

**N.B. If you find this student debate interesting then please note there will be a further student session at 'Beyond the Red Tape', held on 8<sup>th</sup> April 2005 at Oxford University. Programme and booking details at: <http://www.oucs.ox.ac.uk/ltg/events/beyond2005/>.**

### **Morning Session: Beyond the Learner, April 16<sup>th</sup> 2004**

**The following transcript is made more or less verbatim, however care has been taken to retain anonymity. Profile of participants: Student A, male, 19-20 years old, Medical Undergraduate, London University; Student B, male, 17-18 years old, about to complete A level course at Oxfordshire school; Student C, male, 17-18 years old, about to complete A level course at London Technical College; Student D, female, early 20s, graduate medical student, University; A-, teacher at Student C's school; C-, NUS representative.**

**Chair:** I am going to start with Student C, who is a Sixth Form Student at X Technical College. Can I start by asking you to tell the audience what subjects you are studying?

**Student C:** Yes I am currently in Year 13, my last year, studying ICT, Economics and History. ICT being my favourite.

**Chair:** Being your favourite.

**Student C:** Yes.

**Chair:** Well that's good – you're in the right Conference then. So let's start by just thinking back over the time you have been at X Technical College. How have you been using IT in your schoolwork when you are in school? Obviously ICT is a core part. What have you come across?

**Student C:** Obviously it is main part for course work using Word Processing. We just recently created a project for a real life system in a Leisure Centre which involved using Dreamweaver to produce an on-line system which inputs data, customers and so on.

**Chair:** So you are learning Dreamweaver?

**Student C:** Yes, Dreamweaver.

**Chair:** Oh God – how worrying. If you said to the audience here, or most of them, X Technical College they would think of something called LAMS. Does that mean anything to you – the word LAMS?

**Student C:** Yes. It is mainly used in the lower schools obviously and I recently sat in on a couple of lessons when it was being used. Students seemed really enthusiastic about it. They can all learn at the same time a series of questions, where nobody gets left behind and yes they all seem really enthusiastic about the use.

**Chair:** Well now that's Ok. Actually if I can bring A- in at this point because you are a teacher who uses LAMS. I don't know how many people are familiar with LAMS or have seen it so if you can give a brief synopsis of what it is and how you use it in the classroom.

**A-:** It's a bit of software really that's designed to develop cognitive learning so there is a lot of reflective questioning and discussions in a chat environment and the idea is

that every pupil will work through together so we do it in a classroom environment. They will have set a series of questions and different activities to do and be done as individual learning activities put together in a sequence so that they follow through that sequence, take each part in turn and with a lot of the reflective questions you get to see the answers of everybody else in the class. So in terms of the teachers perspective it is actually quite a useful tool to actually make sure everyone takes part as opposed to just a few who would normally take part in classroom discussions as a whole.

**Chair:** So just to get the picture in my mind you would sit in a computer room, or a room with computers, and you would sit at a laptop with a friend or just by yourself.

**Student C:** Usually just by yourself.

**Chair:** OK and you are sitting there and working through this stage and everyone else in the room is working through this sequence, and you are at another computer monitoring them.

**A-:** Yes you don't have to be at that monitoring stage, you can actually monitor them or leave them to actively participate by themselves. What I would generally do is just walk around the room and just help support them and it is a good opportunity to have a one to one relationship with the pupils as well as opposed to just standing in front of them saying this is the discussion we are having.

**Chair:** Right. Just to follow up – what is the difference, I mean why is it more enjoyable sitting at a laptop doing this stuff as opposed to sitting in a classroom when you are next to your mate and can pass notes about the teacher and everything like that, kick the one in front. Why is it more enjoyable to sit at a laptop to do this?

**Student C:** Well you get loads of time to answer the question so that you can really think about it and make sure you put down a decent accurate answer instead of, like if you are in class, maybe rushing and getting ahead and trying to finish it so that you can be with your mate. You can really think about the work and understand it.

**Chair:** Do you think that some of your friends who probably wouldn't put their hands up in class are they more willing to do something in this environment?

**Student C:** Yes that's it as well as discussions, you can discuss the question with other class mates so you get an understanding of what everyone is thinking and make your own choice of what you believe is true. You never get left behind as well. They are all ready at the same stage.

**Chair:** Right that's very interesting. OK I am sure we will come back to you, but I am going to move on to talk to student B now. You are a 6<sup>th</sup> Form student at the Y School in Oxfordshire and could you just let us know what you are studying.

**Student B:** I'm in Year 13 studying Psychology, History, ICT and English Literature.

**Chair:** Right we have spoken to Student C about ICT so lets fit you as a model example as a Humanities Student. Let's start by thinking about again the same question – how have you come across IT or used it in your schoolwork?

**Student B:** Very limited in humanities I found. It's more considered an optional resource for private study rather than a primary learning tool.

**Chair:** So you don't sit like Student C does in a classroom with loads of computers when you are doing your English A Levels or anything like that.

**Student B:** Only if we are given extra time for our course work. Other than that it's based in class writing notes for our notation.

**Chair:** What about getting access to computers - we hear a lot about this. Obviously X College sounds like a very unique situation with students in front of laptops, but schools are very underfunded. Do you find it problematic getting access to a computer in school or at home, or both?

**Student B:** Up until a couple of years ago yes, but recently there has been a drive to get more computers in. We have got new computer rooms; there are stand-alone terminals in the classrooms, in the library and even in the canteen now. So access isn't a problem for anyone in the school.

**Chair:** What do you do with it in the canteen? Browse the Internet and look up the dietary habits of your friends? When you are at home, and you have been set your homework, do you have access to a computer at home, and how do you use it there?

**Student B:** Again as Student C said a lot of it is just word processing, but then you have got the internet resources which I use all the time for homework and have a look through a wealth of resources that, perhaps, wouldn't be available at school.

**Chair:** So it's giving you access to different things, which you probably wouldn't have had a chance to look at. Is that what you are saying? Just finally for the two of you, let's be honest about this, basically you want to use your computers in the classroom for its just a laugh isn't it? It takes away the drudgery of sitting there and just listening to people like A- standing up telling you about the course - this is fun and you can just muck about. Or do you think actually it has a benefit?

**Student C:** I think its definitely a benefit because it broadens the amount of knowledge you can receive through the Net etc through the various programmes they supply, and as well its not just one person's perspective as in teaching. You've got the wide variety so you've got different interpretations of information you need to receive.

**Chair:** But is it fun as well?

**Student C:** I suppose it's fun. Yes.

**Chair:** There is nothing wrong with teaching being fun - St Augustine said that once. Just before I move on, A-, as a teacher what is your feeling about using IT in the classroom?

