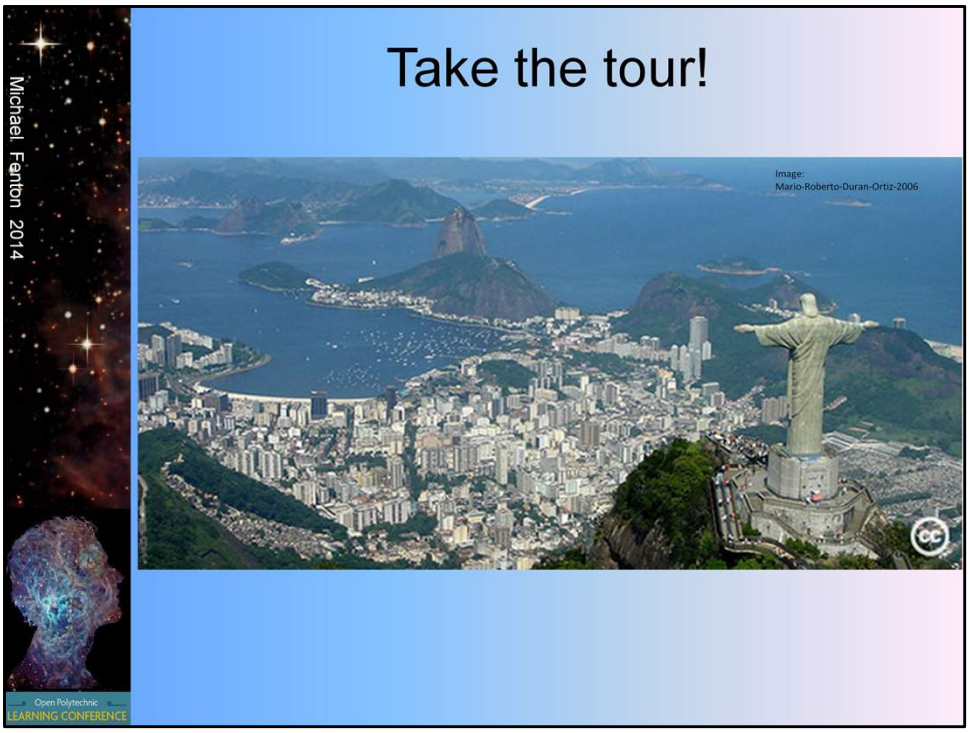
The image I created for the title slide suggests that we are separated from the reality outside of our heads.

The physical world that lies beyond the boundary of our senses is almost beyond understanding; at best our minds build a poor likeness of reality, a virtual universe that is unique to each of us.

Education is about bringing a little light into the darkness…even if it can only light up the mind.



Brazil, home to the 2014 FIFA World Cup. If you were to go on a tour of an unfamiliar city, each of us might focus on different aspects.

As tourists we may be interested in

- The people
- The architecture (technology)
- The culture / politics
- The geography (the lie of the land; is this feature truly significant or just a bump in the road? Perspective…)

As we go on this journey looking at enlightenment in education you might consider the places, people, technologies and times through these lenses.

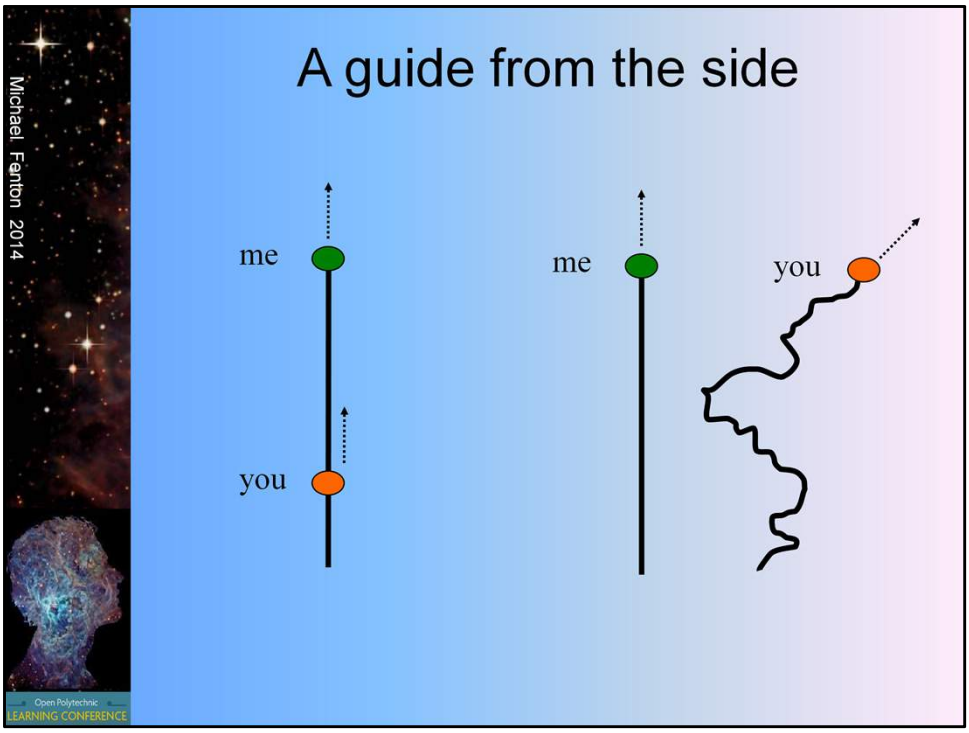
If you could stop and delve deeper, what would you want to know more about? Why?

As the first keynote address to start the three day conference, I thought I would set the scene for our other keynote speakers and presenters. I see that they will address in more detail some of the cultural, political or technological aspects of enlightenment in education.

This presentation paints with broad brush strokes, talking in generalisations. I could talk for at least an hour on whether science is really “western” or debate whether the Enlightenment was truly pro-European at the expense of other cultures.

Such discussions are beyond the time limits of this presentation, and it could be argued that many published discussions take too narrow a view that support particular agendas and interests.

In general terms then, lets us take a whistle stop tour through time and space to set the scene for our other presenters; you might identify with some of the people, some of the beliefs, some of the technology.



Putting this presentation together was a chance for me to share some ideas for you to carry on and develop on your own. Some aspects may stand out as more relevant or important than others.

So don't feel as though you need to follow me too closely, rather go your own way taking in some of the interesting sites I will point out along the way.

It would be interesting to see at the end if the key ideas you take from this were the ones I intended at the beginning!

A bit about me….past knowledge and experiences influence how new knowledge and experiences are integrated into the whole.

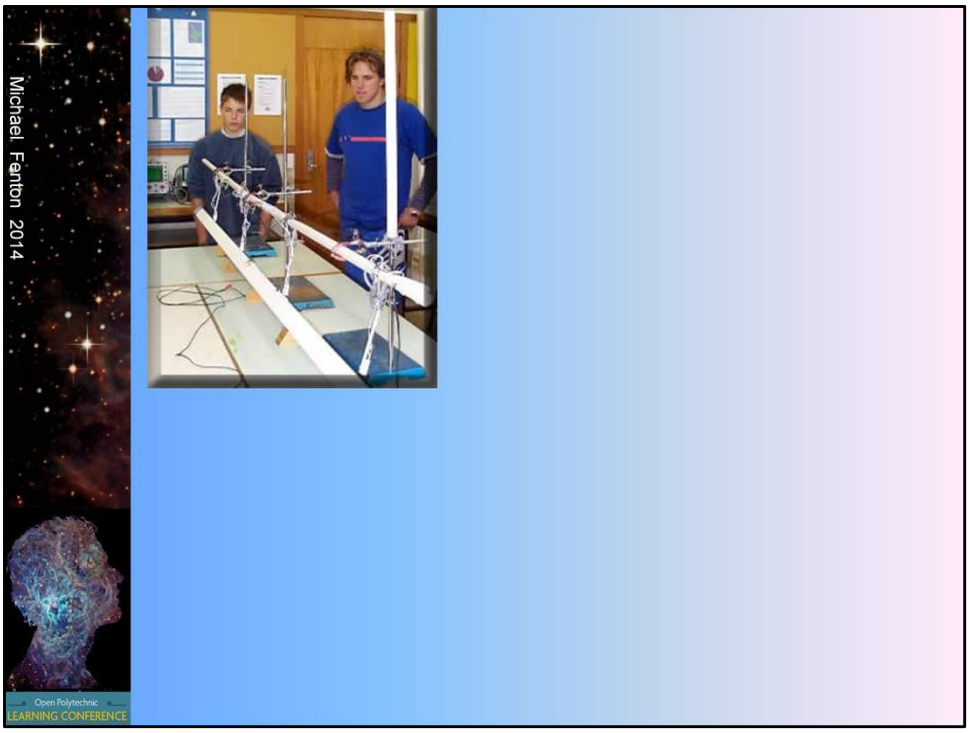
Perceptions of reality change; expectations from reality change

How I taught as a Secondary teacher was influenced by how I taught and carried out research at University.

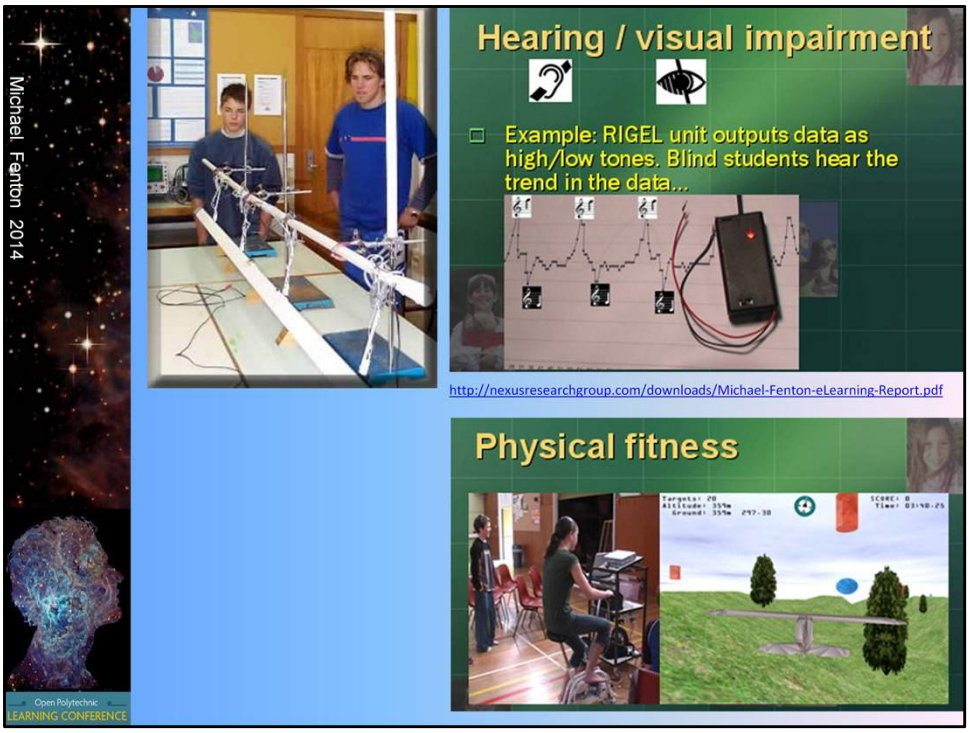
As a scientist I am a skeptic by nature…which has certainly influenced how I viewed some of the 'new ideas' in education about ICT and eLearning…but more of that later.

I have been fortunate to have participated in a number of activities and received some recognition related to these.

Nobody works in isolation though, so I have appreciated the opportunity to trial new approaches to teaching and learning, with the support of my students and colleagues.



Having a strong background in experimental research, including technical skills and equipment design, I wanted to encourage a hands-on approach to science; if the school could not afford equipment, we would make it ourselves!



Technology and Science were entwined and inseparable to me…I needed new technologies to help me gather data that I could use to ask questions about the world around me…one supports the development and improvement of the other.

To help my students I invented the software, firmware and hardware for the pocket-sized RIGEL device; the Real-world Interactive Games and Electronics Link.

RIGEL enabled learning by using ICT that involved authentic and meaningful interaction in the physical world, as opposed to learning only in the virtual world.

Although I was a confident user of ICT and used eLearning strategies, I was still skeptical of some of the claims in the education sector that suggested a major transformation in learning was on the horizon…or had already occurred.

Subject of a Ministry of Education eLearning Fellowship research report; http://nexusresearchgroup.com/downloads/Michael-Fenton-eLearning-Report.pdf

Using TV shows to capture interest / ask “is that even possible?” / or “how would that work?”;

Becoming typecast at the Open Polytechnic with my TARDIS and Dalek at home!

https://www.youtube.com/watch?feature=player_embedded&v=HgskEj7pNO4

So what inspired me to train as a scientist?

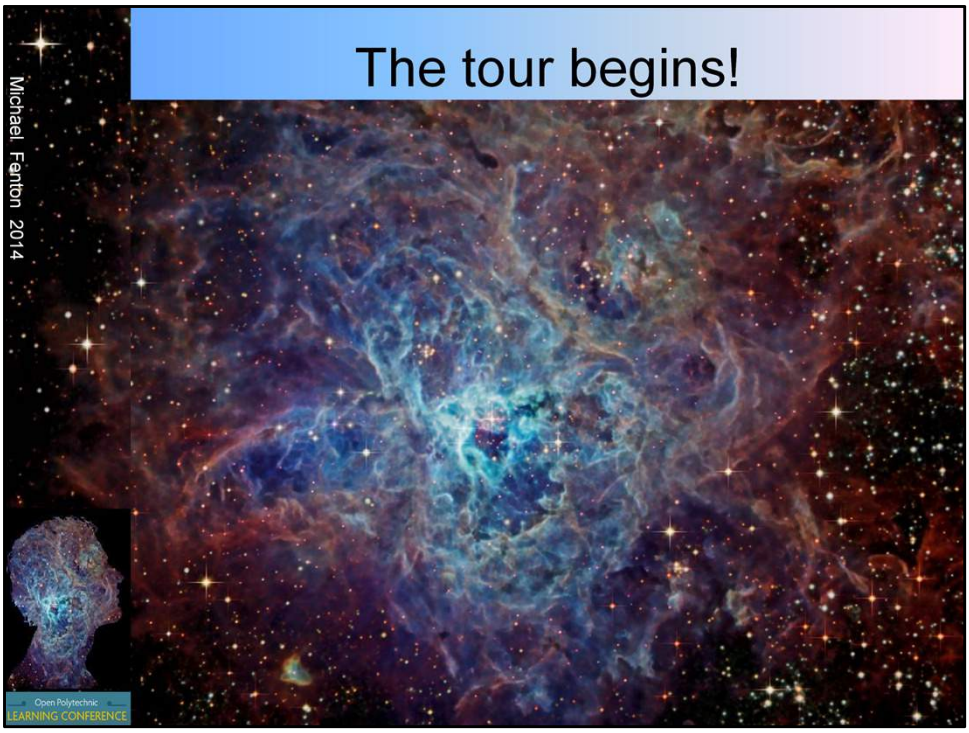
My interest in science and technology began at an early age.

Not surprisingly perhaps, cold winter nights in London as a child were passed by watching a little TV.

Scientists were athletic, handsome, and heroes! Not a nerd in sight!

Late 60's sci-fi inspired many children to become engineers/scientists.

