



Overview

1. Future learning: vision on learning spaces
2. Following the learner: it is already happening
3. Challenges going forward



Learning Spaces

1. Future learning: vision on learning spaces
2. Following the learner: it is already happening
3. Challenges for education



Classroom in 1900 & 2009



Challenges for education

Ageing Population
Personalized Learning Gaming
Increased Specialization Lifelong Learning

If we had total freedom, how would we ideally learn in the year 2020?

Future Skills Location based services
OER versus Methods Private vs Public
Formal, Non-Formal, Informal

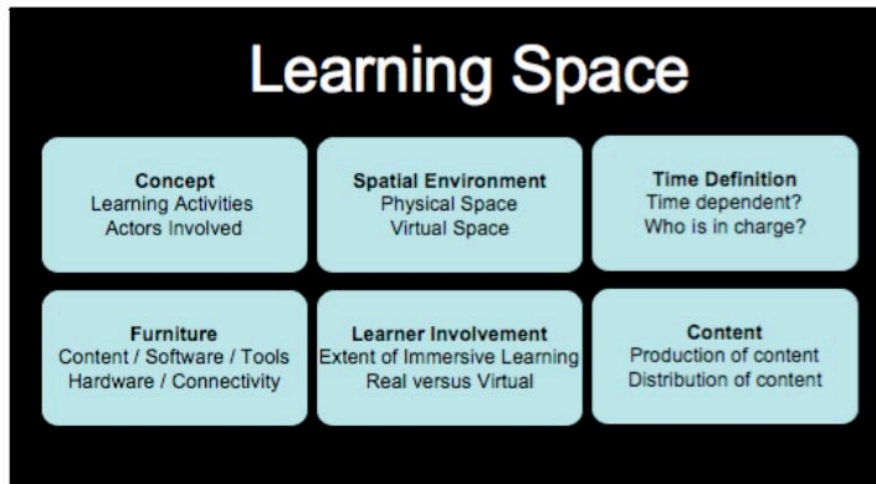


Learning Spaces

- Innovation project to determine what forms of ICT-enabled learning would be most desirable in 2020.
- Goal: create a vision for ICT enabled learning + roadmaps and stakeholder recommendations to achieve this vision.
- Using the concept of learning spaces as a holistic way of thinking about future education.



Learning Spaces Defined



Building the ideal learning space

Created 3 persona's with a learning need in 2020:
different ages, different learning needs, formal and
non-formal education.

Workshops with:

- Representatives creative industries
- Learners
- Educational Experts & Policy Makers



Annemarie, 68

English, French, German...time for something new



Wouldn't it be great if I could just communicate with my grandchildren

Learning Spanish






Cultural Trips to South America, Winter 2021

Something else than Eastern Europe...



Work in groups on series of questions around persona

Discuss with other participants in iterative rounds



Example Learning Space: Your Ticket to Language Life



Learn by traveling

Buy a ticket to language coupled with a location (Buenos Aires)

Buy modules from suppliers or let a traveling agency arrange it for you



Building the ideal learning space

- We developed 20 learning spaces
- Pretty consistent picture
- Lots of unknowns, especially around the question to what extent learners can determine what is good for them.
- Surprisingly, children were the most 'conservative' and focused on social interaction.



1. An ideal learning space is user centric

Adapt the learning space according to the needs of the individual learner.

A user-based learning environment requires a new way of thinking about education, whereby generic curricula, learning methods and subjects will largely have to be replaced with more modular, adaptable goals and supply of education.



2. An ideal learning space includes an immersive environment



3. An ideal learning space is integrated in daily life



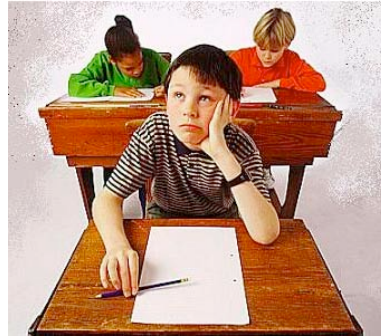
if children say they are
playing with the cat,
they are never so much
playing as "testing its
physical limits"

Source: ToothpasteForDinner.com



4. An ideal learning space gives continuous feedback

Rather than taking one exam at a fixed date with your peers, achievements of learners are continuously monitored by teachers and software.