**A-:** Well I think it has actually improved the working environment as it actually makes things a lot more real. We have interactive whiteboards in every classroom so teachers can access the Internet and can actually display proper images on the board, which we couldn't normally do. It gives that bigger range of access to information that they wouldn't normally have. In terms of us using things like LAMS, which we discussed, there are other benefits in terms of improving those cognitive skills; which I think are very important in any work environment, and if that gives them the confidence to go on and be able to discuss better in a traditional classroom environment that is an added skill that we really need to have to help pupils gain.

**Chair:** Right thank you very much. I am going to move on because I do want to give other people a chance to ask questions and so on. I am going to talk to Student A now who is an undergraduate. Can you tell us what you are studying and what year you are in.

**Student A:** I have spent 2 years studying pre-clinical medicine at the Z Medical School and this year I have taken a year to study medical physics towards a BSc in that subject.

**Chair:** OK, and you have got your exams coming up now.

**Student A:** Yes I have my exams coming up.

**Chair:** Well thank you very much. I remember this distinctly when I wrote to you and asked if you could come and talk to us to-day. I said we are going to talk about E-learning and you basically replied what on earth is E-learning. Does that term mean anything to students?

**Student A:** Having considered it more, yes, of course it did kind of indicate to me a generic term for learning with computers. At Z they use the term CBL, computer based learning, so we can discuss the relative merits of acronyms.

**Chair:** CBL sounds a bit; dry E-learning is sexy isn't it?

**Student A:** E-learning is sexy. Yes.

**Chair:** That's why we ditched it. You are the doctor of the future so you must be absolutely banging away at a computers day in and day out. Is that right or do you hardly ever get to see one?

**Student A:** That's right, yes, the course at Z is brand new and it's very integrated with computing and we do all our histology's using PCs anatomy simulations. This is all complimentary to dissections and things like that, and also we simulate experiments. Of course this year, as part of my BSc I have been using computers for research, general searches, essay writing and such like and also done some computer programming. So yes I have been using computers quite a lot more with the medicine because it's a newer course than physics.

**Chair:** So you are using it for two things: one is partly to cover specific topics in the medical course where you might do simulations or might be focussing on something, another reason is accessing resources. When you came to University did you think this was the brave new world and there were going to be banks of computers everywhere and so on?

**Student A:** I didn't really know what to expect I had no sort of preconceptions with computers. My college is quite up to date with PCs with good access there, but when I got to University and there were these huge rooms full of them - access is amazing. At Z - I haven't got experience of other Universities - there was an outstanding supply with all these modern machines with all light machines with flat screens and amazingly fast connections to the Internet and things like that. It was very impressive, that I didn't really expect.

**Chair:** So when you were choosing your University you didn't go around saying 'right that's got a good computer room, that one hasn't' - it wasn't top of your priority

**Student A:** No not for me. It's more the academic staff and the teaching

**Chair:** That's what we thought, so we can slash the funding on that budget. You sound like you are quite happy with the level of IT you are using in your learning. Do you think more could be made of it are there any big gaps where you think "oh it would be really good if we did something there"?

**Student A:** I personally feel there is a little too much of an emphasis on computing. In the medical school we are being taught in a year of 350 students and this means when you are doing

histology classes and things like that you are sat on a table with 10 students sharing a computer – two to a computer. There maybe one member of staff to 4 such tables and I just don't feel that you have the opportunity to learn as effectively with computers with such little support staff. For me the joy, if I can use the word without sounding too sad, the joy of science is in the discovery and the working through to the end of a problem and with a computer the tendency is to say there's an answer click on there, and not read the 4 pages that come before it. Maybe that's me just being lazy. That for me is my opinion, but I do obviously feel there is a place for it then – just complimentary.

**Chair:** OK. We often hear, and C- picked up on it in his talk, about the balance between traditional teaching methods, like in your case lectures, lab work, seminars and the balance of IT. It's probably a fairly straightforward answer but which one do you value the most? Straightforward traditional teaching methods or IT?

**Student A:** Certainly the traditional teaching methods. In my physics classes this year we have lectures with 12/15 people, which allows discussions and debates over topics, much more than in a 350 person lecture where the lecture is split between two sites and there's a video link; or where you are sitting around being lectured whilst you are supposed to be looking at a computer screen. I just feel that the benefits are miles ahead when you are interacting with a person as opposed to a box.

**Chair:** OK. I am sure people will want to pick up on that; don't worry, in a good way. I'm going to move on to the final student. Student D, again, just tell the audience what you are actually studying.

**Student D:** I am a First year student in Clinical Medicine here and I did my pre clinical medicine here as well as a BSc.

**Chair:** OK so you are another medical student but we will try and not just concentrate on the medical side for this. You would be classified in an way as a Graduate Student is that right?

**Student D:** Yes

**Chair:** OK. Have you noticed the shift or a change in how you used IT in your undergraduate pre-clinical years to when you moved to graduate?

**Student D:** Very much so I think maybe its just here, but it is still a very traditional place, and in pre-clinical we have very, very limited access or very limited e-learning. Most of it was done traditionally in a lecture theatre and this year having come to clinical school a lot more of it is web based. We are encouraged to seek tutorials on-line, and most information is given on-line, and it's a very different way of learning and I think teachers, and students, have been quite hesitant to make use of it.

**Chair:** Why might that be?

**Student D:** I think because, perhaps, it's to do with medicine. The two good things about it are, first, it's been good because it's been time saving and is efficient and it also means that in something like medicine we can go to the Internet and find information that's most up to date, which hasn't been published yet. But people have been hesitant because in something like medicine it's a very dodgy way of learning. It's very good for information gathering and fact learning, but learning skills and people interaction and critically appraising something its not the ideal way to learn and these are crucial skills in a course like medicine. People having graduated from here - they are quite traditional and feel they would rather pick a journal off the shelf, take

time reading it, appraising it rather than find a web site click on a link and someone is telling you this is the information and there is no way of facilitating whether or not it's authorised or not.

**Chair:** So it's like taking a short cut to the answer.

**Student D:** Yes and people haven't been too keen on it.

**Chair:** I was just wondering, now you are going to be using IT now in your graduate studies more and more do you feel you are getting sufficient training or if have you just been thrown at it? We get the assumption that we are in the brave new world where you're all cyberkids so we can let you just at it or have people given you enough support?

