the questions in the physics paper was, 'you're standing on top of a tall building with a barometer, how do you determine the height of the building?' And this smart arse student actually gave the answer, 'I'm going to drop the barometer from the top of the building and time it. And from that, I know the constant gravity, I'll work out the height of the building.' Failed the exam. He was a smart kid this, and they did want him in the faculty, so they interviewed him and gave him an oral exam. Said, 'listen, focus on the physics, give us the correct answer to the exam.' So he said, 'well, I'm going to take the barometer and I'm going to use it like a ruler, and I'm going to measure up the building.' And then his third answer was to use trigonometry and use the shadow of the building, and take the, the mercury from the barometer and use it as a sort of, a surveying device. Anyway, they'd given up and accepted him in. That guy turned out to be Niels Bohr.

And the great thing about that story is physics is an absolutely wonderful subject. It's actually quite easy to get quite far in physics, at an undergraduate level, without knowing much about physics. You really can just gen up on examples and textbooks, and know the formula, and apply the maths, and get passed. The truth of the matter is that most physics students are really still stuck in a sort of Aristotelian form of physics: you know, they still have that everyday view of physics, and don't really get to the heart of the matter. It's an incredibly difficult subject to learn, an incredibly difficult subject to teach. So I'll focus on physics a little bit as I go through.

Maslow

Anybody here heard of Maslow? It's a damn shame that that stupid theory is still floating around, and train the trainer courses, whatever courses. You know, the only... There was no academic basis to Maslow's work whatsoever, complete armchair theory. And it's a completely impoverished view of human nature, this little stupid pyramid. It only survives because it's easy to put on a PowerPoint as a little coloured triangle. It's absolutely hopeless. But it's not unusual in the training and educational world to go on these really stupid courses. I was a school governor in my local secondary school, and the inset days were full of the Mozart effect and NLP and left/right brain theory and learning styles. Absolute bogus nonsense. If you go into the training world it's even worse. With Kirkpatrick, Gagne. Fifty-year-old theories. Nobody's bothered to update them; nobody questions them. And it's hanging around, they're hanging around like fossils.

Back to Maslow however. He did say one very nice thing, which I like, which is if you go around often enough with a hammer, everything starts to look like a nail. And this is what happens in academia. When new teachers come in... I hate the word lecturer. A lecturer. Is that what you do? You lecture people. We should abolish that job description. The first thing they do though is simply look at what they're going to teach. Hardly any reflection on how they're going to teach. Because they're simply going to teach the way they were taught, which is through the lecture. The lecture is the default, absolute default in teaching in universities. Nobody questions it. Now, they're meant to be researchers. You're meant to be questioning.

Critical thought is the whole point. But nobody is questioning this fundamental truth. Now, I know many of you will be thinking, 'oh, Donald, you haven't been into a university recently. It's all different. There's lots of discussions. It's all very jazzy and so on.' Bollocks. It is not. I'm in and out of universities all the time, I sit in lectures, I come to conferences, I see what's happening. And that's not much change.

<http://donaldclarkplanb.blogspot.com/search?q=Maslow+-+who+needs+him>

Do it on scale

Now, I'm not absolutely against lectures per se, if they're good. In fact, I'll say this is my favourite example of a lecture. If you're going to give lectures, don't do it to five people or five hundred or five thousand. Go for ten thousand. If you're going to stand and broadcast get some skill in here. And the crazy English guy out in mainland China hires football stadiums. Ten thousand people a pop. A big PA system. Twenty-five dollars per student. They pay, and that's a lot of money in China, and he teaches them English. They sing songs, they chant, it's motivational, it's a laugh, it's good fun, and they learn English. In other words, if you're going to do these damn lectures, make sure they're bloody good. And why not have them on scale, rather than these rather odd places?

Lecture theatres don't have power sockets

You know, you're all sitting with laptops. Does this (lecture theatre) have power points (for laptops)? Can you actually plug your laptop in this place? I don't think you will. Hopeless arrangement. A Greek amphitheatre basically.

Positive aspect of lectures

Another thing that's interesting about lectures – and the positive side, just before I launch into my critique – is that there is good evidence that actually people have higher degrees of retention when they listen to an expert. In other words, if you have respect for the person in terms of their academic pedigree, having written a book or whatever, then it does actually have a real effect on your psychological attention, and therefore retention. So it's not all bad that you should have very good people speaking, perhaps in universities. And many students will have gone to a good university because of the academics who are teaching on that course. That's a tiny proportion of students. Hardly any students actually check out the credentials of the academics when choosing a course, hardly any. I suppose you could safely assume that if you go to Harvard or Oxford you're going to get that anyway. And I recommend this book highly, *The Media Equation*, because that's got a very good study within it that shows that effect. Brilliant book anyway if you're interested in e-learning.

<http://donaldclarkplanb.blogspot.com/search?q=Brilliant+35+studies+in+media+and+learning>

Ferris Beuller

Now, let me start with a little bit of video here. If you've seen this before I apologise, but I still, you know, I've watched it dozens of times, and I love it. Can we have the volume please? (Clip from Ferris Beuller)

Video: ...of the...? Anyone? Anyone? The Great Depression, passed the...? Anyone? Anyone?

The tariff bill. The Hawley-Smoot Tariff Act, which...? Anyone? Raised or lowered? Raised tariffs in an effort to collect more revenue for the federal government. Did it work? Anyone? Anyone know the effects? It did not work, and the United States sank deeper into the Great Depression. Today we have a similar debate over this. Anyone know what this is? Class? Anyone? Anyone? Anyone seen this before? The Laffer Curve. Anyone know what this says? It says that at this point on the revenue curve you will get exactly the same amount of revenue as at this point. This is very controversial. Does anyone know what Vice President Bush called this in nineteen-eighty? Anyone? Something d-o-o economics. Voodoo economics.

Donald: Okay. Now, everybody's laughing there. Wry smiles at the very least. Because every single one of you have been there. You could not have gone through the schooling process, or a degree or college, without having been there dozens of times. And if you don't... It's a bit of a caricature, but if you don't imagine that this is happening to hundreds of thousand of kids – here, today – then you're kidding yourself. This sort of pretence: you know that, 'anyone? Anyone?' Does anybody know the name of that movie by the way? Any... Ferris Bueller. And it's still an absolute classic, you know? And kids love it. It was absolutely hit the teenage market. That freedom you feel. I remember – like I say, I was quite a bookish kid – I can remember now the one day I skipped school. I can remember the rush, the thrill, freedom of that. That's what the movie's about.