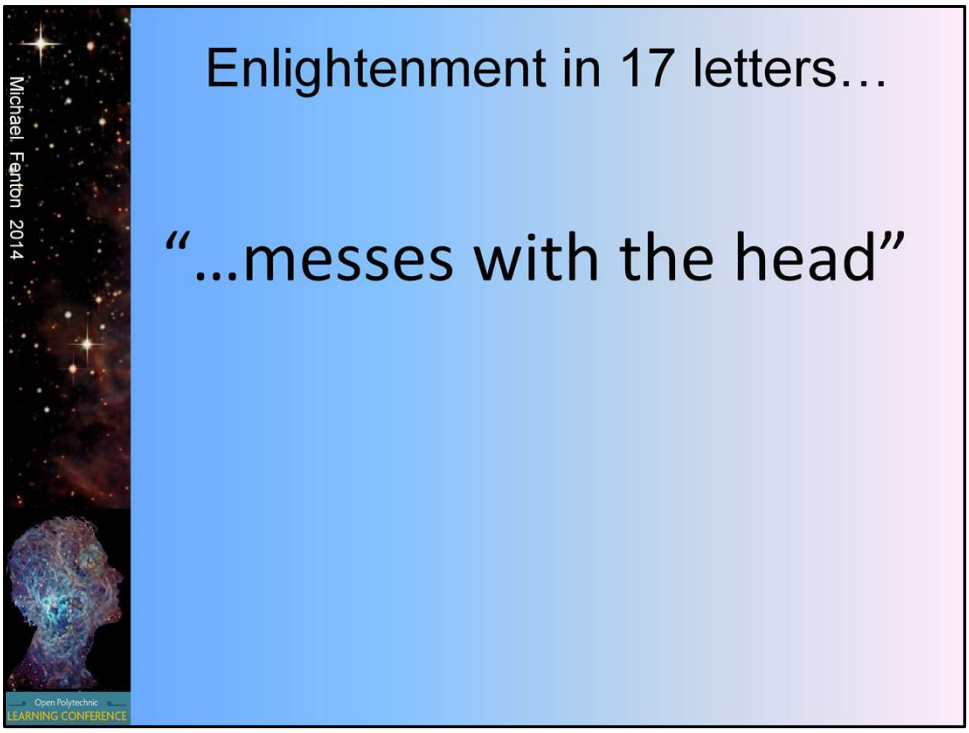
Where did science come from? What is the link between science and enlightenment? It must be time to start our tour…


The tour begins!
Michael Fenton 2014
Open Polytechnic
LEARNING CONFERENCE

What does ‘enlightenment’ mean?

This talk specifically covers just the second part of this definition. I am not suggestion that the concept of enlightenment belongs to one group, or occurred just once in time.

However, our existing education system, including our Polytechnic as part of a wider tertiary system, can be traced directly to the Enlightenment movement.



Mark Nichols said that teaching (enlightenment) messes with the head (mind).

“This year’s conference theme is whakamārama. In its verbal form whakamārama means literally to illuminate, explain, account, clarify, and elucidate. To whakamārama is to bring light to something, to enlighten. It is in this sense that whakamārama is one of the three pillars of the Open Polytechnic Ako strategy.

Enlightenment is a central outcome of tertiary education. Enlightenment is concerned with providing intellectual light, instructing, and imparting knowledge. It is this that makes education, education; enlightenment transforms the individual beyond just providing new skills, or having received training. Enlightenment transforms people, right across tertiary activity.

Tertiary education messes with the head. Done well, education changes the way its graduates see the world. Education broadens perspectives, challenges assumptions, hones discernment. Education can achieve these outcomes at any level of the Qualifications Framework. A graduate of an electrical engineering programme can never look at household wiring in the same way again; they’ve been enlightened. A graduate of business cannot help but think of business opportunities in the context of learned frameworks; they’ve been enlightened. A successful study skills learner is likely to write an essay using the approach they learned, and is likely to be acutely aware of where they may be taking shortcuts; they’ve been enlightened.

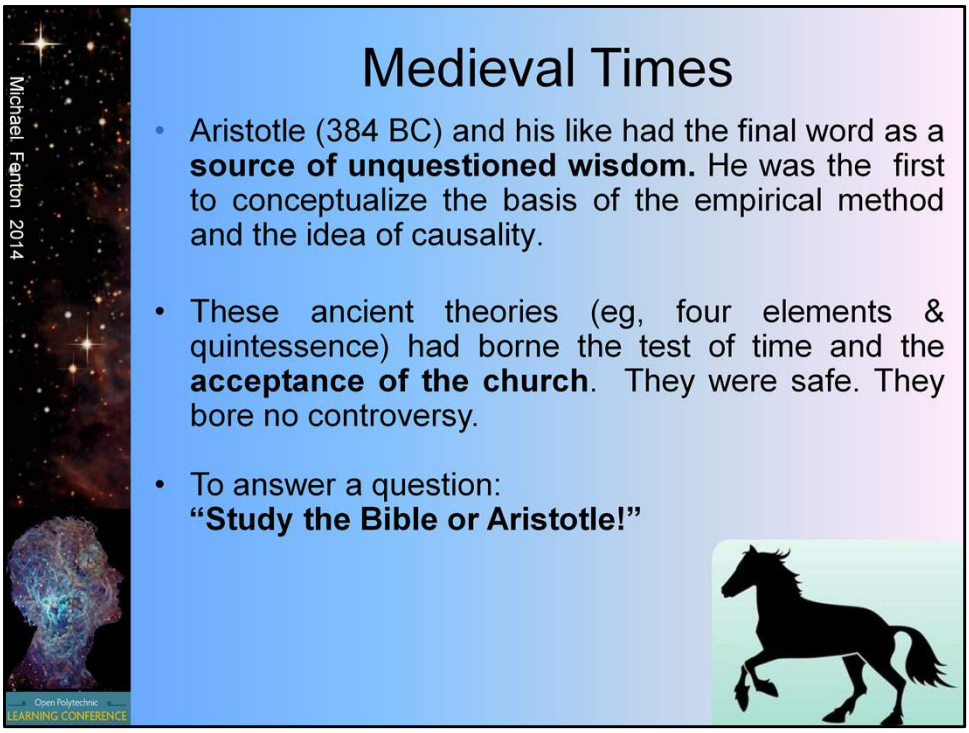
Enlightenment is a term used to explain that how you think, not just what you think, has changed.

There's an important educational theory dealing with enlightenment, that of transformative learning (espoused by Jack Mezirow). Transformative learning is defined as "The process of learning through critical self-reflection, which results in the reformulation of a meaning perspective to allow a more inclusive, discriminating, and integrative understanding of one's experience" (Mezirow, 1990, p. xvi). Transformative learning theory recognises that learning is more complex and enduring than is implied by the terms comprehension (knowing) and cognition (thinking). The theory is a fascinating one, and it makes both intuitive and empirical sense.

So, education enlightens. Of course, the actual Wattage of enlightenment can vary from person to person, and from course to course! Our challenge is to design our ako such that we do more than fill heads with knowledge. Our objective, in fact our responsibility, is much, much greater: we transform thinking.

I'm certain you'll find our keynotes and presenters to be examples of enlightenment as our conference unfolds. May you be inspired, transformed, energised by the Open Polytechnic staff conference 2014!"

Mark Nichols
Executive Director, Education Design Services.
Open Polytechnic



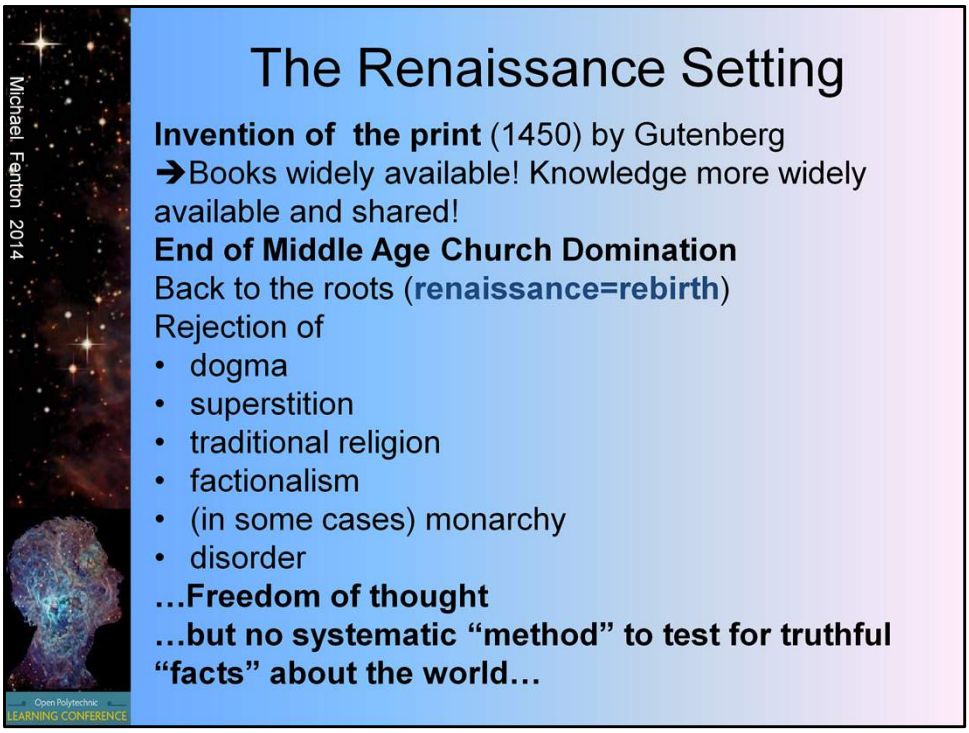
The lack of printing presses meant information, even if it was incorrect, was in the hands of a few.

The majority had no access to the information that was written and could not read it even if they had it.
(This theme pops up again later!)

Printed works were read to the masses via an 'interpreter'.

Even an argument about how many teeth a horse has was settled by consulting the accepted wisdom in texts rather than checking with reality and simply opening a horses mouth!

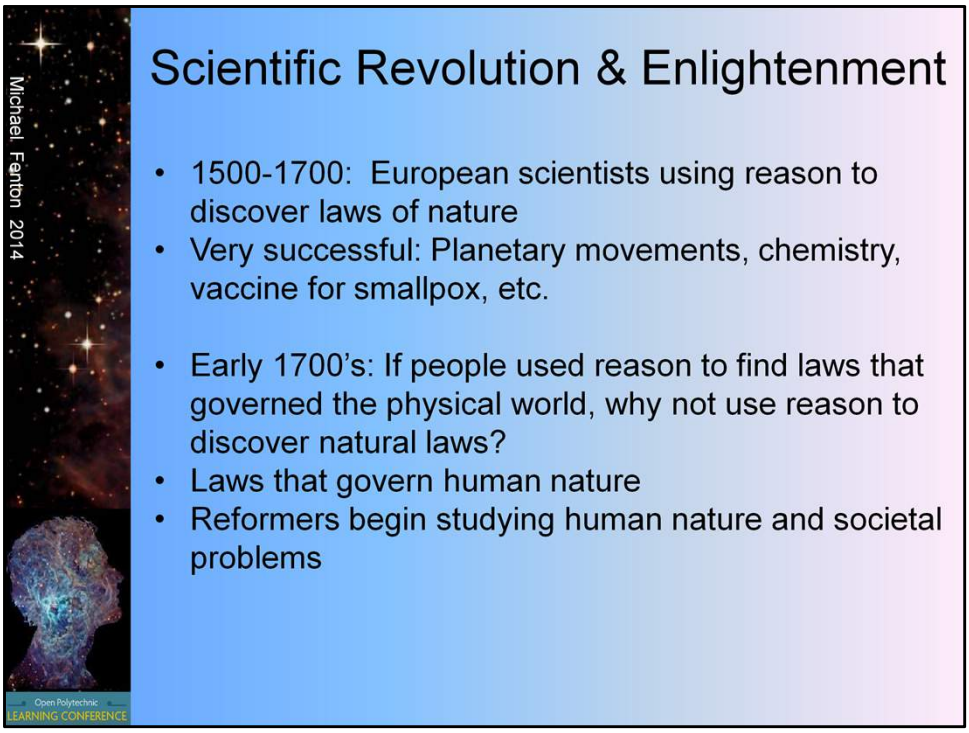
The Dark Ages in Europe were a time of the Inquisition, a belief in magic, and unquestioning faith



With the printing press came access for the masses to information…
So we had the three R's
Renaissance, rebirth, rejection.

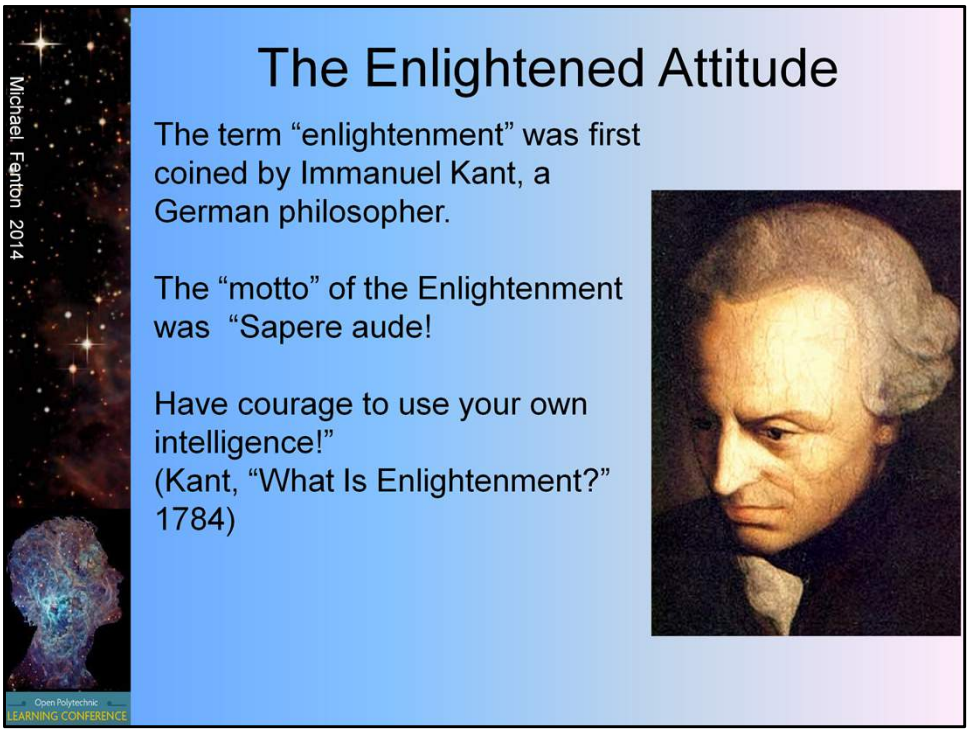
But to reject most 'accepted wisdom' or tradition simply left a vacuum behind.

How could societal questions be answered without creating other inequalities or another Dark Age?



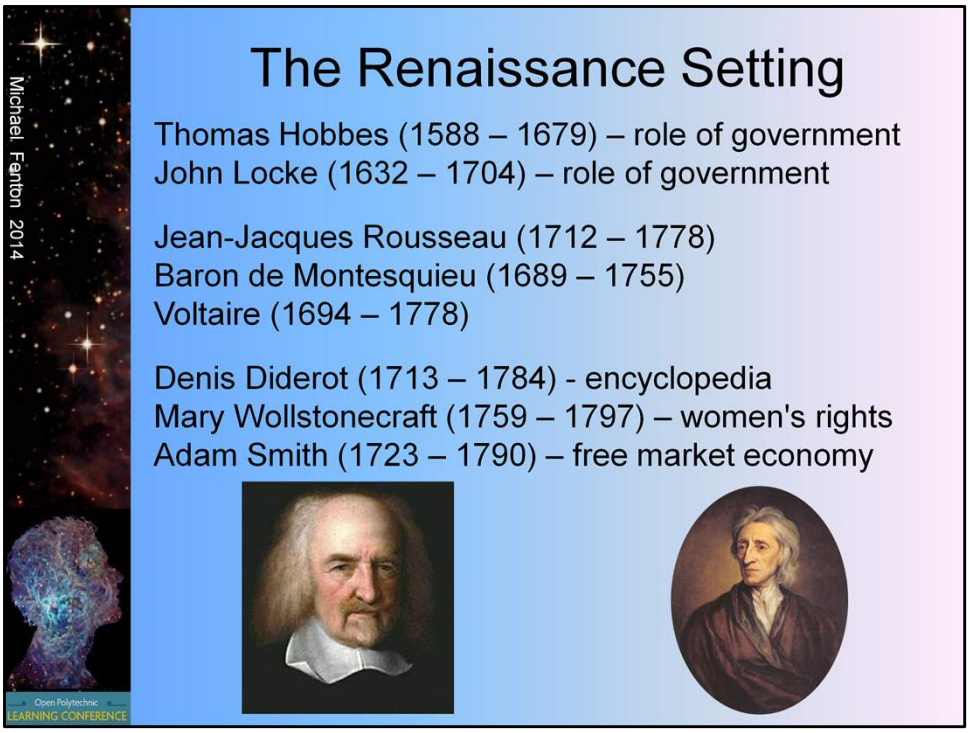
The Scientific Revolution had shown a way…an age of reason and logic had dawned.

The era known historically as the Enlightenment marks the intellectual beginning of the modern world we know.

