The Big Conversation: Living in a digital world

KAREN FOLEY: Well that was a lot of fun, wasn't it? Welcome back to the Student Hub Live. We've just enjoyed the quiz if you've been watching in real time. And I'm now going to be having a big conversation. Now, what is this big conversation all about? Well, we invite academics from a variety of disciplines from the university to come and talk about something that we think is a big issue, something that hopefully you at home can relate to.

In fact, Rebecca's been talking and saying does anyone send handwritten letters these days? We've talked today about the digital world and about the virtual learning environment and about distance learning. And this session is all about how we act basically in a digital world. And I'm joined by Allison Littlejohn, Francesca Benetti, and Engin Isin. So welcome to our big conversation. Could I ask you to say a little bit about why you're interested in this particular area, Allison?

ALLISON LITTLEJOHN: OK, so my area of research is professional learning, how people learn at work and how they use technologies at work. And of course, work is really transforming so it's really important that we understand how it can transform through digital technology.

KAREN FOLEY: Brilliant. Francesca?

FRANCESCA BENETTI: I'm what they call a digital humanist, so somebody who studies the arts and humanities through digital methods. So I live and speak digital nearly every day.

KAREN FOLEY: Brilliant. Well you're probably interested in our selfies board then because you can see on our social media board that people have been sending us pictures, videos, et cetera, and things all through our mailbox, which is wonderful to build a sense of community with. And it's also really nice to see pictures of people, because I think so often in a digital world we can sometimes feel like a number. There's this idea of being anonymous and being personal, isn't there, that translates? And I guess this really relates to Engin, your area.

ENGIN ISIN: Yeah, I'm really interested in issues of how people want to maintain their privacy, anonymity when they're communicating on the internet with digital devices, digital computers. But you know nowadays, being connected is not only even about actively sending or receiving messages. We are almost always connected through the things that we carry in our pockets and so on. And I'm interested in how people now relate to each other through these devices. And what's their sense of the world politically relating to others, and the capabilities and the possibilities that it affords as it were.

KAREN FOLEY: So can I start then with this whole idea, I guess leading on from what you were saying Engin, about how we are in a digital world. And we can be tracked as well as tracking things. Say we're on our smartphones, people know where we are, and also corporations are often getting our data and tracking us. The Open University also using analytics to try and help students progress and see if you're not submitting a TA, maybe you need interventions and things. But there's this idea I guess about how much we can control over that. And a growing level of awareness, I think, about how our digital selves our digital worlds can sometimes be compromised or not in our control.

ENGIN ISIN: There's a growing awareness of being tracked. But at the same time amazingly people find that people who will not permit certain ways of being tracked in non-digital life are actually allowing to be tracked in digital life very easily. So they're willing to give up data in return, give up data about their actions on the internet, their devices, and so on, in return for free services. What turns out to be not so free services because we are actually allowing the status of-- this is one of the most interesting paradoxes of our times. When normally, we would not allow certain privacy issues to interfere in our lives, but in digital world we do.

So recent study, for example, have found out that in Australia young men find it, more than a majority, more than 50 per cent of those who survey, find it entirely acceptable to track their girlfriends even though they didn't ask their consent for it, which is staggering information. Do we really allow that in non-digital life? Do we allow our spouses to track us? Typically, no. We really reject that, so there's something to be explained about our, sort of willingness, to be able to participate in this.

KAREN FOLEY: Yeah, and of course this is a digital environment as well. And we've got our audience at home and Oliver's got a very interesting question. He says in this digital age, does it create societies that are more or less connected? We've been talking a lot about how students are feeling very connected to the OU by engaging in this sort of event. But in terms of a society, I wonder if anyone's got any thoughts about whether we are more connected with the digital age?

ALLISON LITTLEJOHN: I think it's a very interesting question because personally, we've had our phones taken off us [INAUDIBLE]. And I think I'm kind of fidgeting, because I'm used to tweeting, and so on. And I was looking at some of the tweets that people were sending about this event. And it made me feel, personally, very connected to students and other staff who are out there and thinking about the event.

So, at one level, I do think we can be super connected. But we have to learn to connect in a different way. It's very different from being here in the studio and connecting, face to face. So yes, connections, but different.

KAREN FOLEY: Yeah. How do you experience it?