Claxton, Bristol – good research

It's a caricature, but there is a sort of pretence that some lectures are interactive. And indeed, Guy Claxton has looked at this. The people... Anybody from the University of Bristol here? I really, I really love the research that's going on there because, you know, real hard-headed, empirical stuff coming out about what teachers actually do in classrooms. And there is an illusion that teachers ask kids questions and get critical thinking going. But actually, if you go and measure it critically, teachers ask pseudo-rhetorical questions, don't give the kids time to answer back, cut in immediately. And if you look at the number of questions kids actually ask of a teacher over a year, it's a pitifully low amount: about two a year. There's a sort of pretence that critical thinking is being taught or that we're encouraging learners to move forward.

Reference: Claxton G *What's the point of school?* Dillon J *The Practice of Questioning*, both quote a study showing that primary and secondary schools children are hardly ever ask their own questions. It's even worse in the lecture driven pedagogy in our Universities, where critical thought is certainly thought, but rarely taught. The study showed that students volunteered only TWO questions to the teacher's EIGHTY FOUR! It is therefore an illusory claim that modern teaching is in any sense Socratic.

Socrates, Plato, Aristotle

Okay, I'll ask you a question. Anybody know who these three fellows are, from left to right? I'll give you a clue: that's the chronological order. What was the order, sorry? Almost right. It's Socrates, Plato and Aristotle. Fair enough. They do look strangely similar up here. And I want to go back really, to get this ark in for a minute, with regard to the Socratic method. You hear people in education talking about the Socratic method. Actually, you know, Socrates was, never wrote a word, it was all represented by, in the dialogues of Plato. However, there

was another guy, called Xenophon, who looked at the Socratic method. And it's not all it's cracked up to be. Socrates was actually a bully. He absolutely harangued the young students into coming around to his view of the world. And it's not the method it's cracked up to be. However, at least it was an attempt at being learner-centric. But if we move onto the next guy, Plato, we have Plato's academy, which was around until the fifth century A.D, hundreds and hundreds of years. The sort of prototype of a university. Again, no lectures. In the academy, Plato, who took his lead as a pupil of Socrates, had that problem-solving, enquiring, student-centred view of teaching and learning. And then if we skip over to Aristotle – who was, who was a pupil of Plato's for twenty years, who taught Alexander the Great and so on – and his institution – although it was around before he came along, called the Lyceum – again, in Aristotle we have the first physicist, the first natural scientist, the guy who took experience and enquiry of the natural world quite seriously. But again, the lecture was not the format in terms of teaching. So where did this whole notion of a lecture, or lecturing, come from? Well, in the Middle Ages. The word lecture doesn't actually appear until about the fourteenth century, and it literally means to read, and it was reading a sacred text. Because of course to a degree Plato and Aristotle were at fault here: Plato through neo-Platonism and Saint Augustine, and Aristotle through Aquinas.

<http://donaldclarkplanb.blogspot.com/search?q=Spiteful+Socrates>

Woodbridge, F.J.E., The Son of Apollo: Themes of Plato (Houghton Mifflin) described him as using, 'Flattery, cajolery, insinuation, innuendo, sarcasm, feigned humility, personal idiosyncrasies, browbeating, insolence, anger, changing the subject when in difficulties, faulty analogies, telling stories which make one forget what the subject of the discussion was. His great joy was simply pulling people and ideas to pieces'.

Preaching not teaching

We had people who were basically preaching and not teaching. In other words, it wasn't much use giving your students critical abilities because that wasn't the point. You had a sacred text, and that was it. And I still to this day absolutely abhor the faith school system. Having worked and travelled in the Middle East, and seen the destructive effects of Madrasas, having seen church schools indoctrinate their kids similarly in Judaism, I think it's an appalling thing to do to a young person's mind, to close them down in those formative years. And yet that seems, for some reason, I think it's to do with Blair, to have re-surfaced in education.

<http://donaldclarkplanb.blogspot.com/search?q=Education+not+a+universal+%E2%80%98ood>

University of Bologna

You'll all have seen this slide no doubt. It'd doing the rounds in everybody's slide pack. And this was around 1340, University of Bologna. It's actually not a painting at all. It was a little sort of ten by twenty-two centimetre picture in a manuscript, before printing of course. But it's interesting in that the guys – of course you've seen this at a previous Alt talk, which is where I found it in the first place – the guys are sleeping, the guys are not looking at the lecturer at all, the guy, more importantly, is reading from a book, and they have books in front of them. The pre-book era. Now, the word lecturer about this time just meant reading, that's all it meant. About the sixteenth century it changed its meaning and it became a word that

was associated with instruction. And then if we jump now to the twenty-first century, actually the word has a rather odd meaning. If somebody says, 'don't lecture me,' actually that's a very strong pejorative word. 'I don't want to be lectured to,' say my kids to me, two sixteen-year-olds. It's a rather odd term, because it still has that didactic, forceful, imposing your view of the world on another person.

Isaac Newton

Okay, let's trip back to the physics for a moment. Who's this? No. Newton, Isaac Newton. One of the greatest English minds ever. And Newton, at Cambridge, was obviously a brilliant physicist, absolutely revolutionised physics, but his lectures were interesting. He used to trip along to lectures and nobody would turn up. He actually was seriously autistic, possibly Asperger's. Hopeless lectures, hopelessly muddled, absolutely boring as hell. And nobody would turn up. That's not unusual. The two Vice Chancellors I know... I live in Brighton. The University of Sussex and the University of Brighton. So it's a great dark secret, but obviously every university has lecturers who turn up, and no students turn up, two of them. Surprising, isn't it? But true. The difference with Newton is he delivered his lectures anyway. How bizarre is that? He stood there with nobody in the room and delivered them. Talk about a lack of social skills.

Williams at Cambridge

And then there's a very, a great anecdote I read, with Tilda Swinton, the actress, who was at Cambridge. And she went along to a lecture by Raymond Williams. And Raymond Williams came in, she was the only person there, sitting right at the front. And Raymond walked in, didn't even look at her, went up to the lectern, read his lecture and walked back out at the end again. That's now. How bizarre is that behaviour? But you know as well as me that there are those weird defaults, those weird behavioural traits in the world.