5. An ideal learning space contains social interaction and physical components

The ability of learners to interact with each other, to learn within a social context and to have direct contact with teachers will always remain an important part of any learning space.



6. An ideal learning space is open

Education should be as open as possible to as many people as possible.

In the light of life-long learning and bridging the digital divide, learning spaces and the content, applications and technology used in it should be open.

Using crowd sourcing as a means to develop new learning modules



Following the learner as guiding principle for future education

Future education is all about following the learner in his or her:

- Learning needs
- Socio-psychological needs
- Life path
- Environment



ICT will be an important enabler

ICT will be:

- omnipresent,
- adapted to the needs of the learners
- ubiquitous in the sense that information and tools can always be accessed regardless of place, time and device / network used.

However be wary of:

- Technological determinism
- The 'digital natives generation'



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Following the learner

Following the learner is becoming more and more apparent in:

1. Education
2. Content & applications
3. Adaptive environments

Mobile technology as the linking pin binding it all together.



Following the learner: ubiquitous Learning

Ubiquitous learning refers to being able to learn at any time, at any place . The environment of the learner should be adapted to support learning (Klopfer, 2005).

Lots of discussion, especially about the role of the learner in making decisions about what will be adapted!



Following the learner: personalized learning

NY School: Quest to Learn

A school that uses the design principles of games to create highly immersive, game-like learning experiences.



Following the learner: recognizing informal learning

Informal learning: it's life...

Informal learning is semi-structured learning that takes place in various locations (at home, work, during sports, while playing outside etc).

Best example is language development: learning by doing.

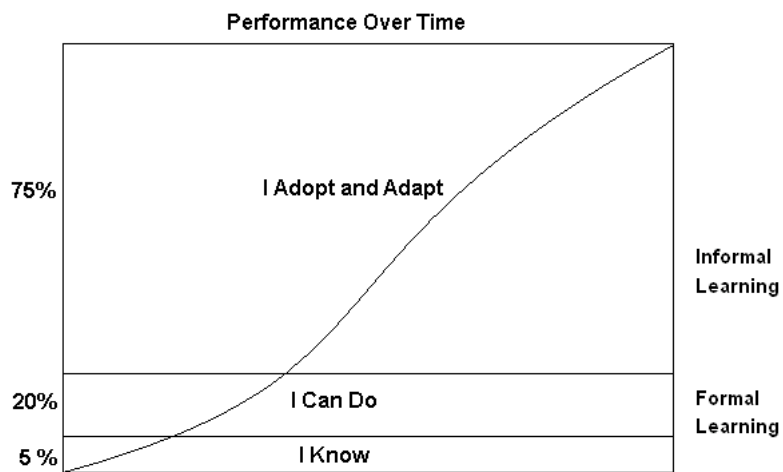


Following the learner: recognizing informal learning

- No curriculum
- No long term pedagogical model
- No teachers
- No fixed timeframe
- In 'natural environment'
- At the pace and timeframe of the 'learner'



Following the learner: recognizing informal learning



Study by Sally Anne Moore, Digital Equipment Corporation
"Time to Performance"



Informal learning: Women of Nairobi project








Following the learner: recognizing informal learning



Experience certificate in the Netherlands...