FRANCESCA BENATTI: I suppose, in a way, in a historical perspective, we have always developed connections. It's just that those connections used to travel at the speed of letter or at the speed of speech or at the speed of meeting physically. And now they travel along different channels at different velocity. So it's creating new possibilities for intimacies, as well as new possibilities for distancing.

KAREN FOLEY: Yeah, no, absolutely. And it's interesting, actually, because we've been engaging in this chat, and we've been getting new people popping in and say, I'm nervous, or I'm scared, and how they connect. And I guess there's always that sort of first transition. Because, like you say, once you're in that community, once you look at Twitter, you feel connected, and you feel part of something.

But how do people then make that sort of jump between engaging in a digital world and sort of, I guess, putting themselves out there and seeing what happens? Because that's the difference, isn't it? We can interact in a physical world and see how people are responding to us. We know that we're talking to somebody. But in, like, a digital world, and a virtual

learning environment, we can put something and think-- does everyone think I'm stupid? You know, is that the sensible question? We don't get that feedback, do we?

So how do you sense that people are engaging with some of that feedback? And, I guess, particularly in terms of how people learn.

ALLISON LITTLEJOHN: Well, we've done research in this area. And what we've found is-- we did a study a number of years ago, looking at how different educators-- people in schools or people in colleges or universities-- and how they get into the digital, using hashtags and so on, putting their ideas out there. And what we found was initially people could be very intimidated, especially if they saw people who they perceived as being very confident.

But if they persist with it, then when they come up with their own ideas it's almost as if their networks change. And the people within their networks are putting their ideas out there. So it becomes part of their everyday to then start formulating ideas and putting them out there. And once people do it, and experience the feedback from it-- which can be-- it can sometimes be negative, but largely positive, and it helps them build ideas-- then they just gradually change, over time, becoming more confident-- change in their practise and doing things differently.

KAREN FOLEY: Mmm. Well, I'd like to explore the idea, as well, about how this is hopefully something that a lot of our students can relate to, as well. So maybe you can feed us some of your comments through on the chat, about how people sort of interact differently between-- I mean, we've got all our module materials here. And we've been talking about how they can also go online. The difference between reading a book and studying something online. And that that can be a very different experience, as well, for people.

I wonder-- I mean, if any of us have got any thoughts around those sorts of differences.

FRANCESCA BENATTI: Well, every time that the medium of reading has changed, the way we read has changed. So in the age of manuscript, people had access to few books. And they would read them in very great details. With print, people had access to more books, and so they read comparatively. And now, with digital, we can use the digital to really delve into small details of the text that we're reading.

We can search digital novels for words or patterns of words and discover new insights. For example, if you search a digital text of Jane Austen's Pride and Prejudice, you can find out that she uses the word "pride" 50 times but the word "prejudice" only eight. Why?

[LAUGHTER]

And then you can start asking yourself, why? Why is it so? What characters use what words?

Also, this new, exciting possibilities of reading digitally is what has been called, by some scholars, "distant reading." So, reading millions and millions of books at the same times, to look for patterns that are so large that they're invisible to the human eye. For example, scholars have found out that, as more books were published, from 1752 to 1850, the length of the titles of books went down. There is direct correlation between titles that were 20, 30, 50 words long, when there were few books published, to titles that were five to 10 words long, when there were hundreds of new books published each year.

And then you can start to ask yourself, why? Why is it so?

ALLISON LITTLEJOHN: Can I just say to our students who are out there, we're very aware of the debate that goes on between should students have ebooks or should they have physical books like the ones that we see in front of us. And some of us think actually it should be both. Because exactly the reasons that have just been described-- there are different things you can do with different types of books.

I guess what we're trying to do is to find a way forwards, because obviously there's a cost implication there. So how do we deal with that? The fact that we're in a world where we use different types of media in different ways.

ENGIN ISIN: Learning also has a different aspect to it through the digital communication devices. We get to learn about other places or events across vast distances, in such a short period of time that was not possible before. Even the birth of things called, like, citizen journals, and where people witness events as they happen, with their devices. And then, as they say, they go viral, and people get to learn about more places in much less time and in a much faster way than ever before.

So there's that kind of learning that we are processing in the digital world, as well. And some people find that to be too much. Because there's so much of that is happening. And citizenship journalism multiplies by a thousandfold what is available, through Twitter and other means. What's exactly happening? What injustices are happening, what police brutality is taking place, where, what kind of racial discrimination is happening?