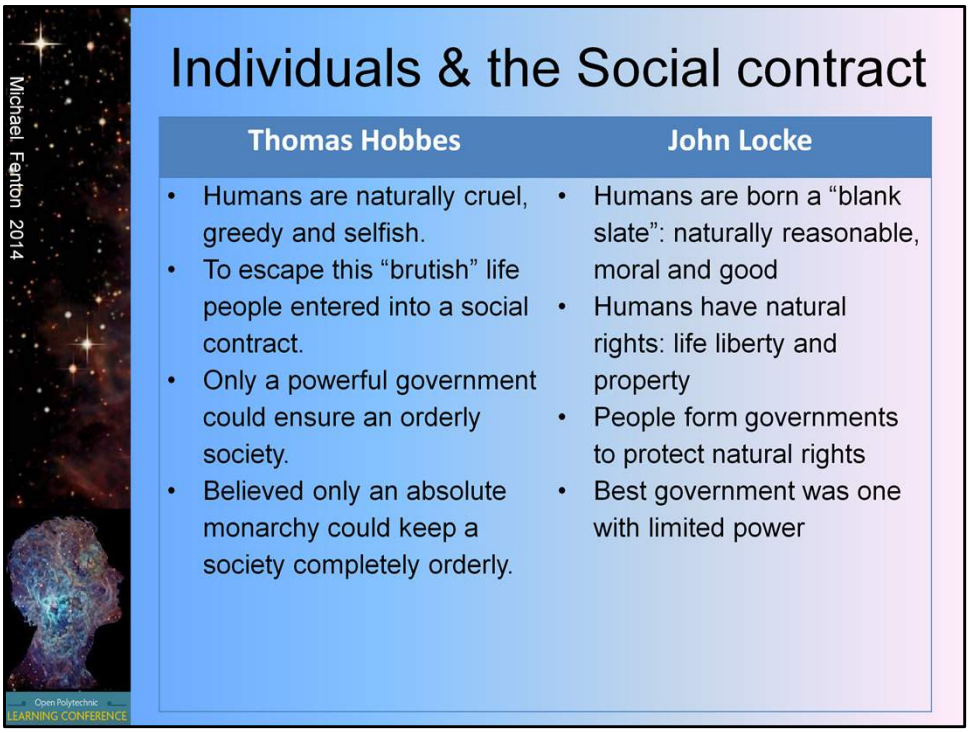


In other words, in order to be “enlightened,” a person had to think independently rather than simply follow society’s customs and traditions.

“Dare to be wise!”



Thomas Hobbes and John Locke



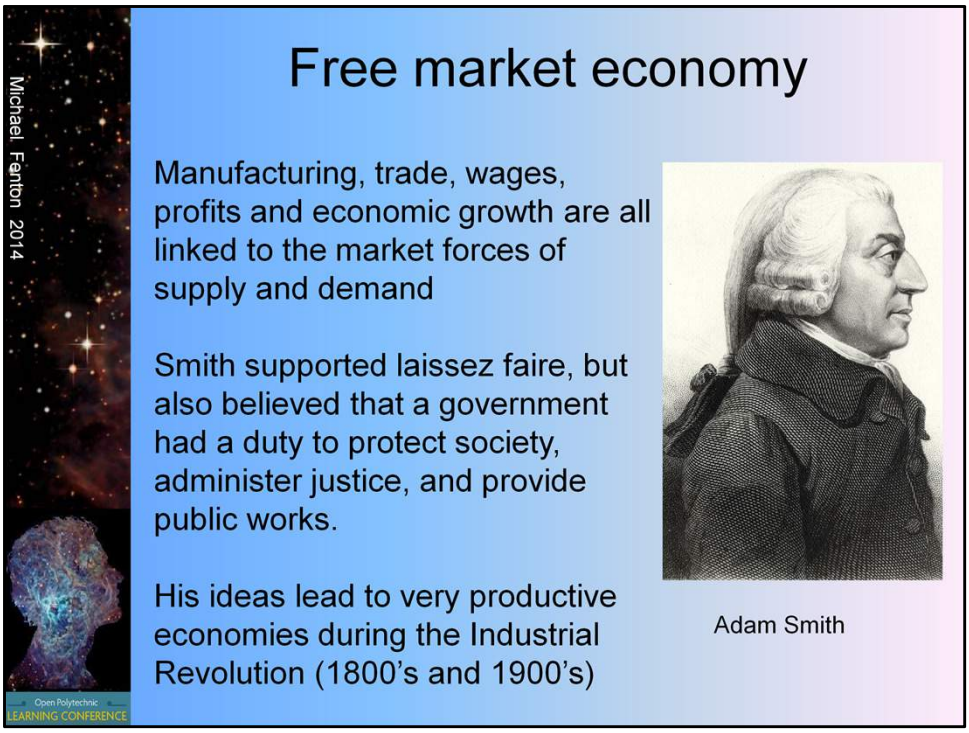
Shift in power relationship mirrored in classrooms?

To some extent students are trusted to self-govern, with a say in what they learn and how they learn.

A "learning contract" is todays equivalent?

BYOD's, collaborative works, etc

At the Open Polytechnic we encourage learning anywhere, anytime

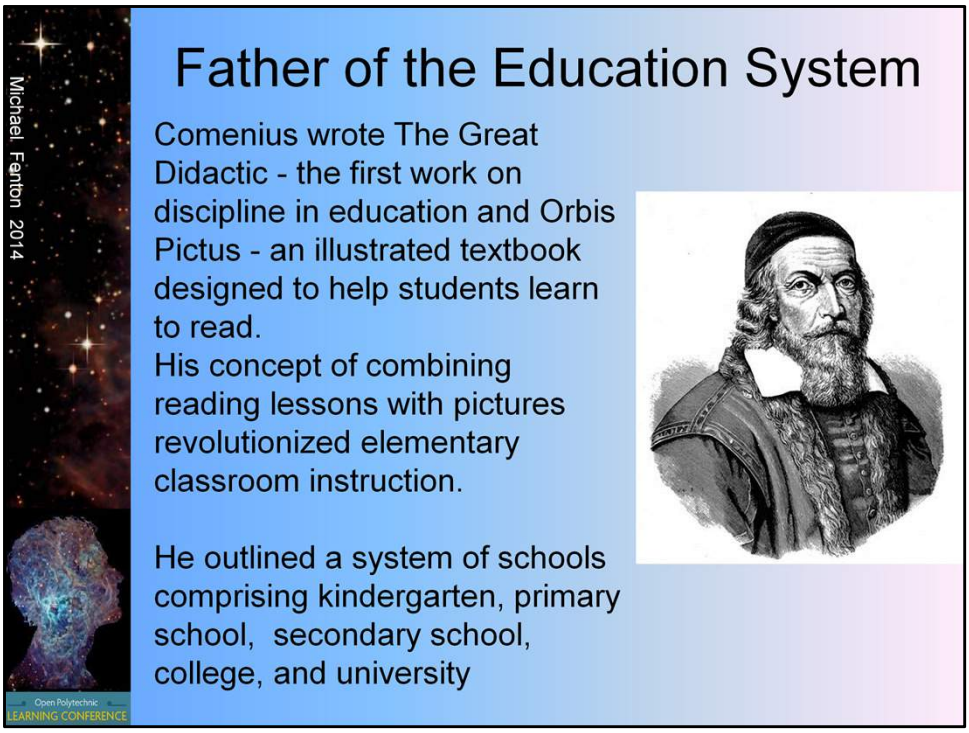


However with international companies such as Google, Apple, Facebook, etc there are risks that companies, rather than monarchies or government, are influencing conditions for workers outside of their home country.

Evidence of low tax payments means companies are not contributing the economies that provide the profits.

Research indicates trusting companies to "do the right thing" to continue in business is a misplaced trust.

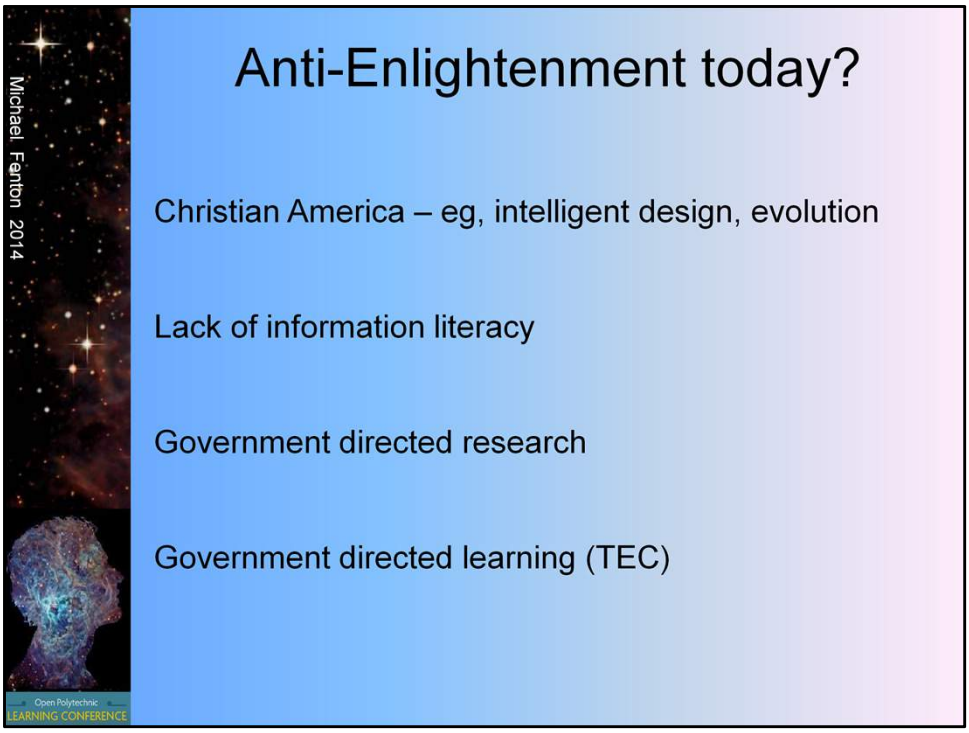
As Smith himself is said to have reported; "It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest."



And we finally arrive at the link between the Enlightenment period and our own time.

John Amos Comenius; 1592 – 1670

The first to introduce discipline to the education system



So did we 'arrive' at Enlightenment hundreds of years ago so now we can rest? The job is done? We are 'Enlightened'?

There are four examples here that indicate we still have some restrictions when it comes to education and knowledge.

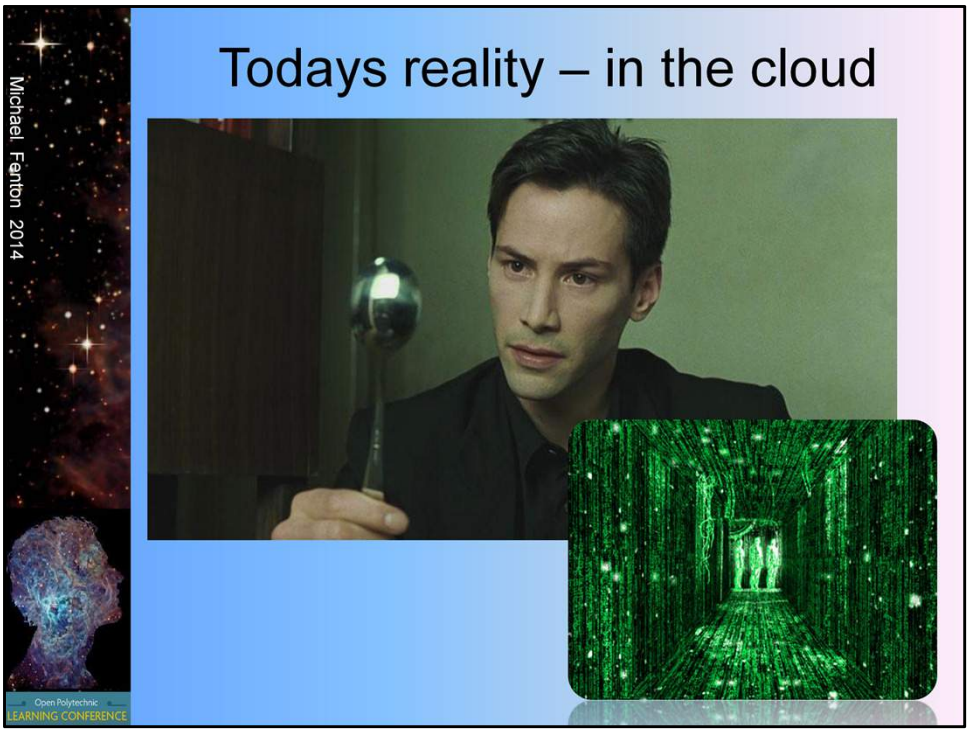
Some schools in some US states will not teach certain aspects of scientific knowledge.

While we have access to unprecedented amounts of information, teachers and students are for the most part uncritical consumers, bound to Google interpreting their search queries and delivery what some biased algorithm decides to serve you.

Universities are limited by what government will fund to research.

Polytechnics are limited by what government decides should be taught.

Reason and logic are still tied to emotional decisions and business (power) interests.

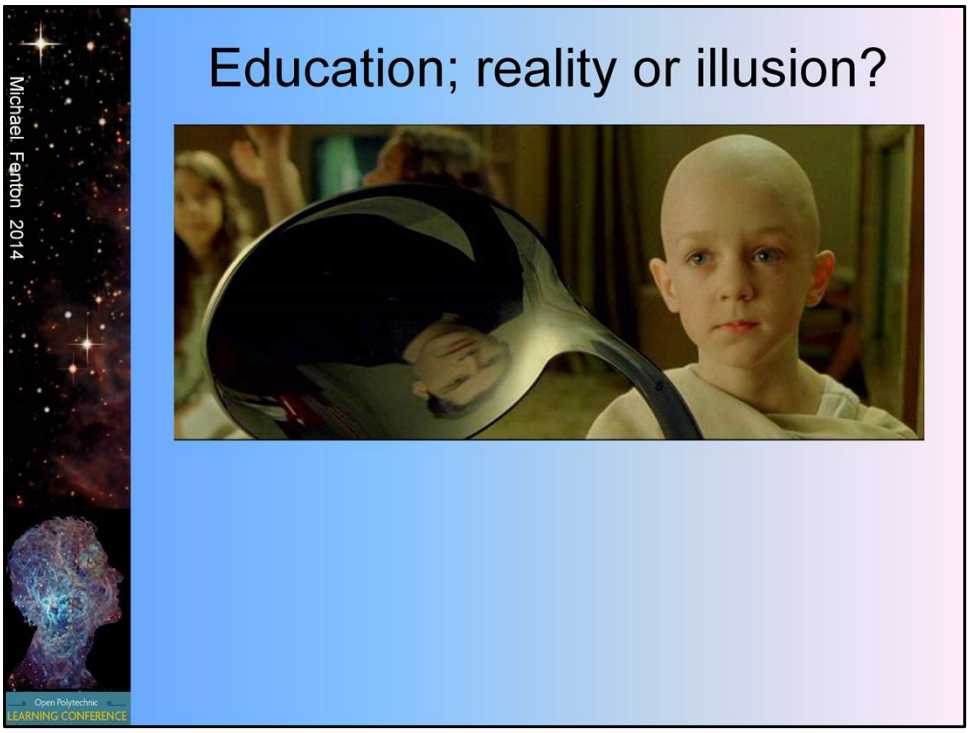


In the film “The Matrix” our hero is asleep with a computer interface plugged into the back of his head (we will come back to this later).

He is enlightened with the help of others to see his reality is nothing more than computer code being sent directly into his brain.

At one point he gets to see what his reality is made up of. This is not far from our physical world, a reality where we interact with clouds of electrons at the surface of objects.

All you know of the world is based on interacting with the cloud…and now we are placing our knowledge in another type of cloud.



“Try not to bend the spoon, for that is impossible;
Instead, try to realise there is no spoon.”

Wow! How many of us are tied to our assumptions about education and learning, perhaps the use of ICT and e-Learning in particular, and don’t realise it?

What if you could realise the truth about education and learning?

What would this truth be?