**Student D:** No. I think support has been very good. We have had a lot of training on how to use the Internet, how to use web-based learning, devices, because resources are extremely important and we have had long teaching sessions on how to retrieve information, what to do with it what is the best way of using a search engine and all of that is very valuable because we do go out looking for information and you get a whole host of things. We have formal two or three days training over the last year on how to use it.

**Chair:** So you haven't just been abandoned.

**Student D:** No

**Chair:** No, good. Now I know from reading and discussions with you, that you were involved in putting material into what we call a VLE – a Virtual Learning Environment – so I am not going to ask you how easy it was to do that, but as the perspective of a student what do you see are the benefit of something like that system.

**Student D:** I think that was quite a unique experience for me to having been on both sides of the VLE and when I was actually doing it I thought, "Oh, this is great. Masses of information going on the web and people are going to be able to access it". Although the two things that I thought would be most important would be the format, which they were put on, and how accessible it was going to be. Both of these things have proved to be most important having come to the clinical school and seeing that people actually do find it difficult, and quite frustrating at times where they think "Oh I can go on the VLE and all this information is meant to be there" and then they can't find it. Because it's such an extensive resource it's often difficult for people to navigate around it and they tend to give up and they go and call the relevant secretary to get this information quickly. Maybe the expectations are too high. Maybe that's what it is but it's putting information in a very intense area, which people are not used to. Maybe it's a local thing because people tend to be old fashioned and the tendency is "do I need to find out – let's click a button and see if it's worth it".

**Chair:** OK. Just to move to A- again. You use a VLE in X as well. Which system do you use?

**A-:** We use a VLE. It's quite a basic VLE I would say.

**Chair:** What do you use it for in school?

**A-:** We tend to use it for putting up some resources. In doing a lesson we can actually save that in a form that can be put on VLE. We are still really in the beginning stages of using it. It is something that hasn't really taken off by everybody yet, but hopefully in the long-term it will. We also have it linked to our Management system so that planning of the pupils with all the information about their attendance and grades as well, so that's quite a useful thing, and our plan is that parents can have access to it as well so that they can see how their pupils are progressing.

**Chair:** I think we should go back to Student C now. Keep your Mum and Dad away. You've probably never heard the term VLE but you know the type of system that A- is explaining there.

**Student C:** Yes I have seen it in action because my brothers use it if they miss a lesson they can go to it and see the lesson plan and they can catch up on the work. But as Mr X said it's still in the early stages, but in the future for the younger years it should be a good thing for them to use.

**Chair:** How do you feel about having your parents check up on your grades and attendance?

**Student C:** That's it. Well me and my parents have an open relationship. They are always on my back all the time. It's fine, I have three younger brothers attending school as well and its good keeping track on them and seeing how they are doing. I think it's definitely a good thing.

**Chair:** Right OK. C- before I hand over to the audience. You don't have to answer anything – don't worry. I think you gave a very positive view of E-learning and we are hearing pretty much that from the students although they have pointed out some shortcomings with that. Have you got anything to reply to that?

**C-:** Yes. I'm trying to get my thoughts in order as it were. It's interesting to hear all the facilities available. I certainly remember when I actually started High School initially IT was very separate it wasn't something staff taught us as part of the general curriculum you didn't really use it in the context of any other subject other than computer studies, as it was called at the time. We'd go into a room with an eclectic mix of computers, everyone different, a mixture of Acorns, Electrons, Amstrads, whole ranges of stuff all black screens, screen lighting. Pretty much all you could do was set up programmes making a line go around in a circle – logo style. It is amazing how fast the set is changing, how quickly IT is moving on and inevitably changing. It's going to continue to happen and we are seeing new developments all the time. There are a couple of other things I want to pick up on. Firstly this sort of initiative is going on both in the Further Higher Education and development of the National Student Survey and one of the questions on that is going to be around the IT resources provided by an Institution. And one of the primary uses of that information is to go on to the Hero website, but with a link through to a Portal development by DfES. The other thing I want to mention, when talking earlier about how the Students Union and NUS by proxy can make the information and support facilities available to students studying through E-learning what I didn't mention is that the NUS on-line which is the web site of NUS and increasingly we used to depend on giving information to the Students' Union, but increasingly students aren't working on campus or don't have that direct link with the Students' Union. We have recognised the need to buy that information in more creative ways. Now all that information is on-line at that site, advice, national campaigns, support information and we are just picking up literally millions and millions of people accessing that site every month to get hold of that information and make sure they can actually access that additional information beyond their academic content, and we are seeing that increase month on month let alone year on year.

**Chair:** Right thank you. Now this is your opportunity. I talked to all the students before and I said you are a very nice bunch and you are not going to have a go at them. They can't be wrong for they have just expressed their opinions and their opinions must be right, of course, in their view. So I would like to do now is hand over to the floor and ask you for any questions or any clarifications you want or anything you want pursue a bit more with any of the Six Form Students or Undergraduates. So we will start at the back there if you can just introduce yourself and say where you are from.

**Q:** I had a question for both Student C and A-. Firstly when you were talking about the experience of using LAMS you were talking about working collaboratively with other people.

The first question was “Do you find yourself learning more from your peers, the people you are working with, when you are using LAMS than you do in a sort of traditional classroom?” The second question was more to do with motivation. “If you are working in a small group your on an activity do you feel that you are in competition with other groups working on the same activity. Is there a sense that you are playing a game?”

**Student C:** Obviously in a classroom environment as you said in a group you do want to try to achieve the best and do the best you can, but if you are using the LAMS and everyone is working together and you can use the discussion facility so everybody can discuss the question and you are left to decide by yourself what the best answer is going to be in hearing and then everybody is equal then and nobody is left behind and everyone is at the same stage to go on ahead in learning.

**Chair:** So when you are in the discussion area or whatever you are using do you find you suddenly read a reply from your mates and you think, “Wow I’ve learned that, I never knew they knew that to be quite honest”. Do you find that you are picking up information from the other students?

**Student C:** Yes definitely because in a classroom environment you are working in smaller groups whereas in LAMS you can use everybody in the class and everybody’s knowledge can be put together and then take ideas and work from there.

**Chair:** I think the other part of that was about motivation and its coming back to this fun idea. Do you, or any of your friends, think “I actually enjoy doing this more than the other and that’s why I look forward to the LAMS sessions”.

**Student C:** Obviously I think in the big classroom you have got more time, you are more relaxed and more concentrating on what you have to do. In a classroom you maybe in small groups trying to get the task done you are a bit under pressure, where using LAMS you can just discuss, as well as do the work and other stuff.