<http://www.guardian.co.uk/film/2008/nov/22/tilda-swinton-interview>

Just today, she has received a Williams biography in the post. It reminded her of the time she was the only student who turned up for one of the literary critic's lectures. He lectured her from the podium. Was she self-conscious? "No, I wasn't. I was embarrassed nobody else was there. It was very depressing."

Richard Feynman – critical of lectures

This is Richard Feynman. Jump to the sixties. A very flamboyant physicist, Nobel Laureate, fantastic guy. Really highly recommend his books. And he's credited with having written the finest lectures in physics ever written, and delivered. He was a brilliant teacher. Highly recommend his biography, as well as the lectures if you're interested in physics. However – this is the biography – he took time out and went to teach students in Brazil, and found very quickly that those kids were learning by the book. In other words, they could pass the physics exam, but they knew precious little about real physics. Whenever he really probed, they didn't have any of the tools and instruments to really go on and solve real problems in physics. They could only answer exam questions. This puzzled him. And he went on this huge crusade to re-write science books, which he thought were awful – he's probably right, even to this day – and publish these essays. However, in the preface to the essays he admits – this is the best set of lectures, the best lecturer, probably ever, in physics – that it was a hopeless task: that

teaching physics through lectures was next to useless. The preface is absolutely fascinating. A guy who completely rejected what he had been doing for nearly twenty years.

See Preface to Fenman's 'Lectures on Physics' where Feynman himself however stated in his original preface that he was "pessimistic" with regard to the success with which he reached all of his students through lectures.

Eric Mazur – Peer Instruction

Let's jump on now. I thank Seb for this, Seb Schmoller. This is Eric Mazur, who has been teaching at Harvard, physics at Harvard, since nineteen eight-four, alongside quite a number of Nobel Prize winners. And again, when he joined and he was given the physics course to teach, he didn't realise – at the time he was really excited, as a new, you know, fresh recruit to Harvard – he didn't realise that all the other people who taught physics absolutely hated undergraduates and wanted nothing to do with this course. Which is not an unusual stance in academia, this disrespect for undergraduate courses. So he had a crusade. He said, 'listen, I'm a data driven guy.' He noticed when he went to dinner with some of these guys – these are Nobel Prize winning physicists – that when they discussed education, all they did was revert back, not to the scientific method or data or research, what they defaulted back to was anecdote. That's all they had in their back pocket when they described teaching, just some stories. And of course eventually, and this is the telling point – and I've been here myself with friends of mine who are academics – it always ends on blaming the students. It's always the students who are at fault: the new intake, the Internet's ruining our minds, so on and so forth. So he set out to look at the data, and ended up writing this book called Peer Instruction, which is absolutely fantastic.

And I like this line because it sums up what bad lectures are all about: 'the lecture is the transfer of the notes of the lecturer to the notebook of the student, without passing through either.' How true that is. Even today when you go to conferences, and it tends to be more academic speakers, they sometimes literally take out a sheaf of paper, and they read it. I'm always absolutely astonished that any adult would subject me, as another adult, to that experience. Why on earth do I want to sit and listen to somebody read anything? It makes no sense. But again, it's happening in conferences all across the globe, today.

Mazur E Peer Instruction

<http://fm.schmoller.net/2010/05/data-is-not-the-plural-of-anecdote-eric-mazur-talks-about-how-to-improve-large-group-learning.html>

http://web.mit.edu/jbelcher/www/TEALref/Crouch_Mazur.pdf

<http://blogs.bath.ac.uk/ars/2010/02/22/what-is-the-mazur-peer-instruction-course/>

Socratic lectures

What he did was he looked at a thing called the FCI test. And it tests physics students on their real understanding of Newton's three laws, okay? Pre-test and post-test. And he got a big shock. Remember, these are students at Harvard, straight-A students. He found that they were disastrous. They were Aristotelian physicists. They hadn't even grasped the basic Newtonian laws in his course. And a typical question was, 'how does the force exerted by a heavy truck compare to the force exerted by a small car when the two hit head on?' Okay? Bigger, same, smaller, not exerting any force, they're just in each others' way. Nice colloquial English

question about physics. Really testing whether you know anything about Newton at all. How many would say A? One, a couple. How many would say B? Small number again. C, smaller? None. And D? Right, great. The majority of you refused point blank to answer the question. That's great. The correct answer is actually B. Strangely enough, lots of students do answer A. And it's, you know, don't be ashamed if you answered A, because that's the sort of Aristotelian view of the world. We associate damage and inertia with, with Newton's law, which is every force has an equal and opposite reaction. So B is actually the right answer there. But he gave them this test, and was quite shocked by the results. Because he found that his students, well into the course, weren't doing too well. So he re-wrote the rulebook, and said, 'I'm not going to lecture them the same way again. I'm going to do something radically different. I'm going to go back to Socrates, and I'm going to lead by probing or creative questions.' And he started giving his students questions. To cut a long story short, the students themselves, he certainly saw a noticeable increase in their grades and performance in the, in understanding of the physics as well.

Reading and lectures – what to do?

What he also did was look at this, this issue. When you have a whole load of people in a room, and you're teaching physics, do you give them notes to pre-read before the class? Do you hand out the notes at the beginning of the lecture? Do you tell them not to read the notes till the end? Which I've heard often enough. Have you even heard, 'don't take notes, it's all in the handout?' Or are the notes handed out at the end? And he did a little experiment with this, and found out that number one was by far, just give the students the stuff guys, you know, they're not there to listen to you perform; they want to learn physics. And indeed, anybody who says don't take notes is committing an absolute pedagogic criminal act because the studies show that actually twenty, up to thirty percent, increases in retention, if you take things, if you write notes in your own words. Not verbatim notes, which is what students tend to do for the first few weeks, before they stop attending lectures altogether. So, interesting guy.

Seating in lectures – what to do?

He also looked at the seating, and found that when you sit the poorer students at the front and, curiously, the smart students at the four corners – this is because he goes into an interactive session on his questioning technique – you get an overall rise in performance. The good students don't suffer; the poor students get brought up to, to the right level. And of course he leads his lectures by questions, thought-promoting questions. And he has, every student has a clicker. And let me explain how he does this. He poses the question. He then gets all the students to say nothing, just answer. It comes up on histograms on the slide behind him. If the majority get that correct, short discussion, move onto the next topic. The students have grasped it. And these are clever questions. If it isn't, he gets them together in small groups and has peer interaction. And he really does believe that physics, especially Nobel Laureates and physics professors at Harvard, really almost cannot teach physics. They are so good at physics they cannot bring themselves cognitively down to the level of the learner. And he feels very strongly that students give mutual support in a very positive way, and has the empirical data to prove it. So when the majority are incorrect it goes into discussions and far more detail. And it seems to work.