What could you do with this? In my case, I have taken the view of a “healthy disrespect for authority”

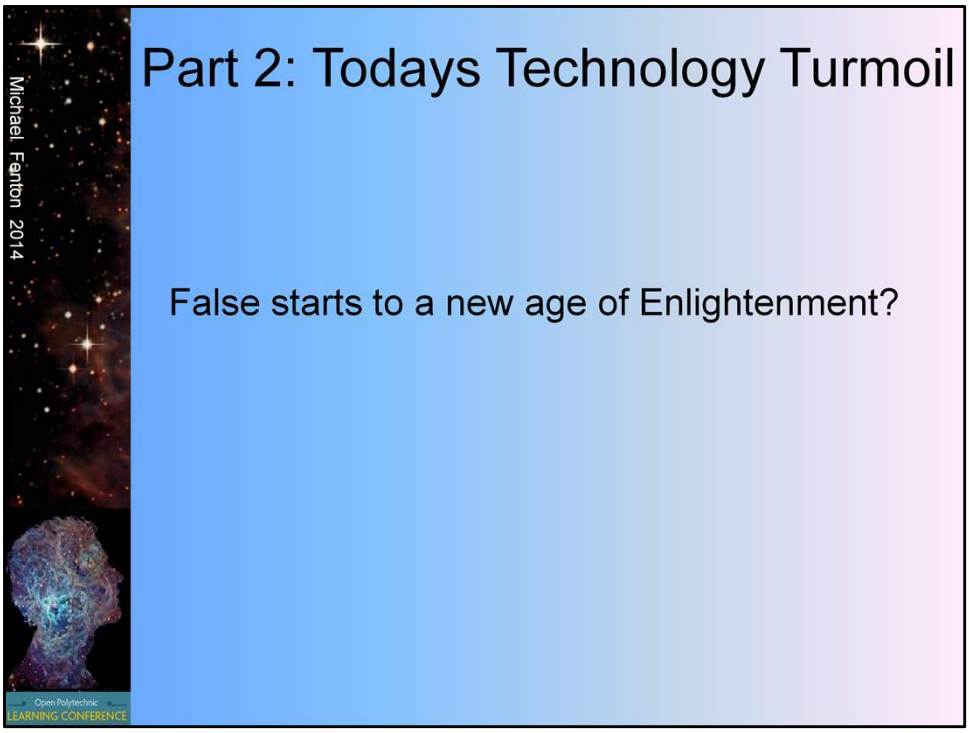
A skeptical view…that I need to be critical of “guru’s” and the “latest thing” in education.

With some of my tertiary students, the sudden revelations about themselves and their knowledge, the process of become enlightened through engaging with the course material, is not always a pleasant or passive one.

As sudden realisation that what you have been doing is ‘wrong’ or realising for the first time that certain beliefs need updating can be quite a shock.

This can result in students disengaging from the course, either thinking they are not good enough to continue or that the course material is ‘wrong’.

While we may be confident as teachers with updating our views and see enlightenment as positive and progressive, we need to be aware of our students who may see enlightenment as something more challenging and sinister.

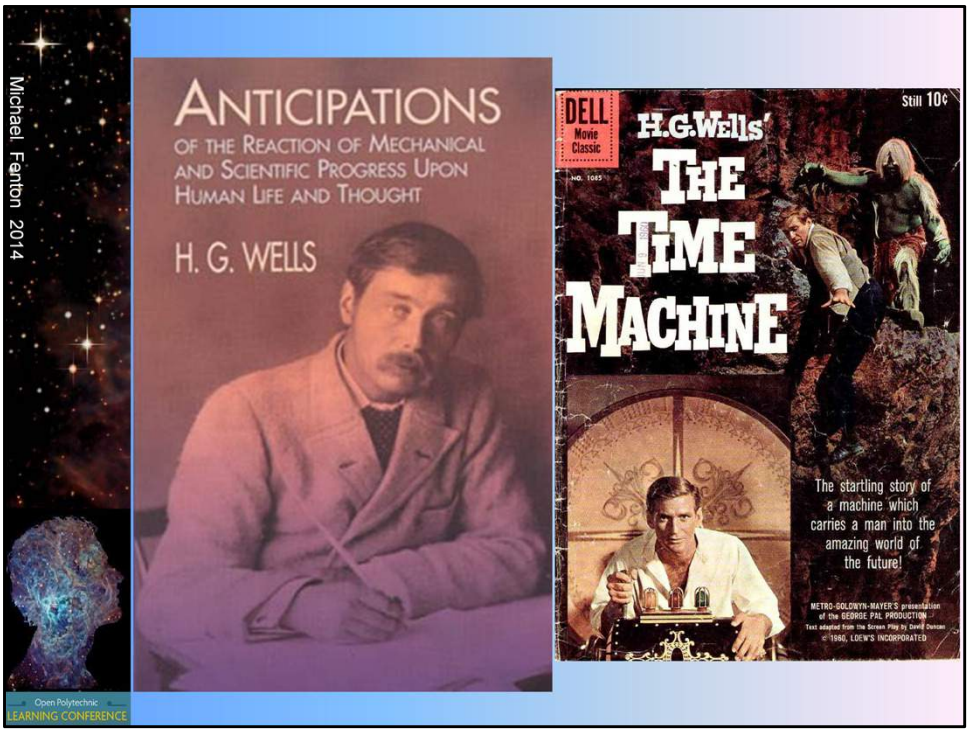


We have looked at where we came from.

Now to look at where we are.

I'm not convinced we are at a new age of enlightenment with web 2.0 or the Internet of Things.

Flipped learning, digital natives; fads or trends? Significant landmarks or bumps in the road?

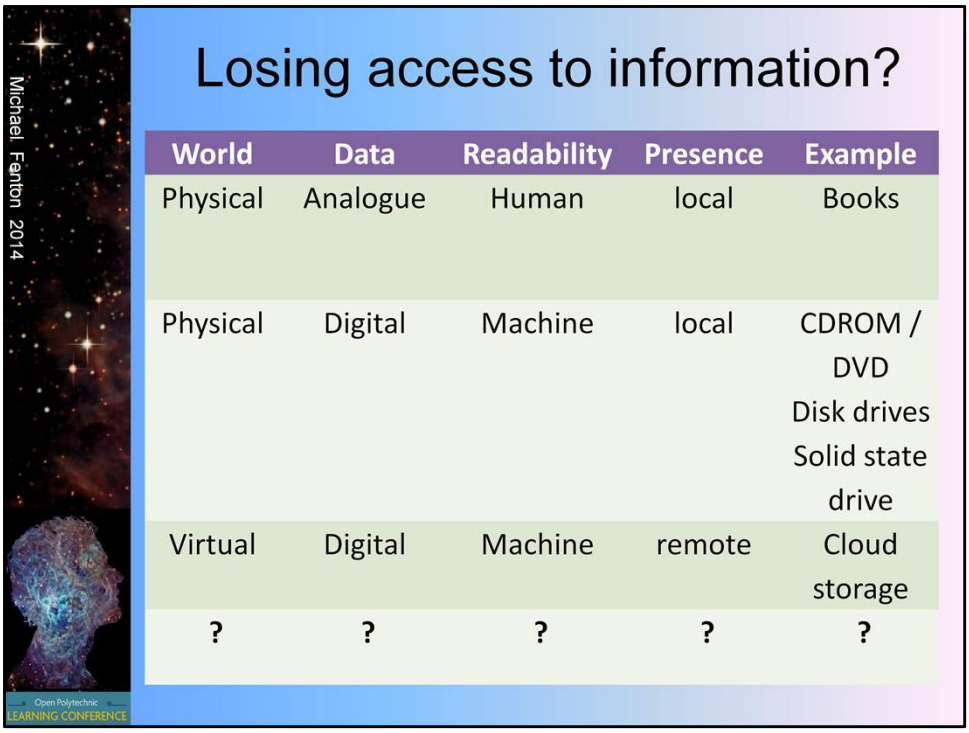


I recently re-read the Time Traveller.

Our 19th Century scientist goes far into the future, and at one point tries to read a book he finds, only to see it crumble to dust.

Humanity appears to have split into two forms.

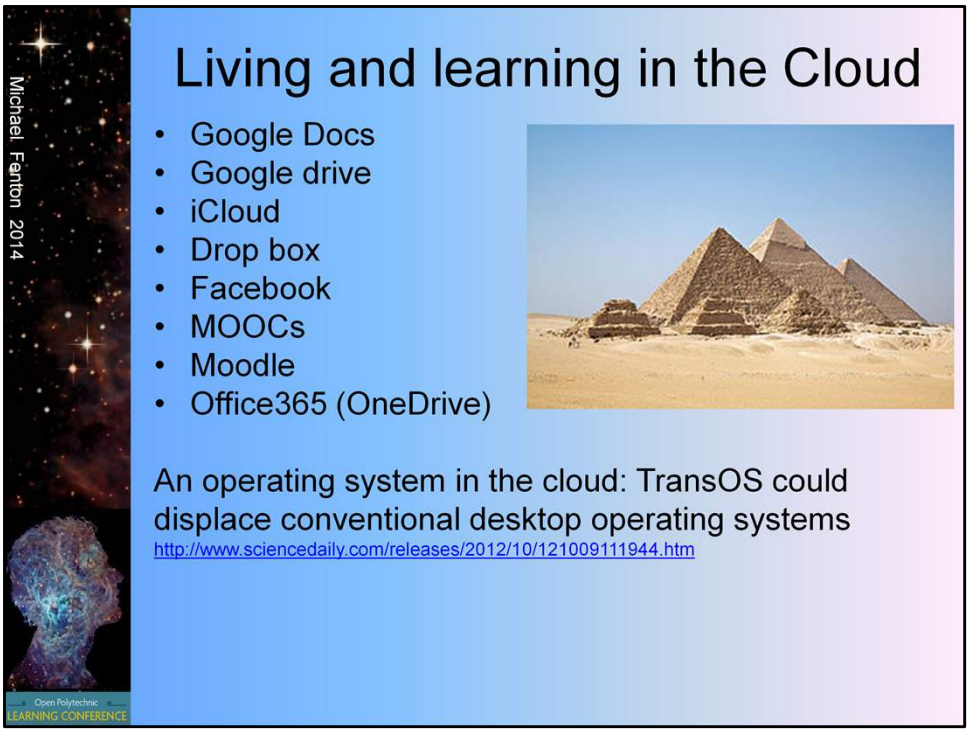
Where is todays technology leading us?



As we look across this table I have put together, what trends do we see?

A shift from physical objects to virtual, from human readable to machine, from locally stored information to information we can no longer say with certainty where it is stored.

Currently we appear to be losing access to information without needing to have an intermediary…a computer.
Are we going backwards, losing access to printed works we can interrogate without having to trust an 'interpreter'?



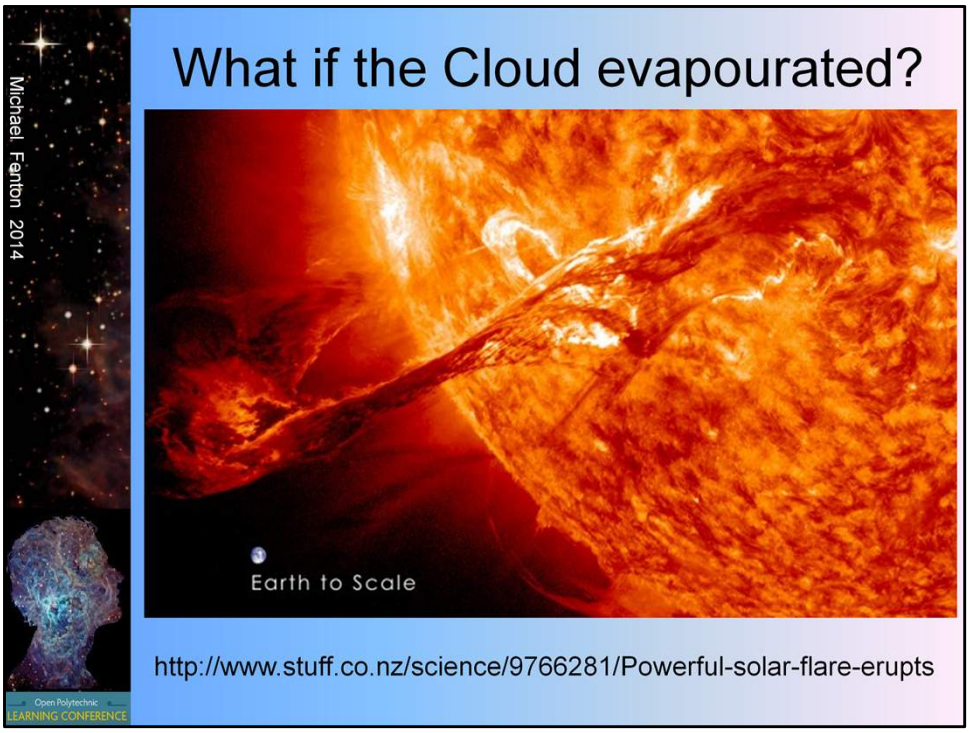
False sense of TRUST in new technology

A lot of trust in companies! Beware John Smith's comment!
"It is not from the benevolence of the butcher, the brewer, or the baker that we expect our dinner, but from their regard to their own interest."
Who benefits?

The pyramids are a stone-based technology that have survived for many hundreds of years. Our time traveller, or us, could attempt to read the hieroglyphs; what would we leave behind if something happened to our society?

Does if have to be a cataclysmic event, or could a natural event be enough to 'send us back to the stone age'?

http://en.wikipedia.org/wiki/File:All_Gizah_Pyramids.jpg



The sun will at times send out enormous flares of plasma and radiation toward Earth. These flares interact with the Earths magnetic field and energise the atmosphere.

And any wires also become energised…but overloaded and burn out.
Satellites are also affected (GPS, etc)

Power grids will fail, anything connected to the power grid will most likely burn out.

1859 Carrington Event - http://en.wikipedia.org/wiki/Solar_storm_of_1859
Telegraph systems all over Europe and North America failed, in some cases giving telegraph operators electric shocks.[7] Telegraph pylons threw sparks.[8] Some telegraph systems continued to send and receive messages despite having been disconnected from their power supplies.[9]

http://science.nasa.gov/science-news/science-at-nasa/2014/23jul_superstorm/

A similar storm today could have a catastrophic effect. According to a study by the National Academy of Sciences, the total economic impact could exceed $2 trillion or 20 times greater than the costs of a Hurricane Katrina. Multi-ton transformers damaged by such a storm might take years to repair.

"In my view the July 2012 storm was in all respects at least as strong as the 1859

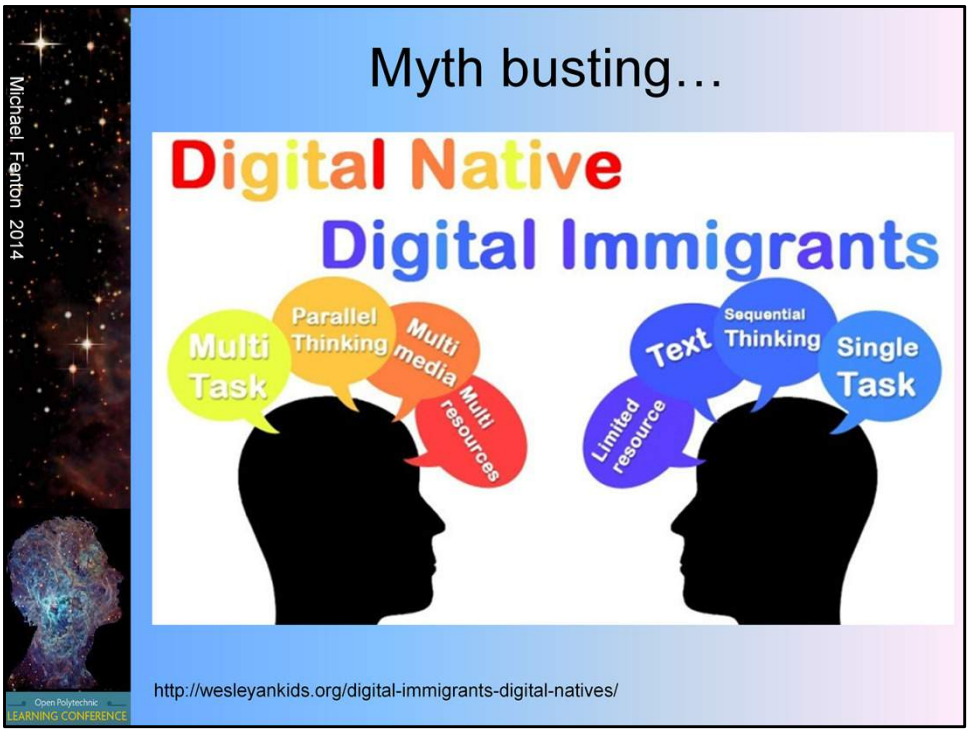
Carrington event," says Baker. "The only difference is, it missed."

In February 2014, physicist Pete Riley of Predictive Science Inc. published a paper in *Space Weather* entitled "On the probability of occurrence of extreme space weather events." In it, he analyzed records of solar storms going back 50+ years. By extrapolating the frequency of ordinary storms to the extreme, he calculated the odds that a Carrington-class storm would hit Earth in the next ten years.

