

Report on the first debate of Education Fast Forward

by Merlin John

What if attempts to improve education are doomed to failure because the education systems we know are “legacy systems” and the best they can do is replicate themselves rather than reform? How can we turn schools from “teaching factories” into “learning environments”. And do we already have the solutions but are simply unable to recognise them yet?

These were some of the intriguing thoughts emerging from the very first, remarkable forum of 18 leading international education thinkers, called Education Fast Forward (EFF) (<http://www.prometheanplanet.com/en/professional-development/best-practice/education-fast-forward/>) and created by Promethean and Cisco. Just as remarkable was the Cisco TelePresence technology that linked them via crystal clear video across 12 different global locations – London, Paris, Budapest, Hong Kong, Johannesburg, Virginia, Toronto, Glasgow, Sao Paulo, Libya, Seoul and... Bedfont Lakes.

The session was focused on two propositions: “The right to digital skills development should be adopted internationally as a Basic Human Right”, presented by Bálint Magyar; and “In the digital age creativity in education will play a critical role, even more critical than STEM education in achieving national economic success”, presented by Lord David Puttnam.

Bálint Magyar (http://en.wikipedia.org/wiki/B%C3%A1lint_Magyar), a member of the governing board of the European Institute of Innovation and Technology, and a former education minister in Hungary, touched on the motivation for EFF. “The technology shift happens faster than the generation shift,” he said, alluding to the problem of citizens being left behind by technology and therefore disadvantaged socially and economically.

“Being a human means social interaction, and now social interaction is moving to digital platforms,” he said. “Digital literacy gives us the chance to keep in

touch with each other, with any one at any time and in any form. Digital literacy, empowering citizens for social interaction in an open society became an essential competence without which social interaction can exist only at a prehistoric level. Consequently, gaining the competence of digital literacy should be a guaranteed human right.”

‘If these trends are not corrected we are in deep trouble’

Introducing his motion, Lord David Puttnam, Chancellor of the Open University and Promethean non-executive director (<http://www.prometheanworld.com/server.php?show=nav.16851>), said that creativity is “imagining the way things could be”. “I’ve come to the conclusion that if we are truly prepared to take on the immense challenges of the 21st century, we’ve no choice but to embrace the equally immense power of the digital technologies to nurture creativity right across the curriculum and, as it happens, most notably in the STEM subjects. And to do so makes our present rate of adoption look exactly what it is, which is hesitant and, in fact, particularly inadequate.”

Falling numbers of graduates in engineering, chemistry and physics is a very serious problem for the UK, he said: “If these trends are not corrected we are in deep trouble.”

“High quality subject specific continuing professional development, married to better, or far more creative, technology-enabled STEM teaching must surely lead to more qualified graduates in our most badly needed professions. We’re in the era of a whole new generation of technology which, if well used and combined with imaginative software, could help deliver a whole generation of accomplished highly creative teachers with the skills to vividly – and that word vividly is terribly important in this context – to bring these difficult

subjects to life. This will encourage the development of a genuinely creative curriculum in ways which I think were unimaginable 20 years ago. If successful, that in turn could help deliver the creativity and innovation which are increasingly the engines of economic growth.”

His words struck a chord with UK mathematician Conrad Wolfram (<http://www.conradwolfram.com>) who said that creativity had been drained from maths teaching. Outside education, thinking about mathematics was far more conceptual and vocational, but in schools the curriculum was just the same. “With computers we can turn that around,” he added.

While the propositions led to a more or less routine vote (‘digital literacy as a human right’ fell 9-5, and ‘creativity for STEM passed 11-0), it was the debate that threw up some of the important current education priorities. At the heart of it was the role of teachers and how that needed to change. David Puttnam had pointed out that raising standards for teachers had led to talk of averages: “We have got to accept, certainly in the UK, that the average teacher is sub-standard. Not just sub-optimal but sub-standard. So raising the average of the average teacher has got to be an overwhelming task for anyone who wants to move on and move far.”

It was a point immediately contextualised by Pete Cevenini, K-12 education lead for Cisco in the US (<http://www.cisco.com/web/about/ac79/edu/ourleadership.html>). “It’s easy to bash teachers and say the profession is drenched in mediocrity,” he said. “But most of them – not all - want to be excellent but they don’t know how. One of the paradigms that we have to shift is to teach them to be excellent... They just don’t know how to be the excellent teachers who inspire kids to learn.”

‘We need to transform schools from teaching places into learning places’

Tom Carroll, who leads the National Commission on Teaching and America’s Future (http://www.nctaf.org/who_we_are/commission_staff/tom-carroll.htm), speaking from Virginia, USA, teased out the changes required for teachers. “I think teaching may be the last solo profession in the world,” he said. “There is no other profession that we don’t ‘do’ in team environments. Health care teams, fire and rescue teams, anything you can think of is being done by teams, so what we need are learning teams.”