In a way, it's very difficult to process. But, on the other hand, it's a collective learning process we are going through, precisely because of the digital communication devices.

KAREN FOLEY: Yeah.

ALLISON LITTLEJOHN: So learning has to change. Because before, we had people who were essentially the gatekeepers of knowledge. So these were the editors or the people who published, you know, wonderful books like these.

But now there are other opportunities. So we can bring together lots of information instantly. So we ourselves and students have to learn, how do we deal with this? How do we find out what's valid information? How do we balance one piece of information against another, and so on? So these are the basic digital literacies that we need, just to operate in today's society.

KAREN FOLEY: Yeah. I mean, I guess your two side of things, I guess, is in terms of how people learn. And Engin, you're from Social Sciences, so you'd be very interested in power dynamics and all those sorts of things. Thinking, then, about how people are learning and how we're generating knowledge, and the differences between digital, I guess, and nondigital world, do you see a sense of difference, in terms of how quickly people react to things?

I mean, we're more likely to post a picture of ourselves than maybe describe something. We're more likely to trust something in a book than we are, maybe, on Wikipedia. So, in terms of those power dynamics, those hierarchies of how we're generating knowledge, and how we act in a digital environment versus a nondigital environment, what are some of the

observations you made? And could I start with you? Because I know this is a big area of yours, in terms of citizenship.

ENGIN ISIN: Well, a quite recent case was during the refugee crisis in Europe. One refugee boy's body being washed to a beach in southern Turkey. The impact of that, I think, was really due to digital media, in many ways. The traditional media would have curated, would have, perhaps, in some ways interpreted already, would have framed it in ways that was not quite possible through the digital media.

So the political impact of that one image. It's just staggering how it changed the entire discourse in Europe, so much so that one nation state actually saying that we're going to accept 800,000 refugees, because of this groundswell of feelings and affect of investments in refugee question, because of that image. So that makes a politically significant change. The power of, for example, the visual image. Power of a particular sentence, a phrase, is really multiplied in the digital age.

And now, politically, also, we are going through, now, a collective learning process. Again, how do we make decisions as citizens, for example? What effective investments we are going to make in a particular image? How are we going to, for example, evaluate its validity-- whether it is doctored-- "photoshopped," as they say-- whether it's altered?

So this is also a part of collective political learning process, that you can't believe everything you read and you see. You have to quickly develop the ability to be able to evaluate. Which is quite a significant skill-- political skill-- that we have to do collectively.

ALLISON LITTLEJOHN: It's so fascinating. Because the powers to change and to influence what's happening online is for anyone. So a lot of images which are projected in social media are not real. You know, some of them are photoshopped and are made up. So it's really important that everyone can identify what is real and what is not. Because otherwise, there can be huge reaction to something which actually has been fabricated. So it's very important that we understand that and question, all the time.

KAREN FOLEY: And we're having a huge reaction at home, as well. So I'd like to go to the Social Media desk and see what some of the key things are that you're talking about.

HELEN CLOUGH: There's brilliant discussion going on. We're talking a lot about physical books versus online books, as far as learning is concerned. So, for example, Joanne says she reads a Kindle with her fiction, but she prefers physical books when she's learning. She likes to scrawl on them and annotate them and things like that. Georgina has the opposite approach. She much prefers being able to take notes via mind maps on her iPad, for example.

And then we were talking a lot about the advantages of having the OU Anywhere app. So you can start studying with a physical book when you're at home, and then, on your commute, you can finish reading where you were, when you're on the train, on your iPad. So, yeah-- some great discussions around that.

HJ: And Oliver, leading to the discussion-- when we talked about the powerful image of the Syrian boy on the beach, and the refugee crisis, as well-- has a great point, generally, about how we perceive images on the internet. He says about citizenship journalism, "At what point

is that information audited? And it's surely why"-- "This is why we as a society end up with so many 'trial by Twitter' issues in the digital age."

So things like, um-- because information comes out so fast, that it doesn't allow context. And sometimes we're quick to jump to reactions, as well. There was a recent case where a member of Parliament appeared to be sleeping. But, in fact, he was listening to a speaker by him, because he's hard of hearing.

So it's quite interesting to think about how our reactions have changed that way, as well. And we might not question context as much, because of the fast pace we receive and interpret information.