The answer: 12%.

"Initially, I was quite surprised that the odds were so high, but the statistics appear to be correct," says Riley. "It is a sobering figure."

www.extremetech.com640 × 400Search by imagePage by Mr Seb - A solar flare captured by the Solar Dynamics Observatory, with Earth for scale

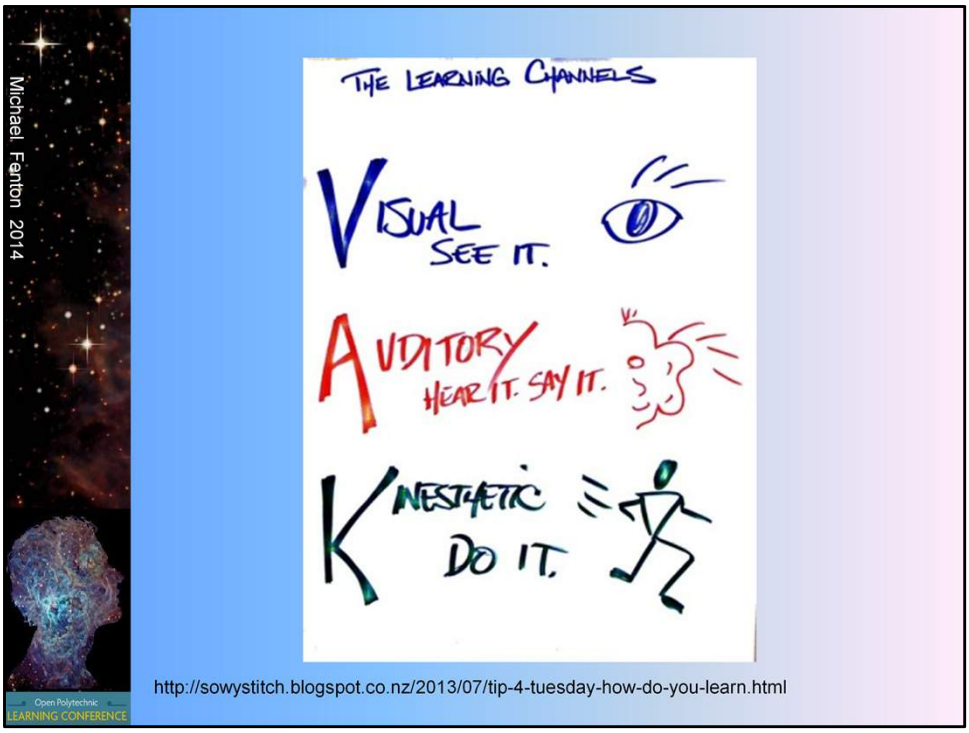


False assumptions about USING technology

The term “Digital Native” and “Digital Immigrants” were first introduced by Marc Prensky in 2001 in his work “Digital Natives, Digital Immigrants.” An extension of this is those who were “born digital” – Josh Spear 2007.

This idea of Prensky’s has now been largely discredited; students do not think at ‘twitch speed’.

Yet Prensky still persists (2012) with notions of a ‘new context’



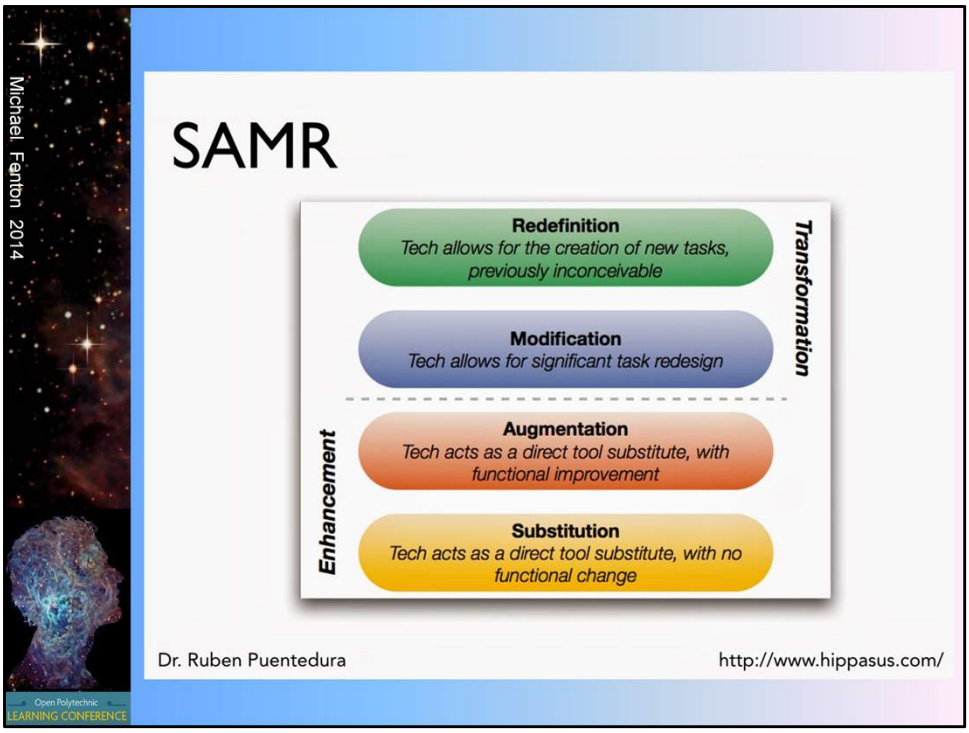
False METHODS and pseudoscience in education

Confusion that good teaching is about using a variety of modes/means to an end

Left-brain / right-brain myth debunked
http://www.sciencedaily.com/releases/2013/08/130814190513.htm

There is no "one" technique to improve learning – need to tame education complexity
http://www.sciencedaily.com/releases/2013/11/131121142303.htm

VAK learning styles debunked
http://www.telegraph.co.uk/news/uknews/1558822/Professor-pans-learning-style-teaching-method.html

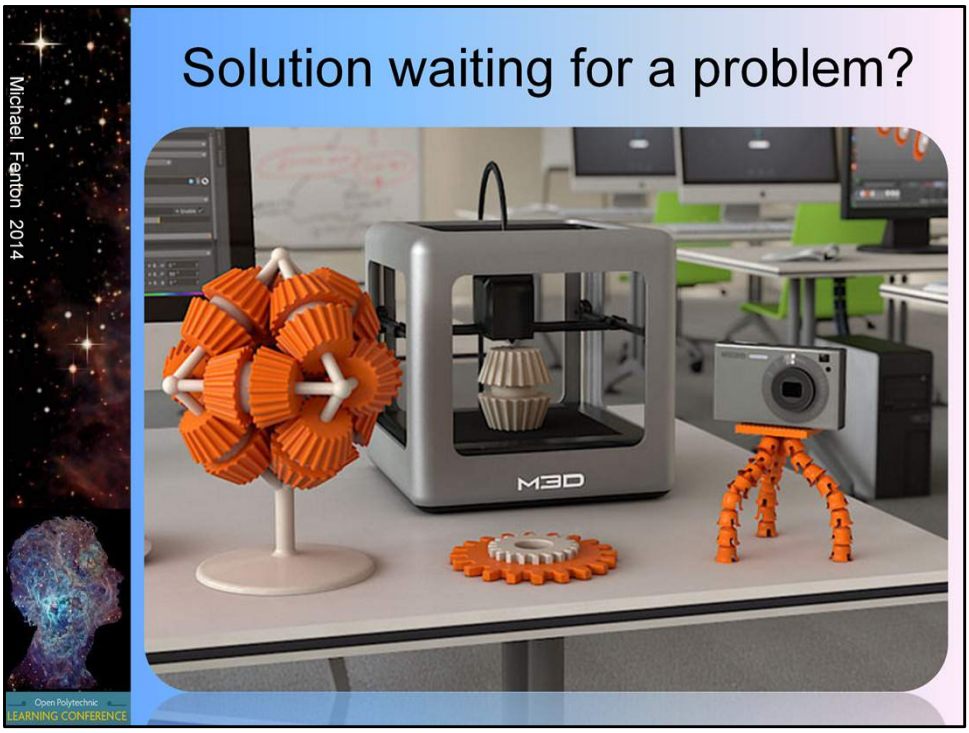


The Substitution Augmentation Modification Redefinition (SAMR) model, developed by Dr. Ruben Puentedura, offers a method of seeing how computer technology might impact teaching and learning. It shows a progression that adopters of educational technology often follow as they progress through teaching and learning with technology.

In schools we see a shift away from investing in computer suites for students to use.
Tablets and BYOD's shift responsibility to learner.

Textbooks are no longer supplied by school. Students buy write on notes.
Write on notes are being replaced with digital texts.
Homework is by subscription to online 'learning academies'

If the student has their own technology, and buys own knowledge, and has homework marked by a third party,
WHAT IS LEFT FOR THE TEACHER TO DO?

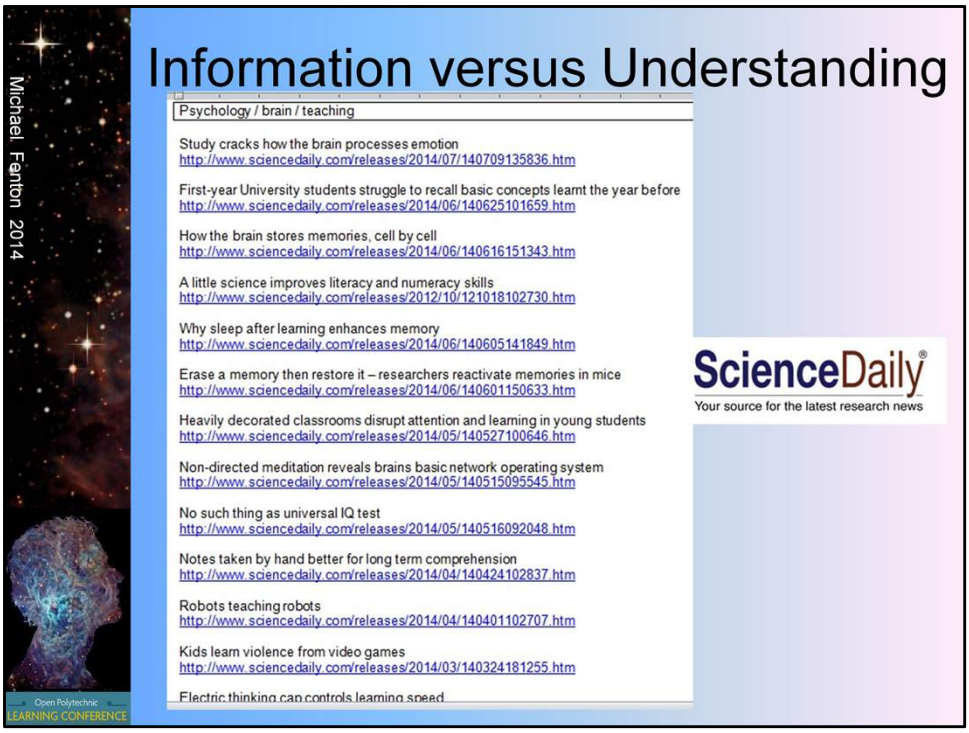


False SOLUTIONS to problems in education

Having the next latest gadget in education is not unusual;
Eg, Smart boards / interactive whiteboards
iPads
BYOD

They all have one thing in common; a lack of resourcing to provide teachers / lecturers with professional development training/time to get the benefit such technologies might bring.

3D printers could authentically serve to make a difference in education but it appears another expensive gadget for schools to want, rather than a clear demonstration of a need that could be met.



False assumptions about ACCESS to information

Schools generally argue that access to the web leads to knowledge and understanding.

However this is no different to standing in a library; you may have access to information but it takes an inquiring and critical mind to make sense of it. This takes time, something schools do not provide enough of.

One example of creating understanding given time;

I use the Science Daily website to follow trends in research about learning and teaching
AND
the other areas of science such as genetics or biology that I hold research qualifications in.

Focusing on trends in the discoveries, how they are made, the impact they may have on society, and the making my own links across disciplines has been a very powerful exercise in thinking.

There are 5 or so “hotspots” that will in my opinion have the potential to dramatically

change our society.

Since technology and science are entwined, calls by the Prime Minister and the government for more innovation to aid economic growth are unlikely to be stimulated using a school curriculum that is long overdue for a major revision in content and structure.

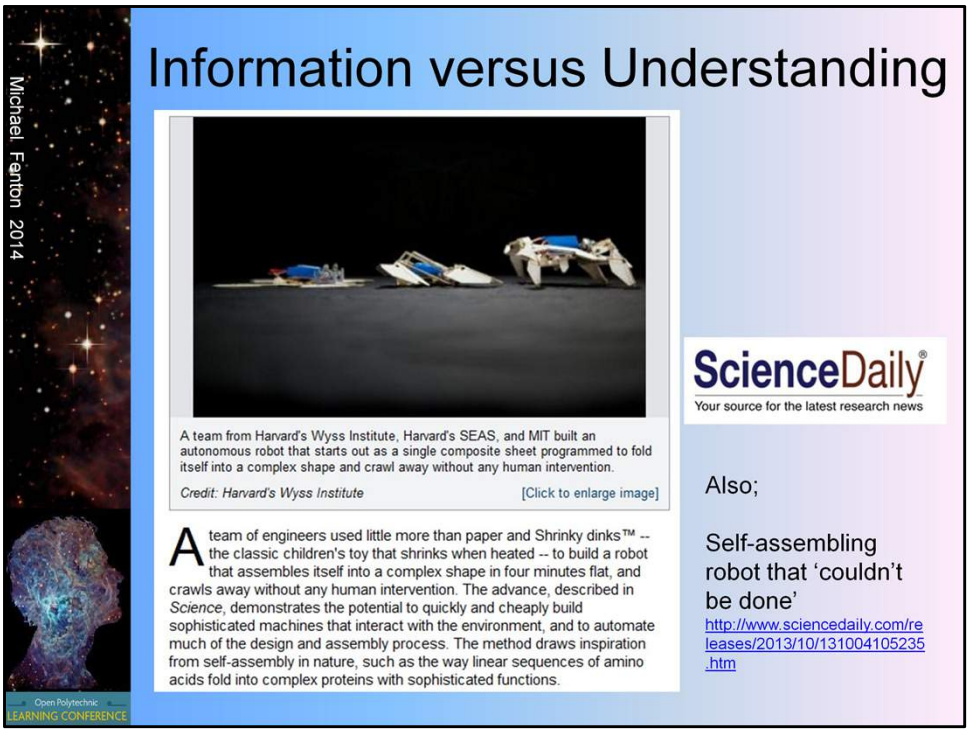
It is evident that our current knowledge about science and its relationship with technology is far more mature and advanced than the silos we still force our students into at school (chemistry, biology, physics).

It is not a matter of 'teaching everything', but recognising the current curriculum does not cover 'everything' as it is; it is a selection of concepts and knowledge that needs to be updated. The current system shows evidence of discouraging imaginative thinking by students; new findings in chemistry challenge the test tube approach, new findings in physics challenge the (still) Newtonian approach schools take, new findings in biology challenge assumptions about DNA and genetics.

This still leaves the open for discussion the obsession with teaching students that there is one 'scientific method', and that in fact schools rarely do meaningful practical work in science. There is clear evidence that the focus on assessment for the NCEA has had a negative impact on genuine student inquiry in science.

Once, not so long ago, if a student asked "Can we make objects invisible?" the answer was 'no'

Today, if a student asked me "Can we make objects invisible?" my answer is 'maybe…let's find out'



Since technology and science are entwined, calls by the Prime Minister and the government for more innovation to aid economic growth are unlikely to be stimulated using a school science curriculum that is long overdue for a major revision in content and structure.

Imaginative thinking, invoking new ideas that break with tradition and dogma, is showcased time and again on the Science Daily site.
All accessible on the web. Lots of information.

Yet many of these ideas would be rejected as 'wrong thinking' if presented in NCEA assessments.