Teachers had different skill sets, he pointed out: “Some people are really good at the information transfer, some people are really good at applied problem solving and some people are creative and some people are really good at real-time assessment, that assessment issue.

“We need to transform schools from teaching places into learning places. And you don’t do that one teacher at a time; you do that by creating learning teams, that are like health-care teams, that have a differentiated composition of knowledge and skills to create a learning environment. And by the way, the students are members of the learning team. They are not served by the learning team; they are active, participating members... We’ve got teaching factories; we need learning organisations.”

The role of learners had been raised at an early stage by Sister Margaret Wong, principal of St Paul’s Convent School, Hong Kong (http://en.wikipedia.org/wiki/St._Paul's_Convent_School). “I would like to involve the students,” she said. “We are the ones saying what sort of education they are getting, the curriculum, what they should learn and so on, but what do they think about their own learning? Because now with the technology they have lifelong learning and personalised learning so I would like to involve students as well as teachers.”

‘In order to be creative you have got to have nothing to do, to dream...’

She also warned that technology might be filling too much of students' time. "In Hong Kong technology engaged students so much that they no longer had any free time to think, to be creative," she said. "I think that in order to be creative you have got to have nothing to do, to dream, and just wander along the sea shore. That will make people more creative. We have to give ourselves more time and space to be creative."

The challenge of reforming a 'legacy' system – like the qwerty keyboard would become if it was overtaken by voice technology – was raised by strategy designer Riel Miller (<http://www.rielmiller.com/>) "Now we don't even take the legacy approach of reading, writing and arithmetic," he said, "bringing us back to the question of indigenous learning - learning by doing, learning inter-generationally, learning by the challenges in the world around us, ambient signs, ambient information, and really drawing again outside the legacy system."

While he thought that discussion of how to transform a legacy system had "tremendous merit" he asked, "Could the legacy system be impeding the development of the non-legacy system? One of the reasons perhaps that the legacy system does not succeed in reforming is that it's inherent to the nature of that legacy system to train people in a particular way, to form them in a particular way and to create a particular relationship to knowledge and creativity which is actually inimical to what we have been discussing as the alternative."

"Any real change takes generations - the old system has to die"

"Any real change takes generations," warned Promethean vice-chairman and founder Tony Cann (<http://www.prometheanworld.com/server.php?show=nav.16846>). "The old system has to die. I think we shouldn't expect this change to come quickly... we need to plan for the change to come." He said that he had spent his life trying to invent new things: "What amazes me is that you can create something that becomes ubiquitous

but at the beginning very few people can see it. Back in 1992 I was shown email – I thought, 'What on earth would anybody want that for?'

"It's about experience and flexibility of mind. Flexibility of mind isn't enough - you have to have the experience as well. We need to develop young people who can understand what is happening beneath things and have the flexibility and the imagination to be able to see where they go."

The importance of demonstrating the effectiveness of reform to win political support was the concern of Promethean director of education Jim Wynn (<http://www.prometheanplanet.com/en-us/professional-development/best-practice/education-fast-forward/jim-wynn.aspx>). "If we look at the industrial school system, the way schools are set up they are designed for classes of 30-40 with the teacher in front," he said. "That's the way it is in about 60 million classrooms on the planet today."

"We haven't done a very good job in showing that if you 'do' education differently you can have returns which the politicians recognise and therefore find the budget to make things change. We talk about teachers not having the time, but if they use the technology they will have double the amount of time they have spare to do other things, like analyse marks and help individuals. But we haven't helped teachers develop those skills and take advantage of the technology which we now can't afford to buy because we haven't shown the return on investment, therefore the budget hasn't been created."

'Unless we can demonstrate return on investment we are going nowhere'

"And we all know that as a person is educated and leaves the education system the more educated they are the less they take part in crime, the more they take part in the politics of a country, they more they are interested in what is going on and they become economically active."

Economic growth was evidence of a successful, educated community, he continued. "Unless, as a group, we can show that we can actually improve education debate in the wider sense, we are not going to get the money from the politicians to do the things that we say we need to do. And in 20 years' time the money won't have been generated and we'll still be talking about classrooms looking like they were 20 years ago..."

"So how are we going to have citizens that are digitally literate, and therefore have an impact on society, and do we have to be creative to get the best out of education systems? Unless we can demonstrate the return on investment educationally we are going nowhere."

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Learn more about the Foundation Fellows, work of Education Fast Forward and join the debate. Visit:

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To be a part of the next debate or contribute discussion ideas email: education.strategy@prometheanworld.com

Education Fast Forward participants:

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Education Fast Forward fellows not present:

Jessica Colaço, Professor Yong Zhao, Professor Sugata Mitra, Haif Bannayan, Jenny Lewis



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