ENGIN ISIN: That's interesting. That brings up some of our old, traditional tools of teaching. I mean, some of the things, even before digital world, for university students. We emphasise critical thinking, one of the aspects of which is that you actually triangulate various perspectives to reach a balanced view of it. So that means from one angle, when something comes-- where a claim is made, a statement you hear-- you just don't take it at its face value.

You actually learn to evaluate it and compare with another angle, and another angle, and another angle. Critical thinking means as many angles that you're able to evaluate and just weigh them against each other. Then you begin to develop your own, grounded view of things.

Now, when I come to think of it, it applies to a digital world perfectly. So we have to also remember some of the traditional ways of learning and critical thinking are really applicable-- maybe even more so, urgently, in the digital world. Isn't it?

ALLISON LITTLEJOHN: Exactly. But the speed at which we process and analyse and question has to be faster, as well, because the information is coming to us faster.

FRANCESCA BENATTI: If I may make a suggestion to the listeners at home, the library-- the OU library-- has an excellent series of digital-literacy tutorials called "Being Digital." I don't know if it's been mentioned already today. And they include several exercises that you can do exactly on evaluating the reliability and trustworthiness of an information source and how to navigate the information universe-- how to select the most relevant and the most reliable sources for your particular purpose.

So I definitely encourage any person listening to experience these tutorials. They're very short-- five to 10 minutes exercises. And they can be very, very useful.

KAREN FOLEY: Good suggestion. And I'm sure Helen on our Social Media desk will be filling people in on exactly how to go and do that. It's an interesting point, actually, because like, Engin, you say we teach people how to evaluate things, so often, you know, at the Open University-- and a lot of students are new students, and we've got some at second and third level. But we teach the skills about how to evaluate things-- how to triangulate and look at things.

We also have these module materials that are written by people from the Open University. And I've certainly noticed, when I'm teaching, that these are a lot more trusted than the other sources. And that people will say, well, yes, I can evaluate it, but it is right. And this idea of

putting things into context, and also the limitations that we have when we're creating module material. We can't include that whole context. Equally we don't always want students then going out and looking for that context.

So I guess what I want to ask you is, what advice would you give students when they're reading some of this module material? We all know that claims made in the Sun may be on a sort of different level. That's sort of fine. I think people get that.

But when we're actually going to some of this module material, how would you encourage people to be able to digest that and think about some of that critically, in the same way that we evaluate a digital environment?

ALLISON LITTLEJOHN: Well, on the one hand, the Open University's known to have very high-quality materials. There's a huge amount of production goes into all the materials. But at the same time, the people who are writing those materials are human. And also, knowledge is just changing very fast.

So I think it's very important to critically examine anything, whether it's in print, whether it's online. I think there can be an element of reassurance. So there's probably a little bit more care and time has gone into producing these materials, as opposed to some instant resources that are created online. So there's maybe been a little bit of gatekeeping. But, you know, we have to question all gatekeeping.

And also, some disciplines require perspectives and views. There isn't a right and wrong answer. We have to consider the perspective.

ENGIN ISIN: But I also sense the problem that you're putting your finger on, where we don't have, really, the resources and energy to be able to be critical of everything we hear and having to evaluate everything. So I can give an example from my own experience. When I'm, for example, looking at medical information, I don't really have the either preparation or energy or the time to be able to look at all medical advice that's available on the web. But I actually want to go and find an authoritative source-- maybe one or two-- and then read the authoritative sources, rather than just get lost in a sea of world.

And so the question then becomes, how do you develop the judgement to decide what is authoritative source and what isn't? And that's where, I think, a nondigital world becomes also significant. You go and talk to a GP and say, OK, you're talking about this issue. But can you give me some entry point into where I should be going and seeking online information?

And then he says, well, you know, NHS has a site. And it has a section that you're interested in. And, of course, I trust NHS and decide that it produces.

So I think it's a question of this being able to also develop the skills to decide, where are the authoritative sources? And that's where, I think, the universities come in, and the materials that we produce. We just don't produce material that is based on opinion or the facts that we just accumulated yesterday. But it comes through an accumulation of years of expertise, years of making these judgments.

And so, when we put out material for students to learn from, there is authority behind it. And that's very significant, also, to underline, that we back that with authority-- what we write. And then the students can actually feel confident that this is what also it provides.

KAREN FOLEY: Excellent. Well, the chat's going so fast, it's all a bit of a blur. Don't forget, there is a Pin That button. So you'll see a little pin that looks like a drawing pin And you can use that to pin the chat so that you can then scroll and see what people are saying.