**Chair:** Do you want to say something?

**A-:** One of the things with LAMS is it takes away the focus of an individual if you are actually asking a question on a one to one basis. It takes away that focus because everybody is answering that question and they are answering it independently. They are answering it on a machine, they are not actually stood up and giving their reply verbally. So that’s a benefit to a lot of pupils who would not normally want to have that and would not focus on that. In terms of motivation if they are afraid normally of answering questions, or taking part of a discussion, in a classroom they are more likely to do it in this kind of environment and therefore are more motivated to answer it. From our experiences we have actually got some really good responses from really good ways that pupils have progressed themselves in the way that they actually answer the questions and take part in discussions which they weren’t doing before. So you can actually see that difference in it.

**Chair:** Did you have a follow up point?

**Q:** Just to clarify with regards to the motivation. Do you think there is a more competitive element involved when you are using this system than there is in a traditional classroom?

**A-:** I don’t think there is because their information is not displayed with their name so other people can see it. So there is no competitiveness in that other people won’t actually know who is taking part and who said this, or who has written that particular answer. But on a slightly different note to that is that one of the things that is very important as well is that just not to rely on what some people said because it is very easy to get a misconception actually for our talk in a

system like that, therefore, if people started to believe that then you have actually defeated the object so you have to monitor it very carefully as well. So I think that you've got to have the right balance.

**Chair:** Right. The lady here.

**Q2:** This is a question for the sixth-formers basically, and I'd be interested in what other students thought too. I am interested in how well you have been trained or educated or acquired skills to evaluate a critique web site. So that when you go to a web site and say this is a good one its valid its up to date, or this is a crap one I shouldn't be reading it.

**Chair:** Student B lets start with you. Have you had any training on that?

**Student B:** Not any formal training – no. There's a consensus among the teachers to explain to us to look at the actual source, who wrote it, whether it's on an academic web site or some private web site, and to assess there as to whether we consider that to be a valued opinion, and even when we do to be careful how we use it or whether we quote it or not. Generally to be critical of something.

**Chair:** What about you Student C?

**Student C:** Being taught by teachers is compulsory since I started in the school in Year 7, as you go along you get the idea that if you are working on web sites the teacher says basically make sure this is valid. Do you have your own opinion? Is it biased? And you have to be really careful. Is it better than books etc?

**A-:** We actually teach the applied GCSE in ICT now when we've only been doing it for the last year. So part of that course you have to analyse a web site in terms of how well that information is and they have to verify it as well. So we are actually developing the skills now that we really didn't develop a couple of years ago.

**Chair:** So it's coming

**A-:** Which will help everybody.

**Chair:** You don't want to access a web site, which gives you inaccurate medical information, or we don't want you to access the web site. Put it that way.

**Student D:** I must confess to having had no formal training as to web site appraisals and in fact in my year of physics we have just been told not to use any references or use any sources from the Internet unless they are also published on a paper somewhere so that we can identify.

**Chair:** Really? That's interesting.

**Student D:** In fact some of my fellow students have had essays failed for it.

**Chair:** On what grounds?

**Student D:** Referencing Web sites. Unreliable sources apparently.

**Chair:** Just to follow up, that it is very interesting because Physics is always waved as one these big subject areas, which is saying right we are not going to publish academic journals anymore because we are giving it to some publisher and then we have to buy it back so lets get on line and start publishing all our stuff. You have been told to ignore that?

**Student D:** Although I'd like to stress this was actually electronic engineers not physicists, but maybe that's slightly different.

**Chair:** I have no idea. A different form of beast.

**Student D:** That has been a greatest concern as well as I said earlier I think that's partly the reason why both teachers and students are hesitant to embrace E-learning here. But it is interesting to see how the mindset has changed and I think even as there is only four or five years difference between me and the Sixth Formers it seems there is this concern growing. They are being taught how to critically evaluate web sites, just as we have been taught how to critically evaluate any paper, or paper that we have read in a journal. That's what the whole 3 years Pre Med School has been about. How do we criticise what we read in a textbook. But because we haven't been brought up with E-learning we haven't been formally taught how to criticise what we see on a computer screen, but Sixth Formers are being taught how to do just that and that's important.

**Chair:** Do you want to follow up and take this point about failing students?

**Q2:** We certainly find our undergraduates do struggle with differentiating between good and less good websites but they do think that it's acceptable to quote from them and I think that that is an issue for us in guiding them to which ones to use. I was interested in your comment about applied GCSEs. I feel this is something that should be done across the curriculum evaluating web sites in all areas, not just doing it in an applied one, which I am sure you agree.

**A-:** Yes.

**Q3:** from the Royal Veterinary College. I wanted to ask the panel about their attitude to E-learning and the digital divide, and just to give you two particular snap shots where I am concerned about this. First of all my own kids. We have a very networked house, broadband, wireless, five computers at home kind of thing. My kids actually, who are 10 yrs and 15 years, use the Internet all the time at the weekend and in the evening to support their learning, and I don't think they are unusual amongst their peers at school. But there are a lots of other kids who don't have computers at home, and certainly don't have Broadband, and I think this is actually quite a dangerous. I know that there is an incentive to provide more computers in the schools, the libraries and so on, but actually a lot of the learning I've noticed for my kids is going on in the evening and at home so that is one concern. If you move on to the University sector, the Royal Veterinary College, we have a very kind of middle class affluent sort of student community and we have just had a survey of our first year intake of whom 90% have their own PC or laptop when they come to the University their own personal one, as well as a very good provision across the College. There is wireless networking, there's offside access and so on. Once again when we surveyed our students they say that they all do a lot of learning outside the official curriculum time so while we use computers in a lot of our teaching they are actually going and looking at the lecture notes, background information, either in the evening or at weekends, or actually during the holidays as well, and I think this is a very privileged position, but I know that a lots of other students don't have this opportunity they are actually restricted to access to computers on campus and that's obviously during the day time. So my question is really "What can we do about this? Are we actually looking at a more divided Society in the future where E-learning is actually going to expatiate the divisions with the 'haves' and 'have nots' or are there ways around that?"

**Chair:** This sort of touches on what C- was saying about his quality paper, but let's start with the sixth-formers on that. Student B. You have got a computer at home, I think that's what you said, but have you come across friends of yours doing the same course who really find it problematic to get access to a computer at home or through a library or anything like that.

**Student B:** Not really anymore, no. With the price of computers going down quite dramatically. Those who didn't have a computer say at the start of the Sixth Form are now getting them now or have just got them.

**Chair:** OK. You can get them for £400 or something like that. What about you Student C. Have you found any problems with your mates or some of them not got computers?