Recording lectures results in increased attainment - evidence

Let me jump to another institution. Is anybody here from the Institute of Theoretical Physics in Trieste? No. Okay. That was a long shot. I was there last year. Absolutely fascinating. This is an institution who does nothing but teach theoretical physics. And true to form, guys just like this walk in with three chalkboards, 'boom, boom, boom, that's what you do.' Now, the guy, Marco there, recognised one thing. He said, 'listen, I ain't gonna change these guys. They're introverts. They're not going to turn around to the audience. They're not going to be, you know, livewires in terms of talking and lecturing. I have to do it another way.' So what they did, and I know that many of you have been involved in this... I mean I think it's absolutely morally bankrupt that people don't record lectures. I think it's just unbelievable. I mean I know there are IP issues and so on, but not giving a student the second bite of the cherry. Where did that theory of learning come from? 'I'm just going to give you it once guys, you better listen, and that's it.' Imagine being a journalist or... 'I'm a novelist. I read my novel out once. I'm not going to publish it. You better listen.' How stupid is that? Especially in learning, because we know that hardly anybody learns anything in one hit. You're going to forget almost everything I tell you today. Before you've hit the car in the car park it's down to fifty percent. After a few days, way, way down to sort of ten, fourteen percent. That's a fact. Ebbinghaus, 1885. Hundred and twenty years of research shows it. Coming back to the institute. What they did was they simply had a stills camera that took fifteen-seconds images and the audio of the physics lectures. But what was interesting was the way the students responded. These are students from all over the world, who come to this institute speaking different languages. And they had a real problem with these physics guys who were struggling with English. The students were watching on average thirteen hours a week of recorded lectures: two hours a night. The results from the students, on a trend analysis, after implementing the system, was an absolute dog-leg. In other words, it encourages the students to be more enquiring because they can stop, do all the things you know you can do with recorded stuff. But more importantly they were learning far more than they were before. And if you're interested I can give you the papers, you know, the empirical studies showing the impact that it had on this institution, which was profound. They had a, you know, a cohort of lecturers who started this. It's now culturally become the norm, so that you'd be pretty hard pushed to go and try and teach there without adopting this system. You'd be regarded as the outsider. So once you get the ball rolling, and you see the results, it starts to work.

<http://donaldclarkplanb.blogspot.com/search?q=Lecturing+-+stupidest+profession%3F>

Enrique Canessa *, Carlo Fonda, Marco Zennaro 2008 Computers and Education, One year of ICTP diploma courses on-line using the automated EyA recording system

MIT's Lewin lectures

And then of course, this has almost become another cliché in terms of slides, Professor Lewin at MIT, and his physics lectures. I'm actually not, I'm actually not a great fan. You know, I'm going for a very strong thesis here: I don't like lecturers full stop. I don't give a shit if they're recorded. You know, I have piled through YouTube EDU and iTunes U, I have watched dozens of these lectures, and they are mostly shit. That's the truth of the matter. The psychology lectures from Berkeley? Dump them. It actually had old discredited theory. And it was absolutely appalling some of the stuff that's been shoved up there. What's the point of just recording lecturers that were bad in the first place? It makes no sense. We have to have a more sophisticated view of this pedagogic problem, surely, than just saying, 'let's just shove them down on tape.' I think that's good though. If you're going to have them, do that. But it's not the solution to the problem. However, I think Lewin's quote is right here: 'it's better to see

a first-class lecture on video than a mediocre one in the flesh.' Why on earth should... I've got twin boys at sixteen, they're just going into sixth form college, one is a maths/physics kid. Why on earth should he be taught by a third-rate physicist in some local institution, when I've got people like Professor Lewin and Mazur online? Why on earth would he want to do that? It makes no sense whatsoever, apart from this tradition that everybody's a teacher, even though all they want to do is research. And this is the result: boredom, people cutting out of lectures.

Sewall Wright

I like the story about Sewall. He was a mathematical geneticist in the States, and he used to bring his guinea pigs along and explain his experiments. And he used to tuck the guinea pig under one arm. And he'd be chalking away. And at the end of one lecture he actually took it out and used it as a chalk duster. Talk about sort of mad professor, you know? That's what these guys are like. You must remember that, in physics especially, the people are largely introvert, highly analytic, bright people with low social skills. Why are you shoving them in front of audiences and trying to get them to lecture and teach and inspire? It doesn't work. And that's true for lots of subjects.

Low student attendance

And indeed, in this five-year study, on five Russell Group universities, you find that on first year undergraduate students, they come in with pretty full attendance at lectures, and then it drops down dramatically to a mean of just over fifty percent, and stays there. In other words, if this were a factory producing, I don't know, you know, table lamps, and you were scrapping fifty percent of them every day, you'd be pretty worried. Nobody really worries about people not attending lectures in the system. It's quite odd really. Is it that bad? Why do students not attend? Because they're bored shitless. We know that. Are we doing anything about it? Not really. Is there something suspect here? The lecture itself? Damn right there is. An interesting book if you want a starter. There are loads of stuff on this, but by and large the research points in a very clear direction, which is, in terms of psychological attention, it's really difficult to hold your attention as a learner in a deep subject like physics for more than ten minutes. Twenty-five minutes tops. You're losing them, because they want to stop, reflect, apply their knowledge. And the lecture is just not the most appropriate method for promoting student thought. It has no critical, collaborative component to it whatsoever. So if you want an initial test that's...

Psychology of learning

Let me go on to another tack entirely, and I'm going to go into the psychology of learning for a minute, because this is where the real battle is. If you really do believe in the scientific method and think we should have an evidence-based approach to teaching, then what does a psychologist of learning say about lectures? Actually, in two thousand years of educational theory, I haven't found one single sentence that supports them. A lot of people have put their minds to this problem. Nobody is saying the lecture is the way to do this. It's a default; it's a fossil; it's a medieval relic.

Babylonian hour of learning!

For a start, why have one hour? We only have one hour... Lectures in universities and colleges are largely one hour. That's for the benefit of the timetabling. It's only because the

Babylonians had a base-sixty number system that we have hours in the first place. It's got absolutely nothing to do with the psychology of learning. And as we know, if we watch YouTube or Ted or people who really know what they're doing, the hour is a hopeless time. It's just like television, you know? People in the BBC produce programmes that are half an hour or an hour because they have to be timetabled for the Radio Times for god's sake. We have the web, it should be as long as it needs to be, guys. And that's about ten or fifteen minutes, or sometimes on YouTube, two minutes. It depends on the task. It's certainly not this default hour. And how many times have you been to lectures, or even talks at conferences, where you know that the whole thing has been padded out to fit the time? It happens all the time.