But it's brilliant to see so much discussion. Joanne, Rachel, and Georgina are loving being part of the community. They love the energy in the chat room. So keep all of that up.

But I'd like to go to the Social Media desk to see what some of the things are that you guys have been talking about. And also if you've got any questions that you'd like to ask our panel.

HJ: Yeah, well, I think (LAUGHING) we're talking about so much, I think some common themes that we're pulling out is about learning and how digital world has completely changed how we learn. And there's actually been some chat about how children learn. So, rather than learning how to do handwriting, they're being more encouraged to be on the computer and typing. And that's also taking them away from their parents, because they're encouraged to focus on the computer, rather than build connections with their family around them and be encouraged that way.

But another interesting point that was brought up-- I can't remember who said it, but I think it's very interesting to think about-- is someone talked about the value of works, these days. So a book written in the 18th century would be worth a lot now physically, but we can't see that, or how-- it's interesting to think how that would work with something that's digital.

HELEN CLOUGH: Yeah. Yeah. I mean, something we're involved in in the library is archiving all that digital content. Because a lot of modules are now completely online. So how do we make sure they're still there in years to come, and people can review that content? Yeah.

ENGIN ISIN: That's very interesting. I mean, that applies to not only the library and the archival material there, but also, living in a digital world, the material that we ourselves produce. How do we keep track of them? How do we accumulate them? How do we archive them? How do we maintain them?

And, over time, how do we maintain their integrity, readability, intelligibility, and so on? How do you bequeath material in a digital world? For example, you know, I have seen my grandmother's letters, my grandfather's, and little-- you know, the boxes that my mum used to carry, with all the little things.

Now, it's digital. How do you manage it? How do you bequeath that material, digitally, when you're not even able to actually guarantee that it will be readable by the machines and devices that will be available in 10 years?

FRANCESCA BENATTI: Well, if I can mention, these concerns are at the forefront of the work that is being carried out in the library and archives community. The British library recently launched, in 2013, the UK Web Archive. So they will collect snapshots of-- the

intention is-- the entire .uk web domain and of websites that maybe do not have a .uk ending but are seen as relevant and important.

It's a work in progress. But the amount of data that is being preserved increases every month. And it can be consulted and studied at the British Library. So it is a work in progress, but we can do it.

You can submit your website, if you want. It's going to be evaluated for importance by the team at the UK Web Archive, because obviously they have limits to how much material they--

KAREN FOLEY: What do you mean, "importance"?

FRANCESCA BENATTI: It has to be seen as relevant for the future.

KAREN FOLEY: Ah-- very subjective, that!

[INTERPOSING VOICES]

KAREN FOLEY: I wonder, how do they do that?

FRANCESCA BENATTI: I'm not sure. But librarians and archivists have always done it. Not everything can be preserved, so judgement has to be made onto what should be given priority and what is less of a priority.

KAREN FOLEY: So I guess beforehand we had a lot of stuff. We had letters. We could sort of just dig those out, if we wanted and if we suddenly decided that somebody was was, in fact, very important. Now there's a hierarchy, isn't there, and a priority, in terms of what we do and how knowledge is constructed and created, then. I guess we're effectively deciding what we bin.

ALLISON LITTLEJOHN: But haven't we always done that? Because museums have decided what to retain. And when they decided what they would preserve, they didn't actually know the techniques, the scientific techniques, that would be available nowadays, where we can really look at DNA and we can step back in time.

So, you know, if we fast forward and think that about the data sets that we're trying to gather just now, we don't really know what we can do with them in the future. But we do know that that's an essential part of understanding ourselves as humans.

I think at the moment there are more PhDs looking at meta-level studies, where you're not gathering primary data but you're using existing data sets to gather evidence, than ever before. And especially in the areas of health. And those are coming up with incredible insights that we could not have imagined even five years ago.

ENGIN ISIN: But isn't there also the issue of, like, the material continuity of the medium we use to record and keep this data? I think that's a big difference, in terms of archival. It used to be, for example, tapes, in '70s and '80s. Now none of those tapes are readable by current devices.

Then came magnetic discs-- 8-inch, then 5-inch, then 3 inches. And now move to hard disc, and hard disc is moving to a flash. So it's constantly changing And keeping up with the material that becomes obsolete, almost within a generation, I think, is a major issue.