**Student C:** Since my time since Year 7 there has been a massive change in the use of IT. When I first started there was one computer room there wasn't much emphasis but now being in a technological age everything is geared towards computers and definitely, I mean, even when I was in Year 9 we didn't have a computer at home and my friends even up until Year 10/11 were ahead of me with their knowledge of the fundamentals of computing, but I quickly caught up.

**Chair:** Just talking to your mates, I mean it would be very interesting to ask how many of them have got a computer and how many have got a PlayStation. Is there a desire to go out and get a computer because they know its going to help them with their school work or do they say I just want to get a PS2 or X Box and play on that?

**Student C:** Obviously some of them are full of games on the computers nowadays, but I think some buy them for their work and also their parents see it as an essential thing in households around the country and that its needed.

**Chair:** Right. A- from the teachers' perspective at school this must be a concern?

**A-:** Yes. We did a survey of our parents and about 80% of them have got computers at home, which is pretty good. Going back a few years I would have said 30/40%. But we make sure that we give access in the school itself to those who haven't got computers as much as we can. We have 30 machines in the library, which is open from 8.00 a.m. until 7.00 p.m. We have a number of IT suites open for them to actually go and use, so they have plenty of opportunity, although there is still that gap in terms of being able to go home and actually do some work. One of the things we have noticed though is because we have been using our VLE and been putting resources on there the more we put on there the more likely people spend more time looking over them again. So it's a real benefit going over the work we have already done and they've got access.

**Chair:** Right. Student A you are in your Third Year you said. So I presume you are not in Hall of Residents.

**Student:** No

**Chair:** So you are in digs somewhere in London.

**Student:** Yes

**Chair:** So do you have a computer in your flat or house?

**Student:** Yes, but I don't have access to the Internet. I question whether too much concern is made about this point really because for me it takes me 30 minutes to get to University. If I need to use the computer with the Internet it will take me 30 minutes to go in and get a computer which I can use at any point, and I feel that's probably the most amount of time that anyone in the country if they are in University, in term time obviously, would have to travel to go and find a computer to use. Obviously in holiday time it's a different kettle of fish, but then I question whether anyone has ever passed a veterinary course without doing work during their holidays.

Similar to A levels or anything like that, and libraries have text books that people can take home and there are public libraries which have access to Internet and most people, when they are at home, are close enough to another British University, for which they can go and use the computing facility probably I would imagine. You certainly can at Z. I would question whether there's too much concern needed about access to Pcs at home and especially the Internet, obviously Word Processing is a bit of a different matter.

**Chair:** Student D

**Student D:** I don't think there should be much of a concern regarding equality of E-learning. In fact it's a lot better in that aspect because having electronic resources in some ways is cheaper because you can put all sorts of resources on it and keep an up to date library and I know from personal experience that since we have had more resources on the web I have to cut down on my text book buying, which is a lot more expensive it can cost £50 per text book, whereas if I have a computer at home, that's one investment which I made last year, I can have all sorts of resources and access to the web, which I think for most households in England would be quite true a lot of people from low middle class they do service all the time. People can have fewer books at home, but if they have a computer at home with access, children are more likely to access them. That, I think, is one of the plus points; again it's a comparison. Just like you can't sit in the library all day and be a good Doctor, the same way you can't sit in front of a computer all day and be a good Doctor. So it's similar in comparison of the difference in some ways and that E-learning is better and perhaps, it's going to be a good quality of learning.

**Chair:** C-.

**C-:** It's difficult in a room like this to get an accurate picture, I think, because almost by a definition of economic profiling of people going on to Further or Higher Education they are more likely to come from better off families so they are more likely to have computer. A survey of whether students have a computer, or not, is not particularly accurate. So there is a great need for increased public access to terminals whether it be through libraries or other facilities made available, you see increase in Web Cafes obviously there is charge attached to that but beyond that, I think a certainly a few years ago, but it seems to have died out recently, there was some talk by some Departments and some Institutions talk about computers ownership being compulsory for students applying. Fortunately I think that has died out that was certainly a worry and obviously one of my main concerns as National Student Representative was financial hardship for students and between £600 and £1,000 extra for a computer is a significant extra financial burden for a student to take on. But we are seeing great moves on the part of Institutions to make those IT resources much more, whether it may be in dedicated labs on campus or whether it be attachments or link ups to Halls of Residents and it is improving. There is much more to go, but we are moving on that line very quickly.

**Chair:** A very interesting range of replies I think. OK the next question.

**Q3:** This is a question for A- and the students. How has their use of LAMS in your school changed the style of your teaching? And I know that you are particularly relaxed with it, how is it changed their attitude, how has the attitude changed with the other teachers and how do the students think that the teachers' styles did change with the use of technology?

**Chair:** Let's start with A-.

**A-:** I think in terms of my teaching, my style of teaching, there are two different ways I would actually use LAMS, there are two different systems. I think LAMS is just a tool that will help in my teaching, it's not something that replaces my teaching, it's still there it's just an added

compliment to it. So I will still deliver in a normal way, I will still actually deliver the beginning of a lesson and use LAMS as a tool for the rest of it and then maybe do some activity after that. So, therefore, in the terms of my teaching there is not a great change, but it does give me the opportunity where I am teaching whether actually using LAMS to actually go around and spend more time. So its something that is quite useful if you are doing an end of unit activity when you want to try and find some activity to clarify what you have actually been doing and their understanding of it. In that case then as a teacher I can get involved in that, I can participate in discussions and actually take part in that, and the difference being there is there is no difference between me and pupils, the levels have merged into one, and you cannot tell who is teacher and who is the actual pupil in the terms of discussions. As a teacher myself I try and gear the discussions to go the way that I want them without going wrong, but there is still that case that takes away the barriers between the teacher and pupil. So I think that answers you.

**Chair:** Thank you. Let's go to the Students then. Let's start with Student B, because you said that you are not using IT much in your A Levels, particularly in your English and History one. Can you point the finger, do the teachers need to change their attitudes, or have they got it about right? If they do need to change – how?

**Student B:** I don't think the teachers need to change attitudes at all really. They have all been given laptop computers and they are using them to prepare work, but just to prepare printouts, to prepare other forms needed, which will actually be given. So it's facilitating a kind of an increase in what they can provide us within a small laptop rather than them not using a computer.

**Chair:** Right so they've got the balance right that's what you are saying. What about you Student C? You have got a real cool teacher here. He's great, he's getting you in there, there's probably two or three others, but I am sure there are quite a few teachers at your school who aren't using LAMS. Should they change do you think?