Boring learning objectives

Usually really shit teachers put the history of the topic at the beginning. Or the learning objectives. Really bad teachers always put the objectives of the course up front and bore people shitless before they've even started, you know? Imagine going to the cinema and getting a précis of the plot before you watch the movie. How stupid. Blame Gagne for that. He put that in his nine steps of stupid instruction. Of course we have Ted and other things. I'm a sort of fan of Ted. You know, I quite like. But at least they made some effort on production values. They keep it short: it's as long as it should be. Good combination of visuals. Sometimes they just let the person speak, it depends. They play to it here. The second one is this tyranny of time. Why should I turn up anywhere at a specific time to learn anything? I'm fifty-four years old. I ain't going back to university. I'm not going to turn up in a specific place and a specific time just because some academic has scheduled the course. I want it in my time. And we do have media sharing. It does exist out there. We do have time shift. We do use BBCi and all those other things. So let's think about time shifting and not timetabling, which is what universities tend to do.

<http://donaldclarkplanb.blogspot.com/search?q=Gagne's+Nine+Dull+Commandments>

Online lecture – half a million hits!

And then we've got YouTube EDU. All that jazz. Lewin up there. Look at the number of hits here. Just shy of half a million. Now a normal physics lecturer, even if they have a hundred students in a class and do it two or three times a week, takes about twenty years to get anywhere near a hundred thousand. The scalability of this is absolutely phenomenal. Now, let's just say that the argument is, 'well, video is a slightly impoverished medium, you don't get as much as the live impact and so on.' It doesn't matter. You've got half a million guys who have seen your lecture, you know? Do the sums here. It makes no sense not to record them, and not to use the good stuff. Just like movies, just like books. I mean we don't get every lecturer to write their own textbook, so why do we insist that everybody has to be a teacher, even when they're not suited to teaching? iTunes U. MIT Courseware. All the physics stuff here. Absolutely fantastic. Interestingly, the top... Do you know what the top course is on iTunes U? Sex in the ancient world, Warwick University. That's what students really look at, you know, when you give them free choice in what sort of lectures they want to watch. Interestingly, however, Lewin's physics lectures also appear in the top ten of all these media on YouTube. You know, in other words, there's some serious people studying serious stuff using this. And when you look at the demographics of this, there are kids in the third world and China and Africa really, really benefiting from this in a way that was unimaginable just a

few years ago.

Tyranny of location

This tyranny of location: you know, the fact that you have to be here, you know, you know, in this room, sort of Greek amphitheatre. You can't plug your laptop in, it's taken a lot of money to get here, you're staying in some hotel, whatever. There's something quite odd about this having to be somewhere. Unless it's a good event where you're doing lots of networking, and I know you will be, having looked at the programme, so come around here. Now, psychological attention, this is the big one really, you know? And don't tell me you haven't been like this at a conference. I'm fifty-four in December. I have never been to a conference where on the second day I haven't been bored shitless, with almost pains in my chest from boredom. Honestly, I give talks at conferences all the time. I'm always bored. I don't know how people get away with it. I don't know why people pay for it half the time. But there seems to be a sort of acceptance that you can bore and you can be bored.

Cognitive overload

Cognitive overload is an interesting one, and new teachers, especially in schools, suffer from this really badly. In other words, you underestimate how difficult it is to learn, and you really hammer the students with too much stuff too quickly. And that, by and large, is what the lecture encourages you to do: it encourages padding out, it encourages too much stuff too quickly. And cognitive overload is the absolute disease for learners. It's everywhere. Almost all teachers suffer from this, even good ones. It takes years and years and years to draw yourself back, to simplify, to cut it down, pare back, and to teach effectively. And then, you know that video I showed you at the beginning? Imagine if I had stood up here and just read that from a piece of text, that script. That would have been crap. It wouldn't have had nearly the same effect.

Memory theory and media mix

And hardly anybody in the education and training system has even looked at the structure of memory on a, on a very schematic level. They'd be hard pressed to make a distinction between semantic and episodic memory. They might know about short-term working memory and long-term memory. They would know very little actually about the real techniques which effect or shunt stuff from working to long-term memory. But the big one here is episodic and semantic. And by and large lectures are episodic experiences. In other words, you know, they're giving you a sort of live video view of a live person, but they're shoving semantic information at you. And the mind doesn't cope with that very well. So you have this huge confusion over media mix. And when people do use PowerPoint, they have hardly any knowledge about the appropriate use of text, images, animation, video and audio. Hardly anybody knows how to use these things properly, because it takes time to learn.

e-Learning and the Science of Instruction: Proven Guidelines for Consumers and Designers of Multimedia Learning Ruth C. Clark , Richard Mayer

Learn by doing

And then learn by doing. Even in physics, good physicists learn loads in the lab, and they learn loads by applying their knowledge to real problems. And the lecture room just cuts that out. It's absolutely hopeless. And we've had, you know, a hundred and fifty years of theory here from William James, Dewey, Kolb, Shank. Lots of really good theory on this, showing

that it's an absolutely necessary condition for learning even a subject like physics. And yet we abandon it. Except in medicine. Clinical practice, I think, you know, they've always been quite good in this, and in the sciences to a degree.

Ebbinghaus – spaced practice

And then another big one: spaced practice. I've already mentioned Ebbinghaus. It was a hundred and twenty years ago the guy came up with the basic statement, which has remained eternally true, which is you don't learn a damn thing without repeated practice over time. You just don't. And for this one-off lecture, this one-off episodic thing is still the norm. It doesn't make any sense.

And I like this example because it's, again, it's back to science. And this school teacher up in Teesside, who actually decided to take spaced practice and apply it to these kids, and got the same results after ninety minutes of teaching, with his cohort of science teachers, using spaced practice, than he had with a class who had been doing it for several years. It really does work. Not collaborative, that's obvious.

Hermann Ebbinghaus (1885) Memory: A Contribution to Experimental Psychology Translated by Henry A. Ruger & Clara E. Bussenius

Collaboration?