Once, not so long ago, if a student asked "Can a robot build itself?" the answer was 'no'

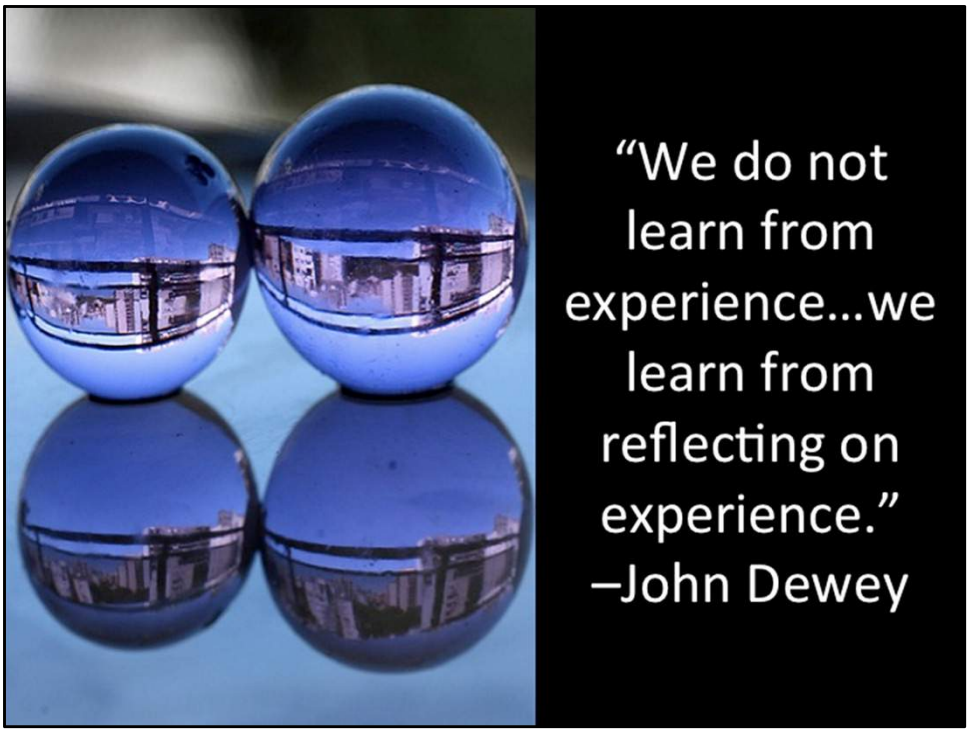
Today, if a student asked me "Can a robot build itself?" my answer is 'maybe…let's find out'

We have had a very quick look at where we are.
I'm not convinced we are experiencing a second period of enlightenment.
I'm not convinced the new information technologies are that significant. Yet.

Now I will share one version of what the future may hold.
ALL IDEAS FROM NOW ON ARE BASED ON EXISTING TECHNOLOGY.

I have made heavy use of the research summaries published on the Science Daily website.

For futurists, this may be somewhat of a shock as I make a controversial prediction of what the next big thing in learning may be!



Do we stop to reflect though? I'm not convinced we do.

I have attended a number of conferences where ICT and e-learning influence discussions, and some of the reasons given to adopt various technologies are rather shallow.

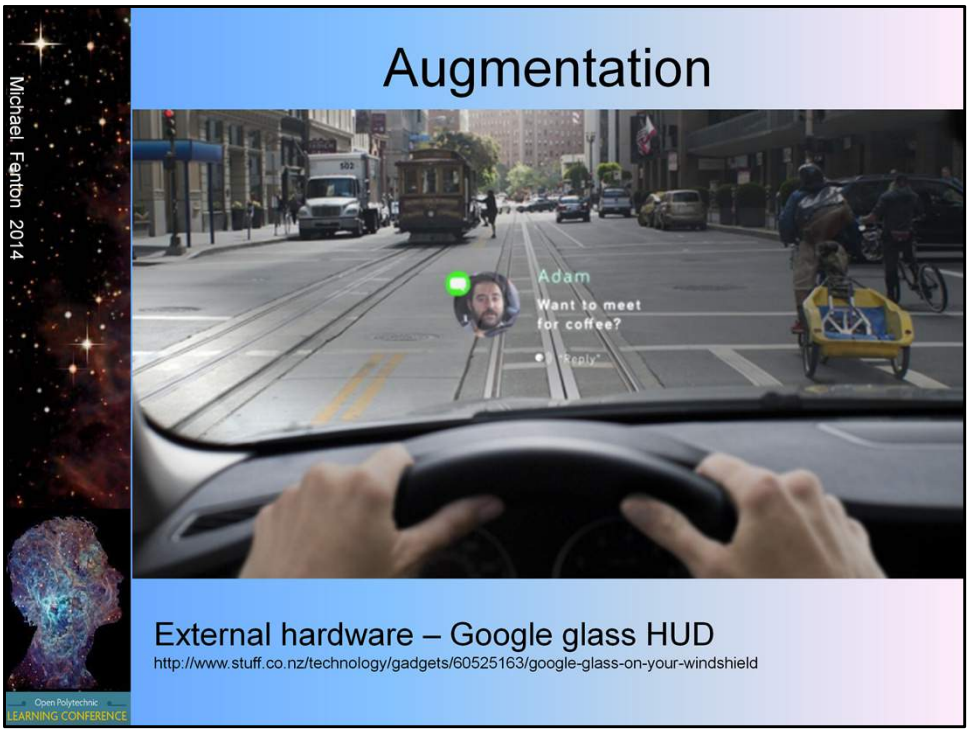
What are the downstream consequences for everyone having iPads at Primary School for instance? How green or sustainable is such a policy?

Indium tin oxide (ITO) for touch sensitive displays is of limited supply, disposing of Lithium ion batteries is an issue, etc.

A new device comes out every 18 months – why? What problem does this solve?

Let's look at some of the possibilities for the not-so-distant future…

[http://www.mjgds.org/21stcenturylearning/?p=582]

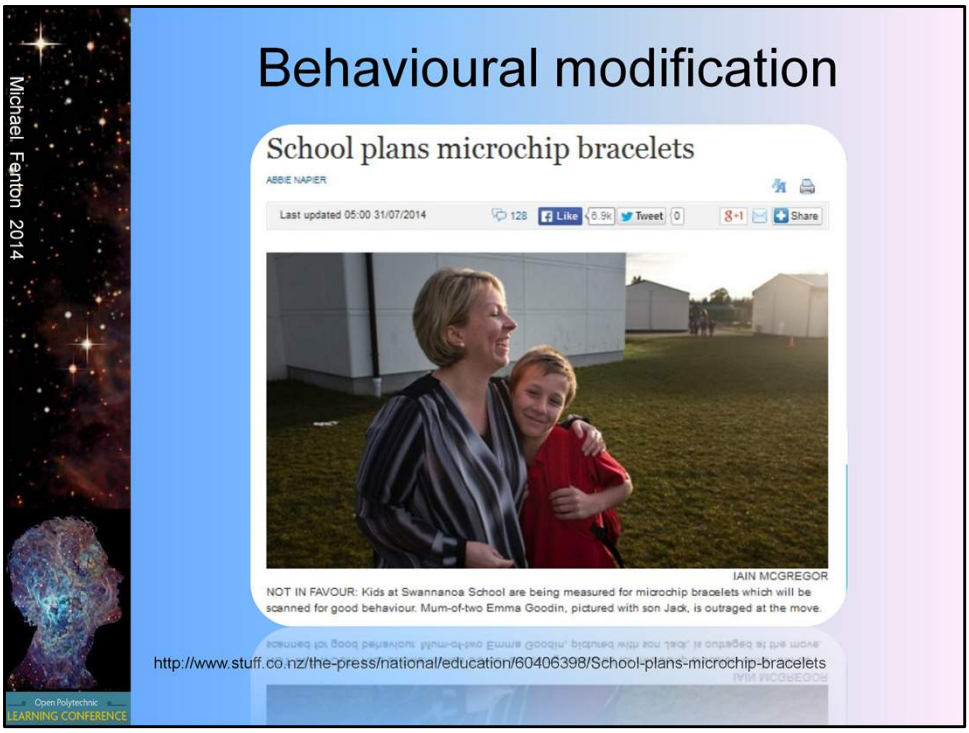


OK, first we have an example of wearable technology.

Forget your smart phone or tablet or SatNav.

Your glasses are now a computer interface. Not so sure it is a good idea to be distracted while driving

But at a boring movie, you could check your email, etc.

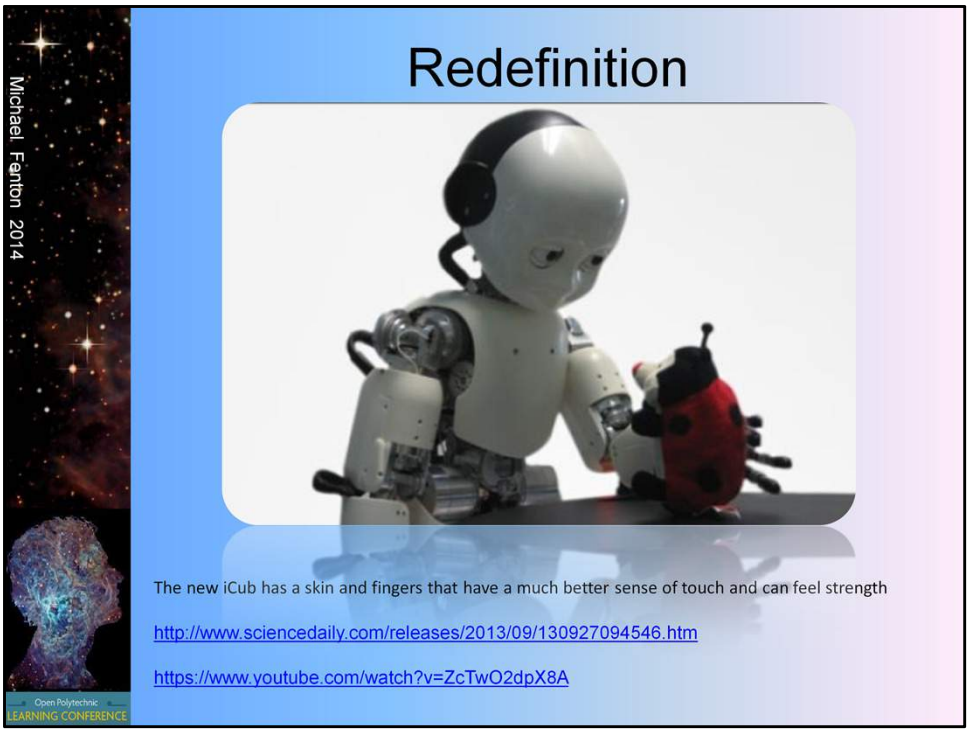


Here is a second example of wearable technology; a behaviour modification device. It replaces a ‘star chart’ idea to reward good behaviour.

But a $7000 for the school, I wonder how many textbooks that could have bought to aid learning.

How many hours of teacher PD?
How many courses in my Primary Science programme could teachers have completed?

This sets a dangerous precedent for a State funded school…what else could this bracelet be used for?

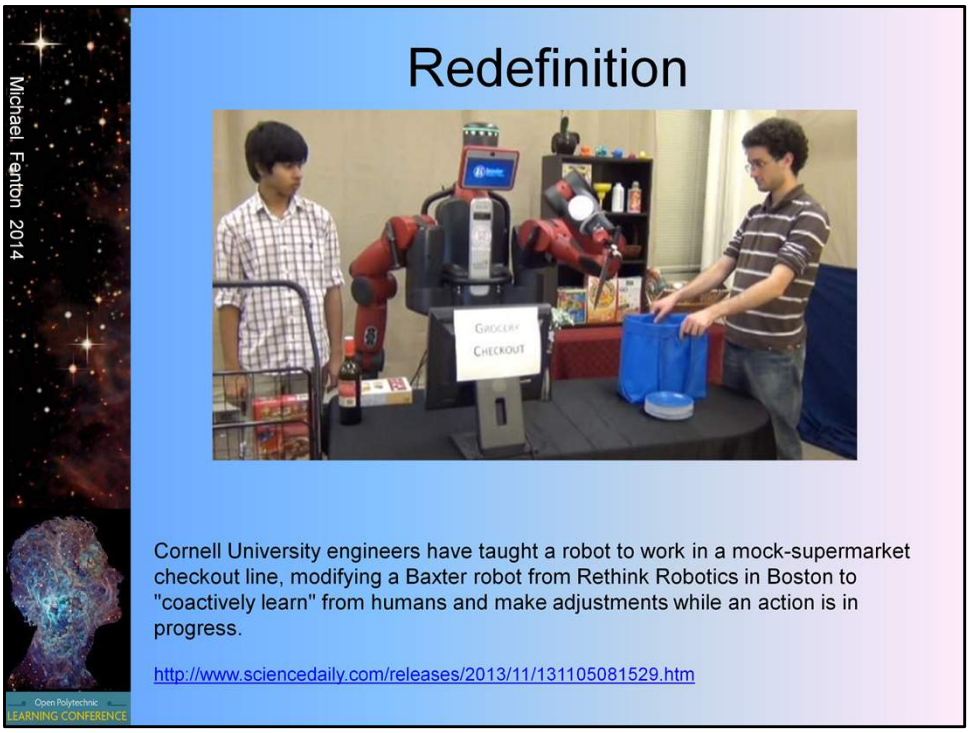


If you do not wish to carry or wear a smart device, why not let go and let a robot or android be your information user interface?

Androids are big business and rapidly being developed. The iCub and its cousins are soon to be in rest homes, supermarkets, perhaps even replacing teachers!

New central processing units (CPU's) are using artificial nerves, some based on silicon, that permit new connections to be made or broken in real-time.

[The possibilities are endless, according to Van der Velde. "The new iCub has a skin and fingers that have a much better sense of touch and can feel strength. That makes interaction with humans much more natural. We want to ensure that this robot continues to learn and understands how people function. This research ensures, for example, that robots actually gather knowledge by focusing on certain objects or persons. In areas of application like healthcare and nursing, such robots can play an important role. A good example would be that in ten years' time you see a blind person walking with a robot guide dog."]



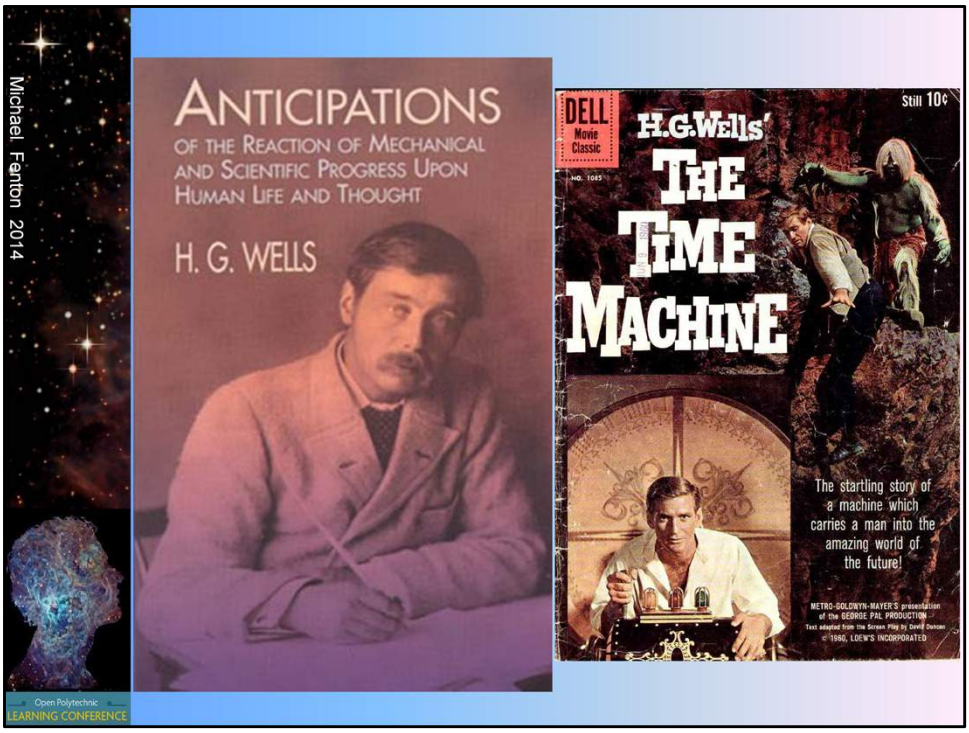
History has shown time and again, if a manual job done by a human can be mechanised, it will be done.

Steam powered mills during the Industrial Revolution put many out of work. It looks like checkout operators may soon be surplus to requirements.

Todays androids/robots are able to learn from people thanks to new chips based on neural networks that mimic the human brain.

[In tests with users who were not part of the research team, most users were able to train the robot successfully on a particular task with just five corrective feedbacks. The robots also were able to generalize what they learned, adjusting when the object, the environment or both were changed.]