**Student C:** I definitely think the merge between LAMS and traditional teaching is better, because it's like an hour lesson, children sitting just there listening it goes on and on where as if you are actually taking part with IT as well you feel more relaxed and more involved in the actual lesson rather than being taught and no feed back.

**Chair:** Well what do you and your friends think of the teachers who aren't using LAMS? Do you think "they're just boring" or "No they've got other virtues- they're good fun" or whatever? Is there a negative view of classes that don't use LAMS?

**Student C:** Because when I first started school teachers were like that anyway – I sort of got used to it. I suppose for the younger children coming up through Year 7 being taught this way is definitely a benefit to them, and they are not going to be as – I don't what can I say - bored in the lesson, but yes I think it is definitely a good thing.

**Chair:** You can speak openly don't worry. Why is it – thinking of the teachers who don't use it – can you think of why they don't use it? Is it because they're scared, thinking, God, I'm not touching one of these things?

**Student C:** Computers being a new thing I suppose they are afraid to use it. Not being brought up, whereas we're the generation where it was actually kick started and for them there's no previous knowledge of computing. I suppose they're not with the times.

**Chair:** They might be worried about being in a classroom with you, who know how to use this. Student A you think they have got the balance right so you don't think they need to change or?

**Student A:** Well, yes, I mean on average the balance is kind of there, but we have got the whole spectrum where we have a lecture of talking to three rooms where everyone is sitting in front of a computer and you might not see a tutor, and then we have an anaesthetist who confesses when you meet him that he likes to teach by humiliation, which involves him asking questions that he knows you won't be able to answer. But for those who are coming around to using, and it's increasingly, especially with power-point presentations, they are amazing aids to lectures and really do compliment teaching, and I think the word compliment is one that should be used. I think the important thing there is for people have a basic understanding of computing because so often when something goes wrong they don't know what to do about it, and the support staff are five roads down, or somewhere else in London and they can't get across until 10 minutes before the lecture ends. I feel basic IT training for the staff, and the students obviously as well. I don't know what it is like in other Universities but there is a very small amount of basic IT training at the Medial School at Z.

**Chair:** O.K. Student D here you are at the oldest and most traditional University, full of crusty old dons, how can we change them?

**Student D:** Well that's really interesting at the end of each of our lectures we have to fill out a feedback form and rank our lecturer and say how he lectures, and time and again it always says that the lecturers who use the traditional blackboard have good oratory skills, or delivered the best lectures. Whereas the ones who relied on their PowerPoints , slide after slide, had very good content to the lecture that teaches, that students could take away, read up again and revise well from, but sat in a lecture for that hour they felt was futile for they could have just come in and picked up the handouts and gone home, because the lecturers then tend to rely on their slides and a lot of hard work beforehand, but delivering the lecture itself becomes over reliant on the computer screen, and there's very little interaction and very little originality for the lecture left and people don't absorb it as much. It would be quite interesting to see, Student C has said quite a lot about, I am not sure what LAMS is, but it seems to me that people don't have to, how do you build up a relationship with your teacher and other students in your classroom? I think interaction within a classroom is quite a good way in knowing what other students are like, but if you don't know who is saying what, what your teacher is saying – do you have a relationship?

**Student C:** From answering the questions on LAMS – the teacher sees the results on the screen, so if he sees that the class is going one way, which is the wrong way he can actually focus to get them back on the right track of learning. So instead of mucking up he can get them right back on track and the whole class can be thinking in the same way.

**Chair:** Student D's point is you are sitting there staring at a screen. Are you missing the banter with your mates and sort of "what did you think of that" whispering, or when someone makes a point in class everyone turns around and looks at them. Do you miss that?

**Student C:** I think it still takes place in some ways, but with discussions as well on this programme, there's no real difference you are just using a computer instead of sort of turning around and having a chat.

**Chair:** I suppose you are of the generation which texts all the time so you will be used to texting. There was some interest in the Power Point coming up – do you want to make a specific point about that C-.

**C-:** I see it very much in the context of the wider sort of need to professionalise teaching, particularly in Higher Education. Higher Education has always been based on very much , as I said earlier on, the importance of Research, and Research is always going to be rewarded very highly – for example it used to be the only way you could become a Professor within Higher Education would be through your Research and, I think probably everybody knows of examples

of somebody who is clearly a world leader in their field, but doesn't have the teaching skills to be able to convey that effectively to their students, and IT is an example of where that can be extended further. Where often the lecturer knows the content incredibly well, potentially better than anyone in the world, but it is important to actually convey that people and often that needs to be face to face as well on as on-line. People respond well to creative and varied art teaching methods and that can be achieved through ICT, but it is important to think about that when designing course content at delivery.

**Chair:** There was a difference of opinion about PowerPoint. Great. You think it's when you say in student feedback you are just fed up because its just bullet point after bullet point, but you think it's quite good.

**Student A:** I would second what has been said, that there is a tendency for some lecturers just to read what is written on their PowerPoint slides, in which case there is no point in being in the lecture theatre you might just as well pick up a bit of paper and just walk off and read it at your own leisure. But then I would also stress that some lecturers who don't use PowerPoint presentations, especially for me, I have to be specific for anatomy lectures. Our anatomy lectures on the heart include someone just drawing a box with smaller boxes within it, which is alright for a general idea, but it is nothing in comparison to PowerPoint slides of a technical diagrams, actual pictures and things like that. So as long as the training is there for teaching with PowerPoint it is much better than without, but if someone doesn't know how to use it properly then it's useless.

**Chair:** Right that's very interesting.

**Q4:** I was wondering about the basic IT skills. You mentioned that when things go wrong nobody knows what to do and that you are using the computers for mostly Word Processing. So I was wondering what training you get in Word Processing and whether there is any sort of ECDL old type training going across to bring us up to here in stature in using computers as tools?

**Chair:** OK. Just to explain to you that ECDL is the European Computer Driving Licence. You can pay a bill – you can get this and go around Europe and tell people you know about computers. There you are. Student A you're itching to get at the mike.

**Student A:** Word Processing training zero at Medical School in fact the same in physics – none whatsoever. I took a course at A Level, in Word Processing so that's my only training.

**Chair:** OK. Student B you said you use Word Processing all the time. Did anyone train you or did you just pick it up?

**Student B:** No the GCSE IT concentrates a lot on Word Processing in Microsoft Word for instance and our general studies course involves actually doing the ECDL and going through the stages of that.

**Chair:** Oh right. That's interesting. Student C.

**Student C:** Well I found this pretty easy using it over and over again. In Year 7 you got taught the basic functions of most packages and then just got used to it day in and day out and at home as well picking up the essentials links.