How many of you have... You know when you come into England – it's a very British thing this, it's less so in the States – you come into a conference call, and maybe there are half the number here, everybody sits with a sort of chair between them. You can see it here, you know, people spread out. In other words, they absolutely hate talking to anybody next to them. I've lived in England for twenty-six years, and I still cannot get over the fact that people never speak to me on the train. In fact, when I speak to them, my accent of course, they think I'm crazy, you know. But the, you know, this is not the environment to encourage collaboration. It just isn't. It does the very opposite: it isolates people, isolates people.

Personality and teaching

And then, I've mentioned this already, this whole notion of personality problems. You know, the people who are primarily recruited to be researchers regard teaching as an adjunct or a sideline. This is wrong. And until we reset the system so that we don't assume that every teacher has to be a researcher, which is how it used to be. I love the ninety-two reforms in higher education sector, but it had a very destructive effect, I think, in producing lots of second and third rate research, but more importantly getting lots of people who were inappropriate researchers to teach at the same time. We have to recognise that this is a truth and therefore cut back on the whole lecturer thing.

Lectures on Second Life!

Now, what happens when people, academics, go onto Second Life and decide to play around with this medium? Hey presto, they build a bloody lecture theatre. It's crap enough in the real world without mimicking it in, in the virtual world. And have you ever been along to any of these lectures? They are an absolutely hoot. There's usually, there's usually the guy and a couple of his mates, and then within five minutes somebody pops in and offers you sex. That's, that's what happens in Second Life. It's absolutely hopeless. Why do, why do people do this? Don't they recognise the stupidity in the model in the real world before tackling it in

the other world.

Research from Carl Twigg

And let me end on a serious note here, because this is really a fundamental piece of research that I go back to time and time again, by Carol Twigg. Big bit of research, eight point eight million, thirty community colleges in the UK, using technology to affect learning, getting away from the old lecture model. Is it cost-effective? Yes. Are we seeing better learning? Yes. Can drop-out rates be reduced? Yes. But what was more interesting was the recommendations in the research with regard to how you should proceed, which is what most of you guys do for a living. And the important thing, I think, was number three, which is don't fiddle about with courses, just redesign them. Take the course, re-construct it. Don't assume that the lecture is a necessary condition for success. It may be culturally, but it's unlikely to be pedagogically. And don't bolt on the new technologies. You know, that's what you do by recording lectures. Why don't we look at the very nature of a lecture and re-think that one, rather than just recording them? Cultural problems of course. But I think I'd like to end on that note because you guys are in the middle of these wars, these battles with regard to implementing technology, and you will be hitting barriers left, right and centre. So I'll end on that note, and good luck to you all. I'm happy to take any questions. Thank you very much.

<http://donaldclarkplanb.blogspot.com/search?q=Carol+Twigg's+research>

Vanessa: Okay. Thank you very... Yeah, thank you very much, Donald. If you could just hang around for some questions. We're due to kind of end at around twenty past. We've got shuffle time, so we all have to shuffle at shuffle time. But until then we've got a chance. We wanted to give a good amount of time for people to ask questions. I see we've got hands up already. We also may have one or two questions coming through on Illuminate. So they're coming potentially from different places. But we'll focus on the hall at the moment. First hand up there, from someone in blue.

Q: Thanks. Hi Donald. Lindsey Jordan from University of the Arts, London. I think you had a really tough job there Donald: you know, knocking the lecture in a lecture. So how else would you have, you know, how else would you have, to use your word, delivered that?

Donald: Well, good question. Most of my activity is not doing this. Most of the things I do in life in terms of, you know, having built a company and tried to affect change for e-learning currently, has been, is online. And I blog a lot, I'm on Facebook a lot, I Twitter a lot. Most of the activity... If you look at people who blog a lot and have been doing it for many years, and build an audience, you get audiences that are ten times bigger than any one audience you're going to get at a keynote at a conference. So you go for scalability. And I would say, I have said absolutely nothing today that isn't on my blog, absolutely nothing. And I would say that would be my, you know, my first port of call, and when I'm looking for interesting information. I've never been to an Alt conference before, I'm not a member of Alt, but I've looked at loads of Alt talks, and I've found some of them, you know, pretty inspiring. But I do it online. I'm not going to come up to Nottingham from Brighton necessarily, when I know I can see it online. I just don't see the point in this. I just don't get it. You know, don't you watch Ted? You're unlikely to pay three grand to go and see Ted, but surely you watch it online. That's a much... I'm not going to spend three grand going there, but I watch those videos

endlessly. In other words, I think we should all be focusing our attention on a different mix, which is more online than offline. I think conferences are a bit odd to be honest.

Vanessa: Okay. Thank you. Looking for some more hands. I mean I certainly have a question in the interim. I mean it's around that kind of, you know, observation around people, the teacher's skills – teacher's rather than lecturer's skills. And, you know, nobody really knows, you know, how to use, you know, the right kind of pedagogical combination of text, you know, images, so forth, around the kind of issue of semantic memory. I mean how are we going to get over that one?

Donald: Well, first of all I think you should give up on trying. Because I mean I ran a company for many, many years. I wouldn't dream of taking people in the IT department and turning them into sales people. I wouldn't in a million years dream of doing that, because their personalities would be unsuited to it, they wouldn't want to do it. And every academic institution in Britain you have the same problem: you have people who want to do research and do not want to teach, and do it reluctantly and badly. So the solution to the problem is not to force them: round pegs into square holes. It's to accept that there's another solution to this problem, which is not getting those people to teach, and making a distinction between teaching and research. Until we do that we are forcing round pegs into square holes, and there will be crap teaching. It's a consequence of that. And so, you know, I don't think it's a training problem.

Vanessa: Okay. Two more. Nigel I think was first, and then one down here.

Q: My interest, Donald, is to follow on from Vanessa's question. What you cover in terms of the presentation to us today, and other presentations I've seen you deliver, is what happens between the person who's contracted to be a lecturer and a group of people who've signed up to be their students. You don't seem to cover the policy and strategy issues, and the implications from what you're saying for the institutions. I'll leave it at that.