Video: http://youtu.be/uLktpkd7ojA

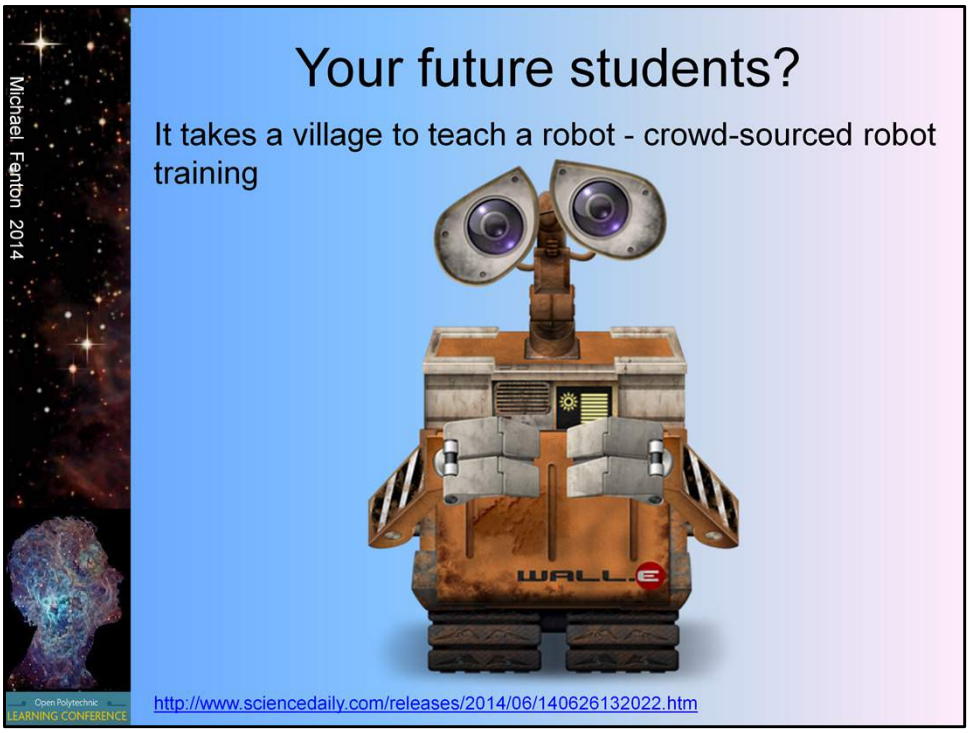


Back to the Time Machine…our hero finds in the distant future mankind has split into two species.

The Eloi are graceful people of leisure. They have no meaningful knowledge and don't know anything about technology of any kind.

The Morlocks have all the technical knowledge and run the machines for the Eloi (and again as John Smith pointed out, for some benefit to themselves!)

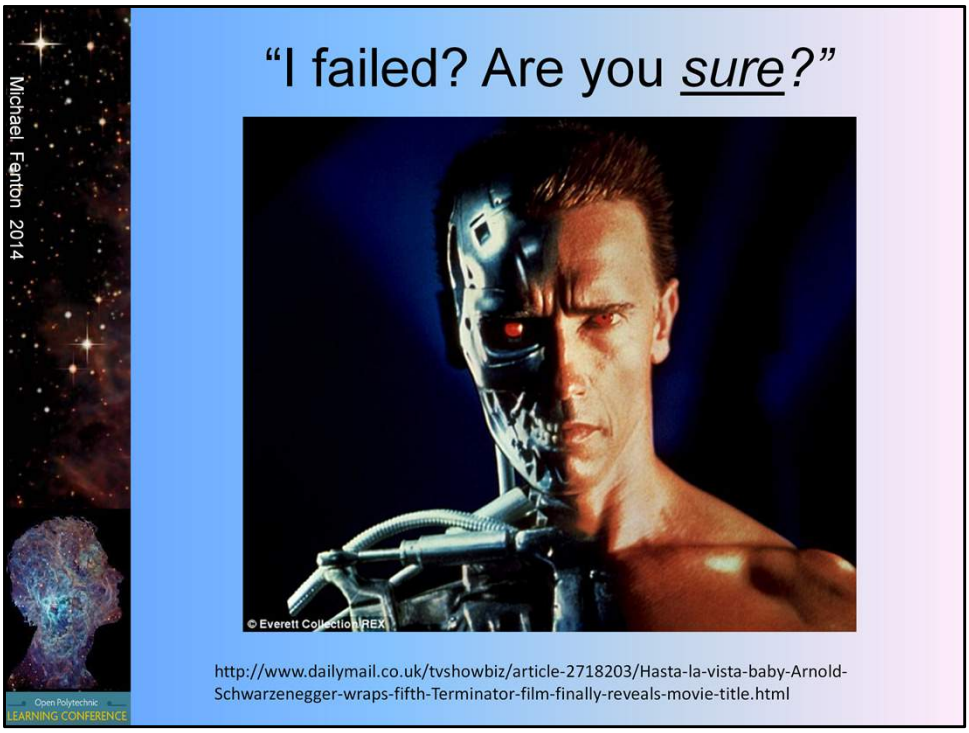
Are we heading for a two species future?



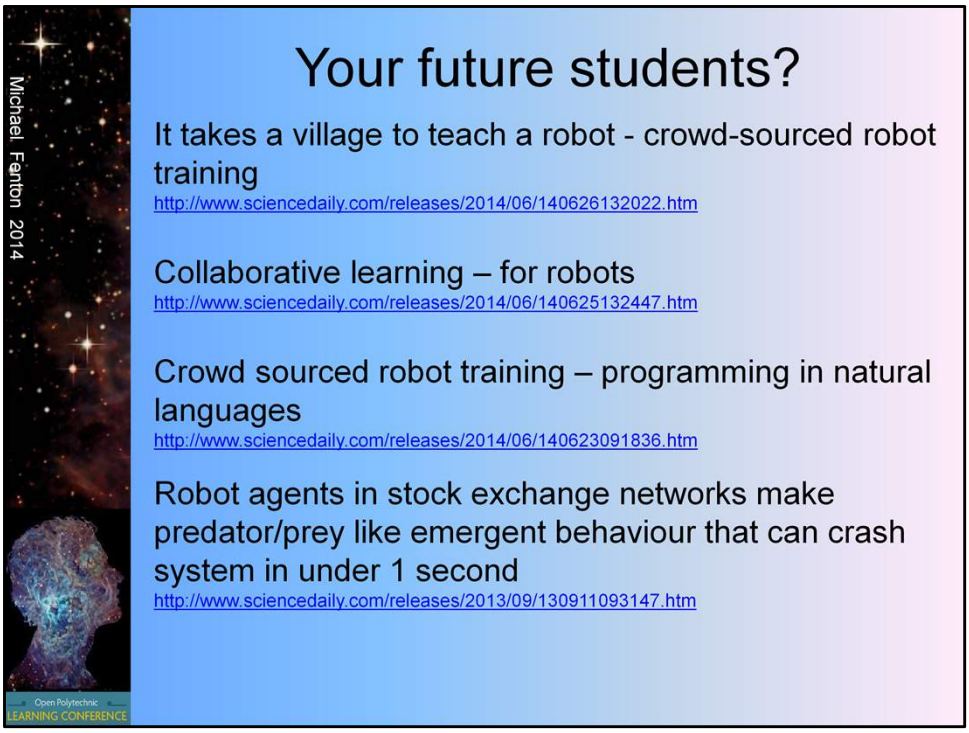
If humans are required to teach checkout robots and iCub androids, why don't we get into the business of training synthetic people?

The Science Daily article provides one example.

I would not mind a synthetic student like this one.



I might be a bit more nervous about this student…



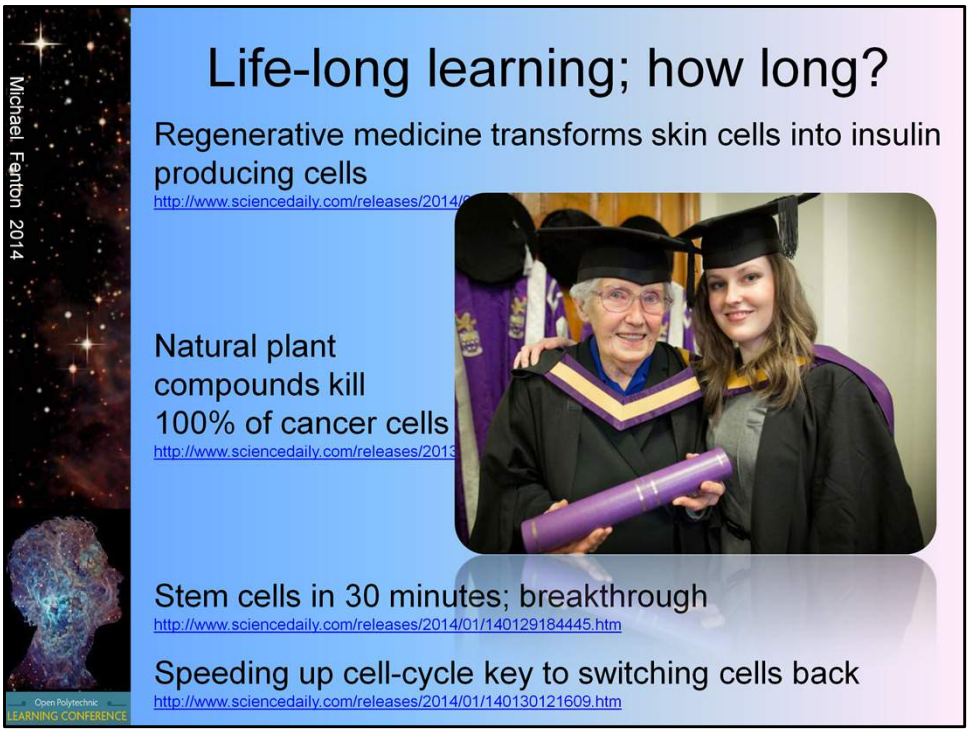
But wait before you go signing up R2D2 for some language lessons.

It appears as though synthetic learning engines may not even need us.

They can / could teach themselves!

So we have a synthetic person with access to machine-only readable knowledge, that can teach other synthetics and do all our work; are we becoming the Eloi in H.G Wells' story ?

Will mankind be dependent on synthetic humans, seperated from work, unable to build or use technology?



OK, let's forget synthetic people if that is a bit too extreme for you.

Let's get back to human beings.

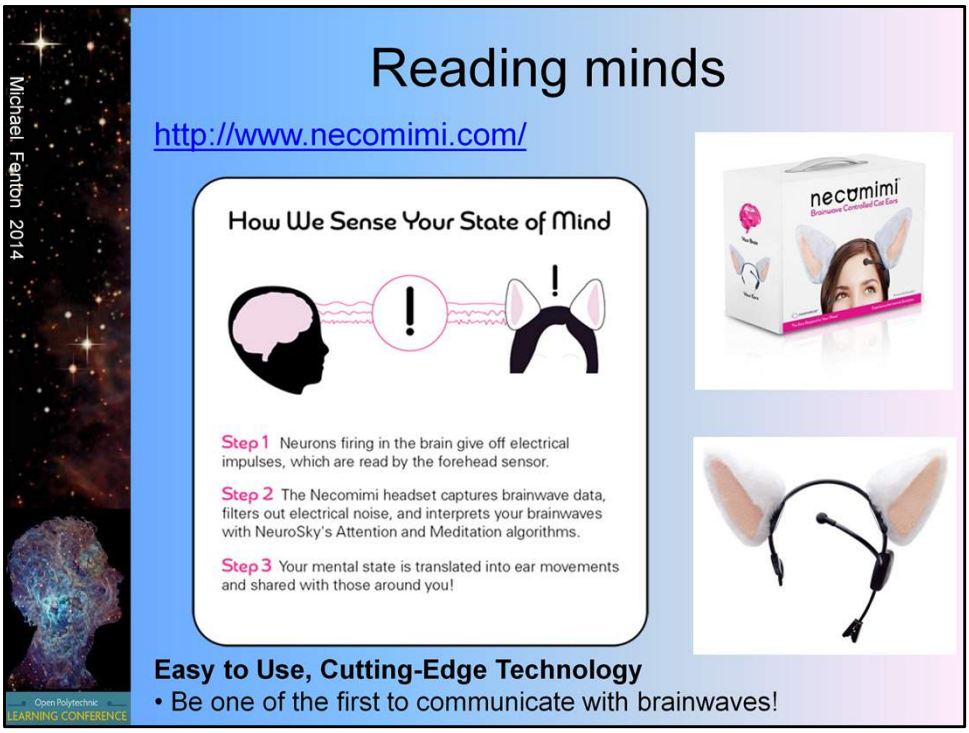
http://www.independent.co.uk/student/news/better-late-than-never-90yearold-grandmother-waits-seven-decades-to-graduate-from-university-of-manchester-after-ww2-got-in-the-way-8995951.html

A new spin on life-long learning when current research on longevity and aging become mainstream and aging does not mean deteriorating!

So, fancy being an IT engineer? Maybe for ten or twenty years…then perhaps I'll train as a architect, do that for another twenty or so years, then I'll be a fireman!

We already claim in videos like 'Shift happens" that todays students need to think beyond one job for life…so this is just a natural extension of this.

Perhaps we had better take really good care of our students so they will continue to see us as their preferred institute of learning for many, many, many years to come!



Staying with human beings, what could we predict from extending some of todays already existing technology?

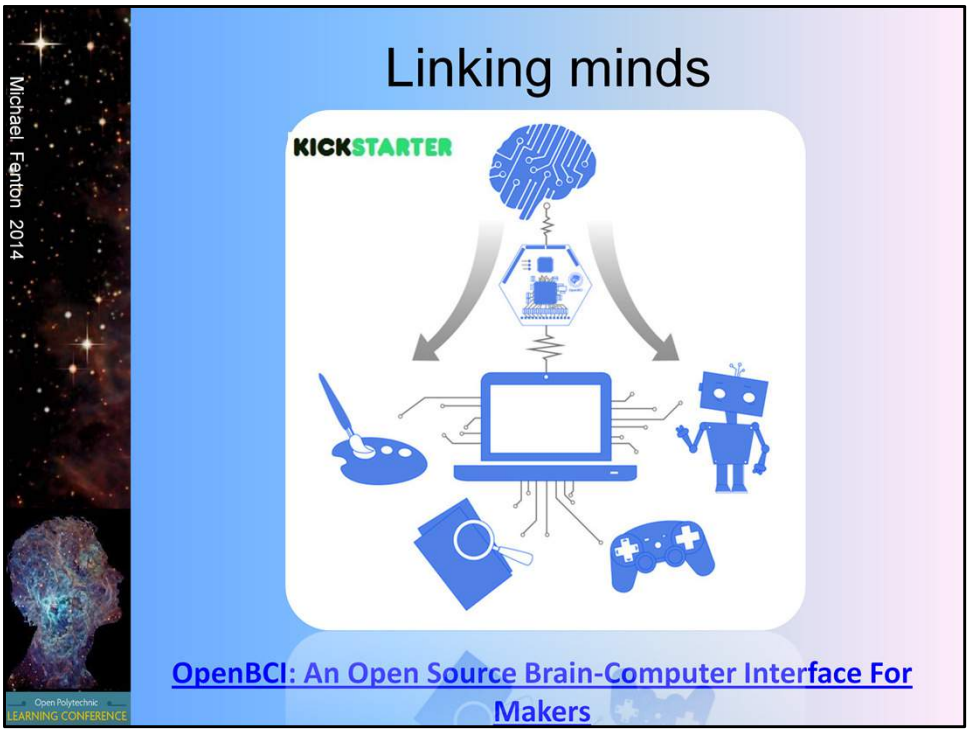
Lets start with an existing Brain Computer interface (BCI) toy – I would love to have my students in class each have a pair of these.

I would tweak the settings so I could see when they are meaningfully engaged with learning, rather than using their iPads to play Candy Crush, or check their Facebook accounts!

Ears up = learning

I could quickly see who is off-task!

And if they were wearing one of those microchip bracelets mentioned earlier, again modified to my specifications, I could press a button and send an 'encouragement' to get back to work!