Following the learner: content & applications

-  **Slim:** Just over 1/3 of an inch, as thin as most magazines
-  **Carry Your Library:** Holds up to 3,500 books, periodicals, and documents
- Beautiful Large Display:** 9.7" diagonal e-ink screen reads like real paper; boasts 16 shades of gray for clear text and sharp images
- Auto-Rotating Screen:** Display auto-rotates from portrait to landscape as you turn the device so you can view full-width maps, graphs, tables, and Web pages
- Built-In PDF Reader:** Native PDF support allows you to carry and read all of your personal and professional documents on the go
-  **Wireless:** 3G wireless lets you download books right from your Kindle DX, anytime, anywhere; no monthly fees, no annual contracts, and no hunting for Wi-Fi hotspots
-  **Books In Under 60 Seconds:** You get free wireless delivery of books in less than 60 seconds; no PC required
- Long Battery Life:** Read for days without recharging
-  **Read-to-Me:** With the text-to-speech feature, Kindle DX can read newspapers, magazines, blogs, and books out loud to you, unless the book's rights holder made the feature unavailable
- Big Selection, Low Prices:** Over 275,000 books; *New York Times* Best Sellers and *New Releases* are only \$9.99, unless marked otherwise
- More Than Books:** U.S. and international newspapers including the *New York Times* and *Wall Street Journal*, magazines including *The New Yorker* and *Time*, plus popular blogs, all auto-delivered wirelessly



Following the learner: content & applications

E-books' holiday charge

As sales soar, digital works face season's crucial test

By [Ylan Q. Mui](#)

Washington Post Staff Writer
Thursday, November 5, 2009

Technology is stalking your bookcase.

It has already taken over your photo albums and emptied your film canisters. It overwhelmed your music collection and flooded Goodwill with CD towers. It canceled your newspaper subscription. (Sniff, tear.)

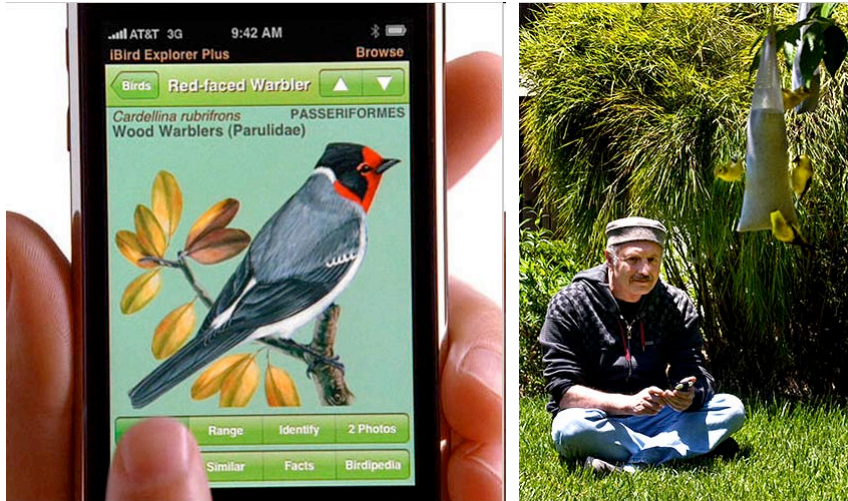
And now, digital evangelicals believe technology is on the verge of supplanting those dusty, yellowed tomes that weigh three times more than an iPod and don't even come with any cool free apps.



Sales of electronic books jumped 68.4 percent last year and skyrocketed 177 percent to \$96.6 million for the year through August, according to the [Association of American Publishers](#). That's not counting the millions downloaded for free at public libraries, where e-books are fast becoming one of the most popular features. And Amazon has said that its e-book reader, the [Kindle](#), has become the best-selling product on its Web site.



Following the learner: content & applications



Source: New York Times



Following the learner: content & applications

Facebook's mobile usage has tripled this year to 65 million

September 3, 2009 | Kim-Mai Cutler and Matthaus Krzykowski | Comments 158 [refresh](#)

How addictive is Facebook?

The company, which is often tight-lipped about its numbers, revealed a bit more about its user engagement today at the [Nokia World](#) conference in Stuttgart, Germany.

About half of its 250 million monthly users worldwide log in every day. About a quarter, or 65 million, used the site from mobile devices in August, according to [Henri Moissinac](#), director of Facebook Mobile. That's more than three times what it was in December, when 20 million users were using Facebook through apps and the company's mobile web page. The U.S., U.K., Canada and Indonesia have the most active users.