Donald: Well, yeah, that's right. And I don't come along and talk about that, but I have been heavily involved in that. And I've worked with people, like Alan Langlands is the Chief Executive of HEFCE. And I've known Alan for years. He's a Scots guy, was the Vice Chancellor of Dundee University. I worked with him on major projects, trying to get medical schools worldwide to come together, to share basic undergraduate content, which hardly any of them do, stupidly. So medical schools typically even have graphics departments. They're still drawing the human body, stupidly. Hundred grand a pop these departments cost. I worked with that. I've worked with David Willetts recently on real policy. I mean I think we're facing some really big problems. I remember the Labour party by the way, but they're absolutely hopeless on this. The, the interesting thing that will face us in the very near future, and I mean October, is the absolute need to teach more students with less money and less resources. And until we grasp some of these problems we won't get anywhere. Now, I think I'm a great admirer of the Open University, and Martin Bean. We've had it since 1969, and we haven't actually managed to exploit it in the way we should, not only within that institution, but in other institutions. But people like David Willetts will do this. You will be able to study at a distance to a degree you never did before. I think there are some enlightened people around who will push the system in that direction. In other words, there are real policy things,

but you've got to get involved in politics at the high level to do that. Which, I've been involved in politics all my life, and that's a different scale of things. And it's quite difficult to come and launch out at conferences on that, to be honest, and say what's in pipelines and planning.

<http://www.ivimeds.org/>

Vanessa: Thanks. One guy at the front here.

Q: You said, Donald, that forcing researchers to teach is forcing like a square peg into a round hole.

Donald: Not all of them, but many.

Q: Yeah. Well, you know... But, likewise, if you are a fantastic teacher you can inspire learning in a whole range of individuals. You're never going to get a job in a university unless you've got a research track record. So isn't it time we changed the... You know, what are we trying to do in universities? Is it research or is it teaching? But are they two very different things is the question?

Donald: Well, they are. And of course what you said there was true of the UK system, but it's not true in the US. You know, there are teaching universities. And I went to an Ivy League university, and it was an absolute revelation for me, at twenty, to go to a place where at the end of the, end of the first semester I got a form asking my opinion, as a student, of the teacher. I have never, ever experienced that in a British university. I understand it's changed somewhat now. But I think you've hit the nail on the head here. If we continue with this catch twenty-two we have a massively inefficient system. There is no human endeavour more inefficient, I think, than education and training. It's absolutely hopelessly mired in old theory and practice and these political catch twenty-twos. You're absolutely right in what you say, but the point is politically to change that. And there are people who believe it must be changed. I think this is going to happen quite quickly, myself, having some knowledge of the political environment. This distinction between teaching institutions and teaching and research institutions, there's huge pressure on the system to change this.

Vanessa: Okay. One in the middle, just towards the back. Yeah. Put your hand up and then we can find you.

Q: Thanks. Diane Brewster, ex-University of Sussex, and currently Open University. I agree with a lot of what you've said, but I think one of the problems I've experienced is an estates problem, a physical building problem. We're still building lecture theatres and seminar rooms. You know, I know a lot of tutors who want to move away from the lecture paradigm. They might occasionally want to give a lecture, as a kind of inspirational thing to do to get students engaged, but they want to do more kind of workshop based activities. And we still have seminar rooms with notices saying, 'do not rearrange the furniture in this room.' We've got lecture theatres with bolted-down seats, that you can't do group work in a space like this. You can talk to the person next to you, you know, risk a crook-neck and turn around to the person behind you. But there is a whole issue, I think, about estates and about the model of teaching

and learning in universities which needs to go beyond us, and beyond the lecturers, to management and estates.

Donald: Brilliant question. Great dark secret of the higher education system. I came in a taxi to this building, and I counted five builder vans, five, never saw a single student, and four gardeners, and what seems to be the campus of a small country, the size of a small country. There is a huge problem here. Speak to Alan Langlands on this. In the last round of cuts in universities, most of the cuts came on capital expenditure. Because he knows, and has believed for years, that people spend far too much money on building monumental buildings, and there are far too many Vice and Pro Chancellors chasing CBEs in monument building. And it's an absolute disgrace, building more rooms like this and forgetting how learning is really tackled. But of course we saw that last round of cuts, a massive cut, not in teaching and research, most of the cut was actually in capital expenditure. And that's absolutely right. You know, I get the sense – I was coming here in a taxi – I get the sense that Nottingham... The great danger with northern towns is they'll become a university and students, we'll have people teaching people, and nobody else doing anything else. These institutions are getting enormous in terms of the capital estate. And they are incredibly badly managed. If you look at the data on occupancy in university buildings, it's unbelievable, and criminally low, way below fifty percent. Any other area of human endeavour you'd be sacked on the spot for not using buildings properly, but most of them are empty most of the time. I went to the University of Ulster recently to give a talk, and I went into a building which was four storeys high, in Derry, fully lit on every floor, and there wasn't a single person in the building: it was completely and utterly empty. It took me ages to find a human being on the campus to get to this lecture theatre. And that's criminal and stupid. And I blame the management of universities. Again, this is a very unpopular thing, people say that managerialism has crept into university. My arse it has. These are mostly academics and ex-academics badly managing estates. They don't know how to manage buildings, they're falling down, they don't know how to put money aside for maintenance. It's a mess. I'm sorry, I get really angry on that. You know, I've got kids. I don't want this happening, you know. I don't want to spend money on more buildings like this. Doesn't make any sense.

<http://donaldclarkplanb.blogspot.com/search?q=Universities+-+empty+vessels>
<http://donaldclarkplanb.blogspot.com/search?q=Salon>

Vanessa: We've, we've actually got one come through on Twitter that's an interesting... Which is, 'could Donald summarise what he recommends as alternatives to the lecture?'

Donald: Well, we have, we already have institutions that have been... Remember, it was fifty years ago now that the Open University was set up. You know, two hundred thousand students, the biggest university in the UK, nobody's on the campus. It's, you know, ten, twenty times the size of any other university in the UK. We've had this model for fifty years. And if you go across to the States, and the University of Phoenix. There are lots of examples where we've managed to dispense with the lecture as the basic pedagogic technique. People still get their degrees. And if you look at the data from students of the OU, they absolutely love it. They score immensely well on student satisfaction. It's not as if I have to come up with any models here; they're staring everyone in the face. The problem is that the institutions are hermetically sealed, with their own budget and funding mechanisms, that make them fight

each other rather than share, you know. The playing fields, the sports fields here were unbelievable. Not one single sportsman on them. But I bet there are poor kids on the outskirts of Nottingham who are really struggling to find a football field. That's criminal and stupid. We should be sharing those common facilities rather than hermetically sealing them up in institutions and letting academics manage them. It's not what they like doing. They don't like doing it and they can't do it well.

Vanessa: Any... Yeah, we've got more. We've got two. We've got one sort of at the back in the middle, and the one just on this edge.