**Chair:** So there is obviously some training going on. A mixture of picking up as well. The lady at the back there please.

**Q5:** I have a particular interest in the use of visual material, in learning in general, but particularly in E-learning and also multi media, and you started to mention the use of illustrations for ideas and so forth and I just wanted to get an impression from you about whether you are conscious of how visuals are used in the E-learning materials that you have and maybe make some comparisons between using visual material on-line as opposed to pictures in text books and that sort of thing and your reactions to that. But also whether you are encouraged to develop visual communication skills yourselves so interpreting images as well as being able to use images in your own research in your own seminars, presentations and so on. I would just add that obviously one of the big advantages of E-learning is that you have got a visual environment to learn in.

**Student A:** In terms of my own learning I prefer using a text book, or text books, to learn from in that mainly because I don't have Internet access where I am and I find it adequate to use text books and there are libraries there for me to use text books in. In terms of how I am encouraged to use visual aids myself I have had to present my research to the academic staff in my Department at the end of this year and I am going to present it at Conference at the end of the Summer and again through medicine we have had to do various presentations again either using PowerPoint or – well they prefer us to use PowerPoint rather than drawing our own slides, and produce our own acetates. So I use it there. Does that answer the question?

**Chair:** Anything Student D?

**Student D:** I think visual aids are really important, I find myself going on the Internet for half an hour just to look up some pictures of various clinical signs whatever, they are extremely important both text books and on-line. The difficulty in electronic resources is that you then have to have the hardware to back it up. A lot of time at home I find very frustrating in the web site as there are lots of pictures and it takes a long time for it to download and then again it's that thing about accessibility. Do people have the resources to make full use of what's out there, but its definitely important and I think presenting pictures in a way that is accessible on the internet is, perhaps, an important thing to let you look at; so that if you put it there everyone can see it and make use of it.

**Q9:** I was particularly concerned to hear the medical students say that the Doctors might actually leave University with worse communication skills, because my experience has been a nightmare. Anyway to change the subject slightly. Do the students in Higher Education feel that there are any concepts they have come across that have been particularly well described by using E-learning technology rather than traditional teaching? I am thinking along the lines of concepts that they feel wouldn't be easily described verbally in a lecture.

**Chair:** Student A you have given us the example of the heart. Is there any other example where you can think a lecturer used some form of a simulation or anything like that, if you tried to imagine them just delivering it standing up from a stage and just talking to you.

**Student A:** Yes more so in physics, particularly with the explanation of nuclear magnetic resonance and wave propagation through fluids and ultra sounds and things like that, which I have done this year without the visual aids. Especially the video, I suppose you'd call them video or cartoon aids where you see exactly what is happening going through the stages. It would not be impossible, but it would be much more difficult to grasp the concept without those visual aids.

**Chair:** OK thank you. Student D?

**Student D:** I do think visual aids are very important. It does improve how you understand, which you wouldn't do otherwise. But there is a danger there and I thought of how Student A said how he was taught histology on a computer screen or anatomy on a computer screen is

ridiculous. You cannot appreciate true tissue, or true organism on a screen and I think it is important to select what is beneficial and what actually gives you a negative benefit, which would better off doing looking at a slide under a microscope or in the dissection room.

**Student A:** I question that. I don't see any merits of using a microscope slide over using high powered magnification computer pictures, especially when you don't have to prepare the slides and, therefore, there is no danger of you ruining the slides in a histology lab. I agree anatomy dissection is very crucial to medicine, but I think on the histology point I feel the use of computers is paramount.

**Chair:** A difference of opinion – there you are.

**Q10:** Unfortunately another person from the medical fraternity, but it's not really a question for the medics on the panel, but I think for everybody. These VLEs which contain all the course work and all the PowerPoint presentations, whether or not you like death by Power Point is another matter, but how do you use the material retrospectively? Do you print it out and read it, or do you use it on screen? I am thinking here about handouts specifically and if you do use it on screen do you find that the handouts are written as if they were for reading as a printed version, or are they written for the web?

**Chair:** I think Student C you are the main user of a VLE. The course notes that go up, what do you do with them? As the gentleman said do you just print them out?

**Student C:** Well really my preferred way is to access the information, put them up, and make notes from what we are given, but as you say whether that is done specifically for the web page, but with the school the information has got to be correct or they are going to be teaching us wrong which isn't right. Yes but definitely to make notes from what they put up is the preferred way.

**Chair:** Yes. Do you print out before the class?

**Student C:** I go to class. I go home and print it out, then make notes.

**Chair:** Student A you were nodding so you obviously do have a system like this.

**Student A:** Yes. I don't understand the Acronyms I am afraid.

**Chair:** No none of us do so don't worry

**Student A:** Yes all our lecture notes are up on the web, but we generally get print outs of all of them handed to us at the beginning of each module for example, and I would much prefer having a piece of paper that I can write notes on and such like.

**Student D:** I think people differ. Some people like to read on screen and some like it printed out, and when I was developing a web which was the VLE I thought that was an important point that I tried to make sure that things were there in both formats as a PDF link as well as a base HTML, and that makes it accessible so that people can print it off if they want to, or read it on screen.

**Q10:** I don't think that was the point of the question. There is a different style of writing required for writing for the web with all the extra accessibility issues. With the punchy statement as at the beginning and not as the conclusion at the end. I am just wondering whether or not we as teachers are having to learn to produce two versions. One that will be printed and one that will be viewed on screen.

**Student D:** There are certain sites which are dedicated for Doctors to learn electronically and I have found the format style of language is very different on those sites than lecture notes that are put on the web, which are actually made out to be printed out and read.

**Q10:** Its academia versus journalism.

**Chair:** Thank you.

**Q11:** I was really interested that Student A's word processing experience was kind of A Level, Students B and C was kind of GSCE. I wonder if the interesting people who aren't here are Student C's younger brothers, because I think they would have come from Primary Schools and there was some surprise earlier when Student C was doing Dreamweaver at Year 13. Although it's not common it's not uncommon for Flash to be done in Year 2. Lots of it, lots of animation, video editing to be done in Primary Schools, and I am thinking that in five or six years time when they were approaching University what they are going to find. It's a cultural thing, there's a lot of input going in primary Schools, and Secondary Schools, a lot of NQTs going in, having recently just come out of University and they are bringing the kind of time saving benefits of ICT and that is effecting kids and I just wonder, maybe ask us all, but how that's going to effect the sort of teaching and learning they are going to find in Universities in five years time.

**Chair:** We will have that as the wider question for lunch but we'll just pick up on Student C. You've got younger brothers, what ages are they?