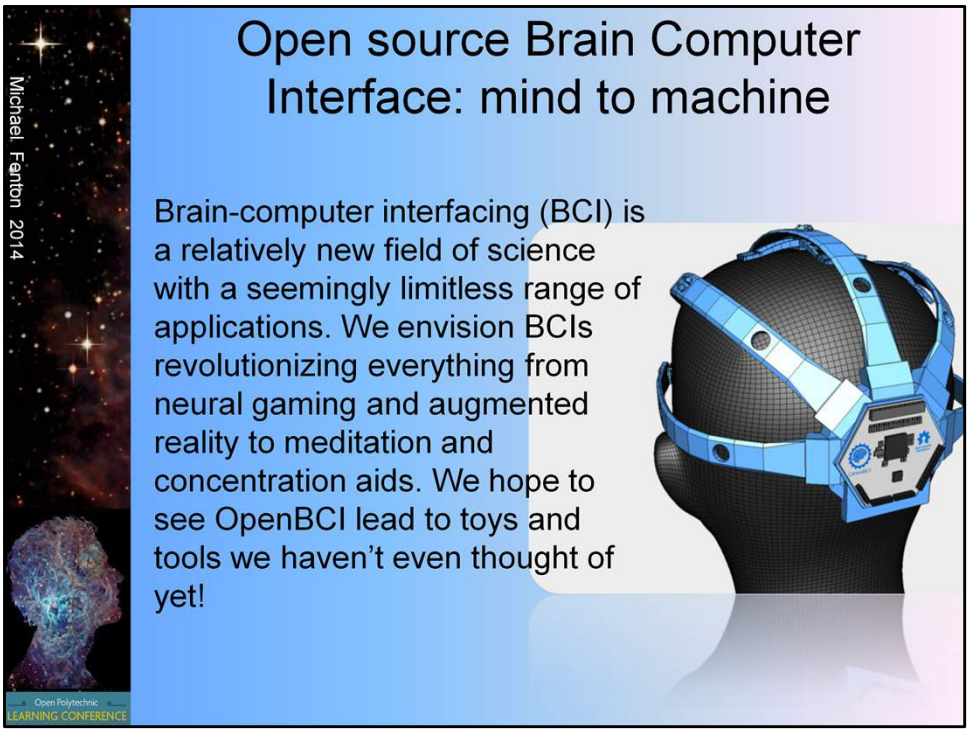


But people like me love to hack and build from scratch;

Here is an example of an open source project I found on Kickstarter.

You wear a computer that picks up brain signals and translates into machine commands.

This is starting to look a bit like The Matrix (a connector at the back of the head connects the wearer to a computer)

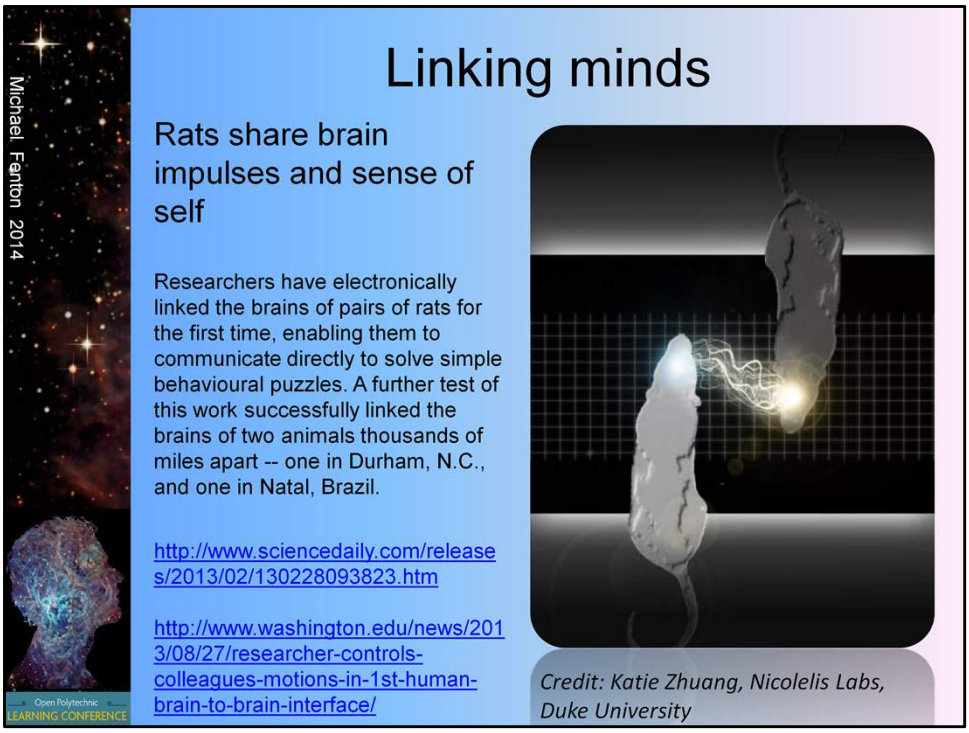


With a BCI we could skip attending classes or depending on other devices to connect to information.

We could connect to the web directly ourselves!

Why bother memorising anything when you can look it up / download it when you need to?

See also
Monkeys use minds to move two virtual arms
http://www.sciencedaily.com/releases/2013/11/131106141225.htm



If we can use an interface to connect to a machine, could we connect to another mind and take advantage of that persons experiences?

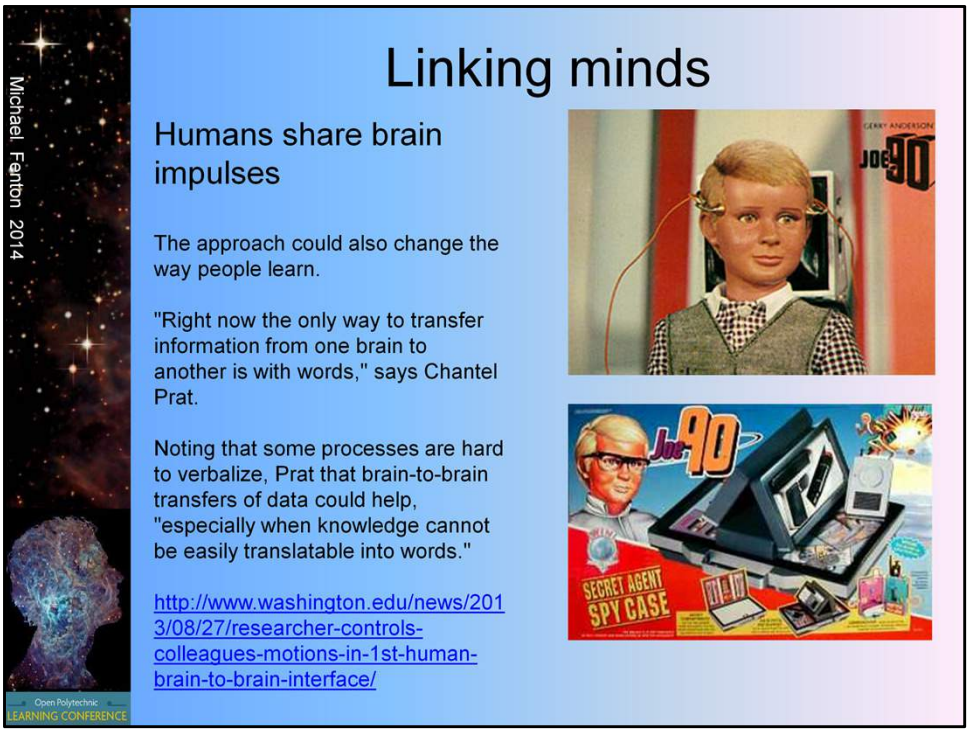
We get the benefit without having to do the work.

According to this report, the answer is yes. More interestingly is the possibility of a “super mind” made up of different individuals.

If you know it, I’ll know it.

[He pointed out that, in theory, such a system is not limited to a pair of brains, but instead could include a network of brains, or "brain-net." Researchers at Duke and at the ELS-IINN are now working on experiments to link multiple animals cooperatively to solve more complex behavioral tasks.

"We cannot predict what kinds of emergent properties would appear when animals begin interacting as part of a brain-net. In theory, you could imagine that a combination of brains could provide solutions that individual brains cannot achieve by themselves," continued Nicolelis. Such a connection might even mean that one animal would incorporate another's sense of "self," he said.]



Reminds me of Joe90…recording another persons knowledge and experiences and providing another person access to them.

http://www.washington.edu/news/2013/08/27/researcher-controls-colleagues-motions-in-1st-human-brain-to-brain-interface/

http://en.wikipedia.org/wiki/Joe_90

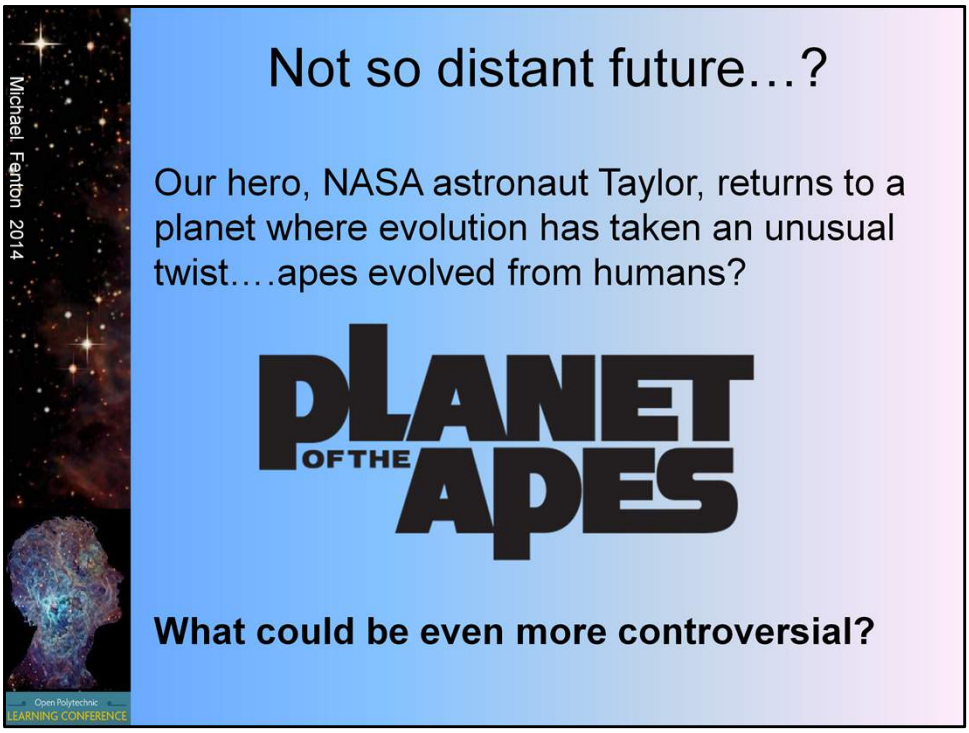
Perhaps this is pushing the boundaries too far for some of you;

Do you feel some pushing back against some of the ideas here?

Is my attempt at enlightening us to what the future may hold challenging you own views about where IT and e-Learning is taking us?

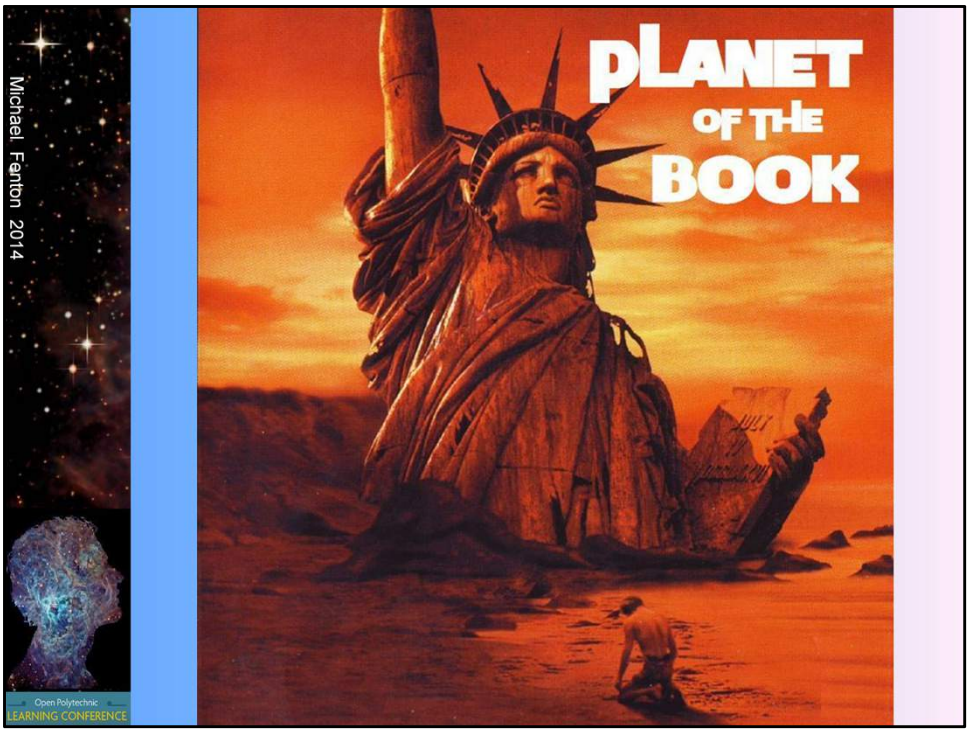
Perhaps as we near the end of this talk, it might be worth returning to a more familiar and somewhat less controversial or fantastic vision of the future.

Which reminds me of a movie I loved as a kid, which seems to be having a bit of a revival at the moment…



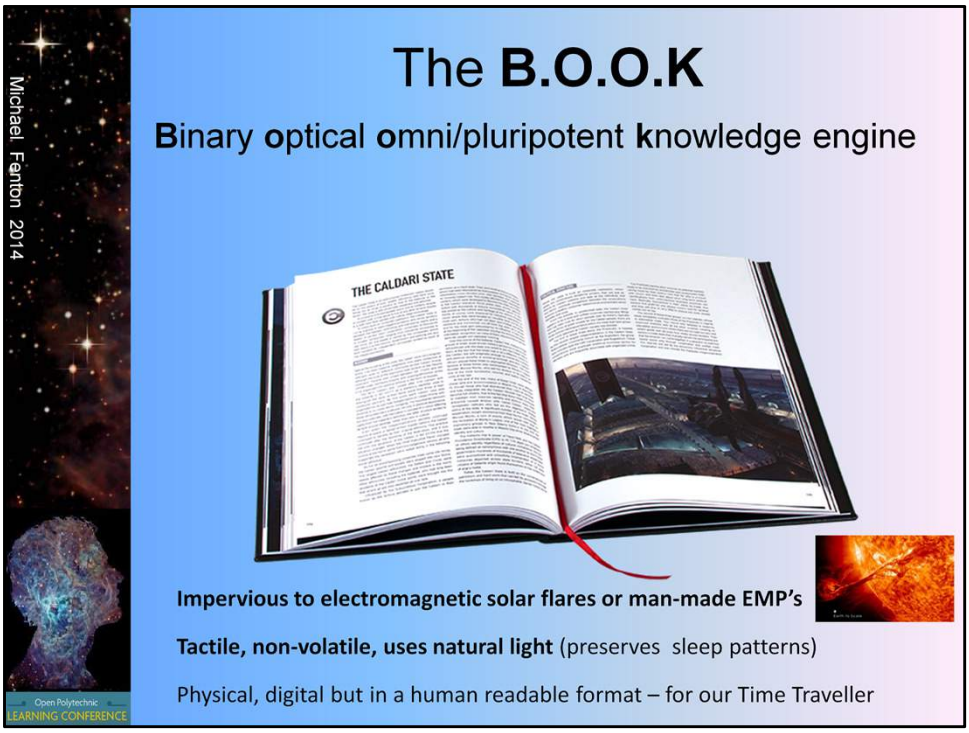
What could the not so distant future hold for us?

What could be more controversial than thinking about a world where evolution works in reverse?
Instead of ‘man evolving from apes’, our hero finds a world where ‘apes evolved from man’.



Yes, a planet where the book evolved from computers!

But wait, this is no ordinary book…this is MY book…and it fills a technology gap very nicely…



I will leave you with this as something to plan for when designing your next courses!

Maybe some old skills will have a new life in B.O.O.K. s

http://sculpturebythelakes.co.uk/gallery/sculpture-in-the-park/search-for-enlightenment/

It looks like our time is almost up; I hope you have not felt as though you were empty heads waiting to be filled.

Instead, we are recognising together that each of us has a unique model of the universe in our heads, a personal universe, and as educators we try to build a more accurate view of what reality is so we can guide our students to coping with this reality.

As we went on this journey looking at enlightenment in education you considered the places, people, and technologies presented here.

Our other keynote speakers and conference presenters will carry on with selected aspects in more detail, so please enjoy the rest of your time here at the Open Polytechnic.

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