Vanessa: I think we can probably take these two and then one right at the back and then we'll leave it there.

Q: Hi. I think it's a bit, a bit dangerous, isn't it, to polarize things as either teaching or research? Because there's lots of people that sit in the middle, that, you know, their research informs their teaching and vice versa. So there are quite a few people who are quite good teachers who are also researchers. I think it's a bit, you know, it's a bit, in the current climate, a bit dangerous to say it's either going to be research or teaching.

Donald: I don't think there's any climate where you don't say what you think. As a university you're supposed to be open to critical thinking and new ideas surely. But I think if you look at the distribution curve on this. It's a good question. I would agree with that. I think in some subjects actually, specifically in the arts and so on, actually practitioners and researchers actually probably do make good teachers. But in physics, where it's a non-volatile subject, difficult to learn, difficult to teach, there's no reason whatsoever that researchers should be teaching, because they're bad at it. In other words, you know, we have to look at this subject by subject, look at the distribution curve, and take a reasonable view in it. I'm not going to be completely one way or the other on this. I think there are some researchers who will be good teachers, some teachers who will be good researchers. But the two are completely different skill sets. And there's no other area of human endeavour where we collude the two, coalesce them, and get such a messy outcome. But I would agree with you: I think there are lots of good researchers that are good teachers. Fine, let them teach. But we have to have some way of determining their competence. It is almost impossible to get sacked from a university for bad teaching. It is literally impossible. That will change in October because the pressures will be enormous. And my local university, Sussex, has just gone through a process of hiring lots of people. And it's called cuts, and it is a cut, and they've got rid of a hundred people, all on voluntary redundancy basis. But that's what you have to do: you have to weed and you have to feed if you're going to have a vibrant teaching community and a vibrant research community. You just can't have people hanging on forever.

Vanessa: Okay, we had one just out on this edge here.

Q: Yes, thank you. Nyle Watts, University College Dublin. I've been both a student in a campus based university and with the Open University, and I've also taught online and studied online. I do think one thing that's a little bit missing from, and it's also a feature of the conference here today, is the kind of social element. You know, you have social networking and discussion forum and so on online. But there is the chance to interact with

your peers and with the lecturers, which you do get around the lecture, maybe not in the lecture itself, and also at a conference. That's still a little bit missing in the online world.

Donald: I would agree with that. I mean... And of course that's not an attack. You can get rid of lectures and still have that. It's nothing to do with whether lectures are a pedagogically good or bad thing. And indeed, my recommendation is that you have a much more learner-centric view of the world and blended learning. And I mean blended learning and not blended teaching, where they just dice up different teaching techniques. When you bring this in you really do have a massive increase in the level of social learning, whether it be face to face or online. But the days... The current university system is really based on the eighteen-year-old undergraduate intake model, despite the fact that the majority of students are a lot older than that. And it still is the rather old-fashioned and quaint idea that you can have a drunken meander for three years and still get a degree and not go to lectures. Those days are gone. It was a privilege for a chosen few. It's no longer something that we can afford. And I don't think it's something that's desirable either. You know, I don't sort of buy that over-romanticised view of getting a whole load of rich kids together and allowing them three years to go through that experience. I don't really buy that much. But you're right. I'm all in favour of the social stuff, I just think there's not one iota of social learning in a lecture room.

Vanessa: And then final question at the back.

Q: Hi Donald. It's Sal Cooke from (...). I just wanted to bring in the notion that you're talking about online, and I too have had a lot of conversations with Alan as well. What are we doing about the ten million who are not online at the moment, who may well be charging towards this idea of HE, in inverted commas? Have you got any thoughts about, that you'd like to share with us, around that whole notion of the FE paradigm, the schools things, the notion of how we're going to blend some of the fantastic activities that go on in those sectors, and picking the best out of some of those other areas and blending it with what goes on in the innovative parts of universities, and trying, looking at some of those things. I just wonder if you've got anything you'd like to share on that.

Donald: I'm going to be a contrarian again here on this one. Because, you know, I don't buy this glass half-full thing. It's a tiny number of people who are not online. And if you want to be online in institutions it's easy, because every school has broadband, every institution has it. In fact, my experience as a school governor was salutary here. The inclusion agenda was actually counter-productive. Every time we came up, and I found money for this school, kit for this school. Rejected every time on the basis that a couple of kids didn't have broadband at school. In other words, the inclusion agenda ended up being exclusive. They wouldn't do a damn thing until everybody had something. Now, I don't remember this argument being applied to books. I mean I didn't have any books in my house when I went to school, but I can't remember teachers saying, 'well, we can't teach using books, guys, because Donald doesn't have any books at home.' Stupid argument. In other words, the inclusion people have suddenly become a sort of, the fascists of the world, where you can't actually do anything until everybody's got it. It makes no sense. No medium works like this, you know. And if that's the solution, we have Martha Lane Fox. Martha Lane Fox on inclusion, everybody should have a pony or something. I don't know. Where did that one come from? You know, what world are we living in when she gets chosen as the Czar for Inclusion. She ever been in

a sink estate? She wouldn't last five minutes. But I think the point here is that... And my experience in a school, where I sat for four years desperately trying to get things done, was that the debate was counter-productive, you know. The inclusion debate was the enemy of progress. It was very curious. But you go with the flow on this. And there are easy ways of dealing with those small number of kids who don't have access. It was a really easy thing, in terms of homework and printouts and so on, to cope with that problem in the end. The truth is that schools don't actually want to communicate with parents, and therefore they don't want to open, they don't want to open these systems up. And that was the real political battle, was with the teachers. Interestingly, I don't believe in this digital divide thing at all. I think it's always been a series of fractures. It's not been a rich and poor issue necessarily. And in the schools I've been in, very often the teachers have been technophobic and rather snobbish, and they have little televisions, they don't like buying big-screen TVs and all that jazz, you know. It's that world that you're fighting against: the teachers, and not the kids and their parents. They've all got Sky Plus and broadband. So, you know, I think, I'm not too sure that I buy the amount of effort that has been put on this. I certainly don't believe in the current method. And the levy of course has gone, so nobody will pay for it.

<http://donaldclarkplanb.blogspot.com/search?q=Is+%E2%80%98Digital+inclusion%E2%80%99+actually+exclusive%3F>

Vanessa: Okay. Well, thank you very much Donald. Great way to start the conference I think. And that's all food for thought for us. Let's give...

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