**Student C:** One in Primary School.

**Chair:** Are they experiencing different things to what you did when you were in Primary School?

**Student C:** Yes definitely. My little brother, he's in Year 4, he comes home after school and shows me something on the computer and I think 'Wow' I only learnt that sort of thing a few years ago and he's already learnt it in Primary School. It's amazing the way it's changed since I was in Primary School.

**Chair:** So there's a lot more IT going on a lot earlier on. OK.

**Q12:** Earlier on, I think it was C- said that E-learning is completely different, and there is nothing I have heard really to-day that suggests to me that it isn't particularly different, and that reflects the NLN evaluation we have been undertaking. What seems to be a different way of delivering conventional teaching, or delivering conventional teaching more flexibly? I have heard nothing really to-day, apart from references to the potential for active learning, which would suggest that E-learning is leading to different pedagogies.

**Chair:** OK. Let's start with the Higher Education, the Post-Grads. Do you think it is actually different when you experience E-learning?

**Student D:** No I don't think it is, and if I do feel it is different I always get to come off it. So when I do a half-hour tutorial on the internet and I feel this is very different from what I have just been taught in seminar I would always try and reinforce it in some way. Maybe that's because the different psychological mindset, but there are dedicated sites out there, which are dedicated to E-learning and they do have a different sort of format, and they bring out different points, which in a seminar you get in a different sort of way. So I think there is a generation developing, which is different, but it will take a while and the younger generation will be more attuned to it and take it with less scepticism.

**Student A:** Maybe the teaching of E-learning is no different, but I would suggest that the learning is very different. I can't have a conversation with a computer, I can have a conversation with a lecturer, and if I don't understand something, or I'd like to discuss through something with someone, and I am supposed to learn it on a computer, I can't do that and I find that incredibly frustrating and it will often lead to me either not learning something, or learning it incorrectly. So I don't know whether the teaching should change to be able encompass those problems that I find, or whether that's just my dislike of the method of computer learning in some way.

**Chair:** If anything it might be different in a negative sense, but I don't think we will go on to LAMS as we have discussed that. So can I take the next question?

**Q13:** I am an E-learning enthusiast, but actually thinking about the contrasting views of and having the fabulous examples of anatomy on-line and the real need to do things and see them for yourself. Then when it goes back to the old thing of text book examples it's very good to be able to see those, but you actually do need to see the variety and I think that one of the dangers is if you are talking about, especially to do with things to do with people or biology or anything else, you actually do have to see the real variety and not think that the world is as perfect as it is on the screen.

**Chair:** That just gets general nods. C-.

**C-:** I think when I was talking about the techniques being very different I was thinking in the terms of the distance learning aspect. Most of this part we very much talked about the use of E-learning techniques in a conventional learning environment, whether in the classroom, but basically for full-time students' study, close to if not on an Institution's campus where there is great use where that contact doesn't exist and the materials tend to be extremely different for the learning environment and the outcomes tend to be very different. It is sort of taking it back to that initial separation I made at the beginning of my opening plenary. Where the two do need to be separated to be seen quite differently.

**Chair:** OK. Just a last question if you could make it very quick, for just one last point. Then we will call a halt.

**Q14:** I wanted to ask the students on the Panel, it seems to me that we are increasingly working with technology and what we are capable of achieving in education with the aid of word processors, and all sorts of presentational devices far exceeds what we are capable of achieving without them. Yet in education when it comes to assessment you are expected to perform without any kind of technological support in a timed examination. For me personally, there was a massive disparity in my education between what I could achieve in course work and what I could achieve in final examinations, and I wanted to ask the students on the Panel whether they had had similar experiences.

**Chair:** OK. Let's think of the exams. You are word processing happily away, you are writing all these things you download on the Internet and then we shove you in a room like this and say for three hours you have to handwrite an essay. How do you feel about that? The DfES are here so you can say whatever you want.

**Student A:** The examination system for medicine at my University is slightly different in that because there is so many of us we don't write essays any more. So Doctors can't write essays – so don't ever ask us to do it. We have an examination, which is called the MCQ, which is true or false questions. We scribble in boxes on a card, whether they are true or false and indicate your confidence whether we think we have got this answer right. I suppose that's kind of normal examination, but then on the other hand we have a computer examination where we go into a

room where images are on screen similar to images we would have used before in our research and things like that. It's a similar situation to what we have done within a classroom before. On the point of course work I completely agree, course work for me is easy marks compared to an examination. I mean its just the fact that you can get so much more in a course work than in examinations. You have got time to go and get the answers.

**Chair:** Anything from the two Sixth Formers? I don't want to depress you but in three or four months time you have got you're A Levels. You are not going to have the opportunity to sit down and do you're A Levels in a LAMS environment are you?

**Student C:** I want to say with the course work, I came with top marks in the course work, full marks and in the exam overall I came out with a B. So in an exam I must have got a C or something like that. I don't know, with the course work you have got all these resources, you can use the computer, but with an exam you just go in to pen and paper again. Such a change. It's hard to chop and change all the time.

**Student B:** It seems that there are two distinct schools of teaching. The teaching the actual subject and teaching exam skills, and the exam skills aren't necessarily very helpful in later life other than take exams.

**Student D:** I think, looking at Sixth Formers, the way teaching is changing in schools we are going to have to change the examination system as well. I mean it was a shock to me last year to sit my BSc exams and have to sit and write on paper for 3 hours, when it had been encouraged that all my essays were word processed and it is a shock to write with pen and paper. I think the system is going to have to change if you are going to actually assess what the student has actually learned properly. Because you are working very fast towards changing things to E-learning environment it has got to be E-assessed environment as well.

**C-:** I think taking it back to the idea of what outcomes you should have in E-learning there are two main things you expect students to come out with at any level. One is knowledge and one is skills, and you do need different methods of assessment to do that. Course work very much allows you to assess skills, the ability to collect information, to assimilate it and rate its value against other pieces of information and then essay writer skills presentation and all those types of things. Whereas an examination clearly doesn't. Examination in a formal setting tends to give you the ability to assess knowledge retention and general understanding around the subject. I think it is important to see the two in parallel not necessary contradictory, but there is no reason why you should expect somebody to write on paper rather than on a computer. We've certainly increased ICT in examination setting.

## **End of Session**

**N.B. If you found this student debate interesting then please note there will be a further student session at 'Beyond the Red Tape', held on 8<sup>th</sup> April 2005 at Oxford University. Programme and booking details at: <http://www.oucs.ox.ac.uk/ltg/events/beyond2005/>.**