Those could be nice, sticky numbers for advertisers, who are looking to see traffic and attentiveness if they're going to run large brand campaigns on the site. Intensive mobile usage and sharing would also be a plus, giving Facebook the edge if it wants to deliver location or time-sensitive ads based on people's habits.

The social networking site is trying to tighten its partnerships across all platforms. Nokia and Facebook announced a lifecasting app, that would make it easier for users to send status updates and their locations on the N97 and N97 mini Nokia models.



Following the learner: content & applications

“I have used Twitter to capture real-time feedback from students on course design and assignments.

Additionally my students use it to stay abreast of current issues in our field (distance education) and to bring those topics to the classroom for further discussion.

The students have given positive feedback on that use of twitter - they like the feeling of not having all their information filtered through me and it encourages them to challenge my point of view”

(Faculty Focus, 2009).



Following the learner: adaptive environments (10 seconds, Mscape)

> Case Details

> Profiles

> Case Materials

> Message Inbox

Just off Gloucester Road if you know it... Anyway, we gotta have one last look there, just so we can get this fucking case closed. The big-wigs won't be happy till we've put the last nail in the coffin so to speak! This Whiteman guy, total nuts. Anyway, they were gonna send me, but since you're new and I'm your senior, I'm sending you! You'll need some special hardware and software so that I can keep track of you and that. Here's a list of the stuff ya need:

- A Windows Mobile device with GPS
- A Windows-based PC
- Mscape Software
- Our specially designed mscape
- Some fucking common sense

So, get your hands on that stuff and we're laughing. I'll give you some links to the stuff you might need at the end of this email, ya know, software and maps and shit (we don't want you gettin lost now do we!). Load up our software before you leave and once you're at the location the GPS will kick in and we're good to go. I'll guide ya through it since you're such a newbie, but don't expect me to hold your hand every time! Whiteman says all this creepy shit happened around dusk, so I



Following the learner: adaptive environments



Following the learner: adaptive environments



- The internet of things
- Artificial intelligence
- Sensor technologies



Learning Spaces

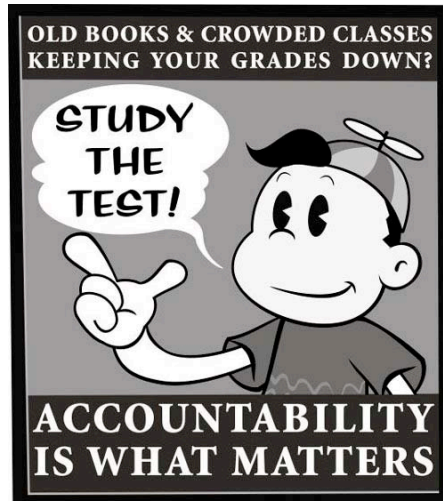
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Create evidence base: demonstrating value for education



Change what we value



Change what we value

Knowing about the past, imagining the future

In a recent article in "El Pais Semanal", Francesc Miralles reported that those who are generally successful in school are not necessarily so in life, whereas famous people were often labelled as "bad students" (examples include Albert Einstein, Charles Chaplin or Alejandro Amenábar). The explanation he provides is that in schools students are generally asked to master the past, while bad students who become successful in life have a tendency of being rather good at imagining the future.

Posted 19 hours ago | [Reply Privately](#) | [Make featured](#) | [Delete discussion](#)

Comments (1)

Yes, I recognize Miralles view. As a former teacher I saw many 'bad' students who became good actors or creative scholars. They often were students who had the courage to pursue their dream already then. It tells me again that we have to offer a different curriculum on certain aspects to our students.

Posted 19 hours ago | [Reply Privately](#) | [Delete comment](#)



Go for Open Educational Resources

Education should be open!

Open content describes any kind of creative work, or content, published under a license that explicitly allows copying and modifying of its information by anyone, not exclusively by a closed organization, firm or individual.

Wikipedia, 2009



Finally

Project of TNO - OU Netherlands
- Attic Media for the European
Commission (IPTS).

Facebook Group: Future of
Learning

LinkedIn Group: Future of
Learning

Your input is highly appreciated!



Thank you and have fun at mscapeFest09!

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