FRANCESCA BENATTI: The area of media archaeology and media preservation is also a growing concern for the library and archives community. There are several approaches. One is to keep older computers functioning. That can only work for as long as there are spare parts and technicians who are trained.

The other one is to build emulators that copy the content of older formats. So for example, the library at Emory University has an emulation of Salman Rushdie's computers from the '80s onwards. So if you are a researcher, you can actually go and look not just at the manuscript-- rather, the computer files of his novels, but at what else-- what was in his computer while he was writing a certain text. Which is really exciting.

There is a compromise. When you emulate, when you move from one medium to another, you're going to lose something. So, once again, you need to decide what is really important to keep and what can be discarded. Obviously, we are going to make mistakes. But this has always been the case, throughout history.

KAREN FOLEY: We've been talking a lot about, I guess, this hierarchy-- what we're keeping, what we're not. But I also wanted to talk about our views of education. So we've got all of this knowledge there. But also we've got these societal constructs about what we see as "learning."

And what I wondered is how that's sort of impacting on this whole process, as well. So what we think is "learning"-- we've talked about the various forms of knowledge, but how do we conceptualise learning, at the moment? And how has that been impacting on our digital environment and being digital?

ALLISON LITTLEJOHN: It's very interesting, because we do a lot of research where we ask people "How do you learn?" And they usually tell us about programmes-- formal programmes-- that they've signed up for, and formal education. But when we probe a little bit further, people actually learn in all different ways.

And so there was a study couple years ago that estimated that people at work learn-- 80 per cent of what they learn is not through formal training. It's actually on the job or through everyday life or through connections we have with people or online. So there are a whole variety of different ways of learning.

However, the social norms around education are very strong. You know, skills have actually changed very little over the past 100 years-- I mean skills like primary, secondary skills. At one level, there's a lot of homework, online, copy/paste, and so on.

Yet people are still in classrooms and doing things in a very similar kind of way. We could've changed education much more dynamically to look at how we build knowledge and how we learn from building knowledge. But we cling on to what we understand as education and learning, from a very social sense.

KAREN FOLEY: Yeah. Do you want to add to that?

FRANCESCA BENATTI: Just that perhaps give it time. I mean, historically the transition from manuscript to print signalled a change in education from the mediaeval curriculum to a new curriculum based on the classics, which, all of a sudden, became easily available through print. And that curriculum actually held pride of place in Western education for 400, 500 years.

So I think it is-- digital will change. But we are still in, I think, a transition phase, in the digital incunabulum-- the very new first steps into thinking and living in a digital world.

KAREN FOLEY: This whole idea of change and things, I wanted to touch on. Because, Engin, you're very interested in this whole idea about who owns some of this information and data and what people are doing with it and how that's also impacting on society. Both, I guess, in terms of education but also in terms of ownership. I mean, a lot of fridges will let you know how much milk you're using, and club cards will know what you're eating. We can market to people very effectively.

Now sometimes that's really good. But I know on Facebook there's been this thing lately about information and who's got access to that information. And people are becoming a lot more savvy. I wonder if you can tell us a bit about that side of things.

ENGIN ISIN: Well, I think one of the significant challenges we have in digital society is precisely how our behaviour generates data and who is in possession of that data. Should the people who are the subjects of that data, who generate that data by doing things-- I move around in the city, I travel, I turn lights on and off, I listen to certain music, I communicate with certain people, I record certain things, I write diaries, and so on.

Now all of this used to be nontrackable behaviour, or very difficult to track. Now, it is incredibly easy to track any of the examples I've given. We can track people in their movements in the city, the things they have done, the people they have talked to.

Who owns that data that a given individual produces is a major issue. Now corporations, states, and others who use and mined this data say that because it is collectivised, aggregated, it does not concern an issue about privacy and anonymity, because we don't know exactly individuals in this, but we have actually patterns. But that produces another issue.

On the basis of those patterns, if corporations and states begin to develop policies and products, what they will be doing, practically, is calibrating individual behaviour to collective behaviour. They are projecting it. There is less and less autonomy for an individual to experiment and try different things in life, because there's always this constant calibration.

We can take back that to issue of learning. Of course, learning-- at least to me-- happens in two registers. One, the things that you learn about, but also mode of learning.

And one of the most significant things about learning is that it is essentially to be able to develop critical judgement-- the capacity for critical judgement. And that capacity for critical judgement develops through experimentation and autonomy. We know that in child education, but also in adult education. It is important that we as humans actually are left to our own devices to experiment and learn by trial and error, to an extent, and also develop a taste for learning. That's how we develop the investment in critical judgement and capacity.

This calibration business, I think, is severely interrupting that-- disrupting that autonomy of individuals to be able to learn on their own. That's one of my major concerns, really, about this data mined and collected through and then fed back to individuals as standard behaviour.

KAREN FOLEY: Well, in the chat room, they're getting very deep and philosophical. This has thrown up a lot of interesting points. What are they talking about?

HELEN CLOUGH: Well, Ben made a rather alarming comment, I think. [LAUGH] He basically says, if our environments, practises, and lives are becoming digital to the point of maybe totally digital, if we fail to evolve digitally into a hybrid being, do we run the risk of becoming extinct?

HJ: Dear me, that's [LAUGH] sort of taking it right to the end point, isn't it? I think Caitlin, as well, had a very good theoretical, philosophical point, as well. She says "I think we're getting close to the Socratic method of learning. Everybody thinks for themselves, we can't take information for granted, and we have to question everything." Which does bring us back a bit to reliability and how we interpret things, as well, and how we can jump to assumptions.

So I think those two points, I think, actually, have got me thinking a bit. My brain's riled up.

KAREN FOLEY: Any feedback?

ALLISON LITTLEJOHN: So there is an area of research called "transhumanism" which looks at this idea of the hybrid of the digital and the human and the fact that we are relying so much on digital and data and so on. However, this idea of feeding back the standard way of doing things, we are individuals. We do things as individuals. We are human.

And I think that, rather than trying to standardise what everyone does, what we have to do is to emphasise the importance of different types of literacies, being able to regulate, to direct your own learning, rather than necessarily be corralled into what the standard is. But also to understand how to use the data that is available to personalise your own learning. I think that's the most promising way forward for us, as humans.

KAREN FOLEY: We've got three minutes left. And I guess I'd like to pick up on that theme of the future, then, and ask each of you, really, where you see this all going.

FRANCESCA BENATTI: I see us as becoming a society that values different kinds of literacy. Not just the traditional reading, writing, and arithmetics, but new transmedia literacies that will allow us to evaluate these different pieces of information, sometimes contrasting, from the microscopic level to the macroscopic level.

ENGIN ISIN: In response to, actually, that question-- I forgot his name-- the alarming comment about, are we becoming extinct, I think we can turn it around and say that we are not becoming extinct, but we are becoming hybrid beings, where we are incorporating digital ways of learning and digital devices into our ways of understanding the world.

So often people say, for example, how their devices became an extension of their memory. That's really an indication of an example of how we are becoming hybrid beings, where we are not just simply limited by our own memory-- biological memory-- but also physical memory that's available to us through devices. And there are other examples, as well, of this

hybridisation-- of one philosopher called "cyborg." "Cyborg" not in the sense that only we can have limbs and other sort of organs transplanted and planted in our bodies, but also in terms of how we use our devices as ways of learning.

Which turns it around [INAUDIBLE] the significance and the political significance of then the data collected-- the mine about our activities even becomes more significant, if we are deeply embedded, now, in technology, so much so that we are hybrid beings, we are not only governing but also governed by the technologies that we are using. So that means that we have to be even more vigilant about how we use them.

KAREN FOLEY: Excellent. We've got a lot of people interested-- Caitlin and Georgina-- in the transhumanism. So they could, I guess, google this and find a wealth of digital information about that. That was Ben, posing those philosophical questions. So thank you for that, Ben.

Excellent. So, any final thoughts, then?

ALLISON LITTLEJOHN: I think we're evolving into people who learn continually. No longer is the end of the degree, you know, the end point. It's really a starting point into whatever comes next.

But not only are we becoming continual learners. We're becoming continual teachers. Because, more and more, we connect with one another, and essentially we have to learn from other people, not just teachers or recognised experts, but from everyone. So that idea of being always a learner and always a teacher is a really interesting one.

KAREN FOLEY: Excellent. Well, Engin, Francesca, and Allison, thank you so much for being on our panel. That's been a really, really interesting discussion. Very philosophical.

We are now going to go to a short video break, where we're going to show a video clip about enduring love-- a research project that my next guest, Meg John Barker, has been involved with. And after the break we're going to be talking about managing your relationships while you study. Grab a cup of tea, and we'll see you in five minutes.