

Lessons Learned From Being A MOOC Learner

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ICTP, Trieste, 1/10/2013

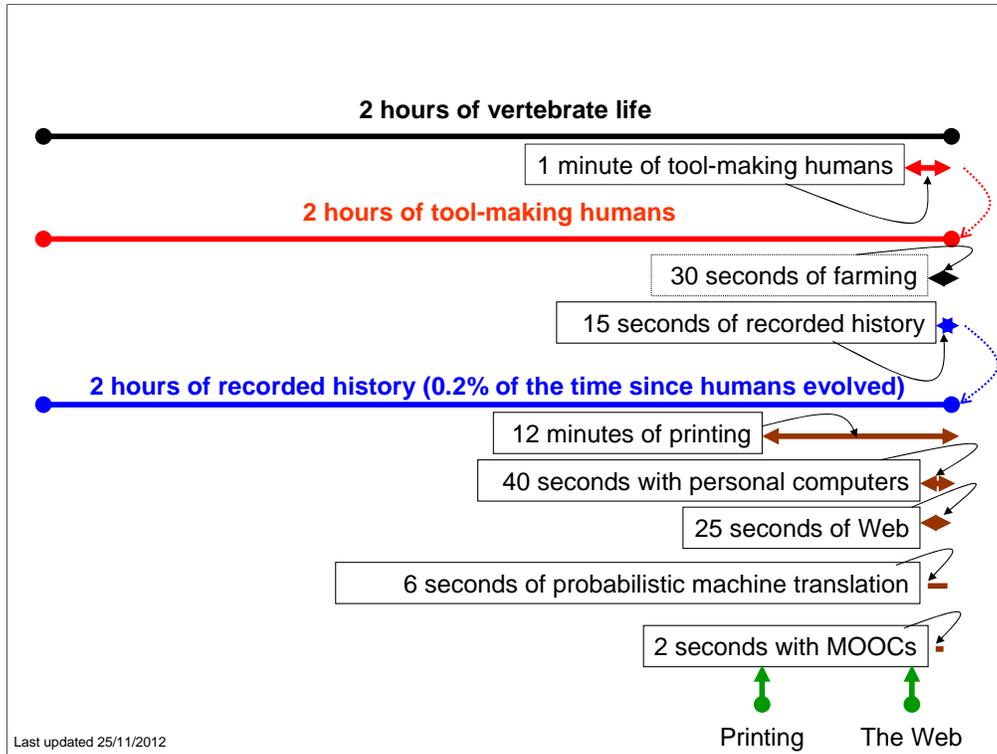
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Links for yesterday's (and for this) talk – <http://tinyurl.com/ictpMOOC>

Before I start to say that I've put up some links relating to yesterday's (and for this) talk at this URL <http://tinyurl.com/ictpMOOC>

Yesterday I felt I'd gone on too long by the time I reached my concluding slide so I skirted round a key idea that I think makes a reasonable starting point for today's talk.

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This diagram, which uses ideas in Richard Sennett's book "The Craftsman" which are in turn based on those of the geneticist John Maynard Smith (who died in 1974).

1. Humans as a species have not changed cognitively or biologically for hundreds of thousands of years.
2. We've only had recorded history for a small proportion of that time.
3. We've only had the tools and systems which concern us in this workshop for a tiny proportion of the time we've been recording history.

It took centuries for the print-based distribution and mediation of knowledge to become properly understood and for it to have its influence.

The Internet and the Web and ubiquitous computing represent the beginning of a new phase in how humans – cognitively unchanged for the last few hundred thousands years, and unchanging for the next – create, distribute and mediate knowledge, and learn.

I think MOOCs are a part of that new phase. Yesterday I finished up by saying:

For now, our job is to:

- 1 seek to make MOOCs work;
- 2 understand the affordances of things like subject, level, MOOC design, learner-characteristics;
- 3 scientifically assess their impact.

I suppose this talk's focus is on aspects of #2

On **understanding the affordances of a learning medium.**

Yesterday I didn't give you any feel for why I am interested in online learning other than to say that I'd been involved in it for a long time.

I now owe you a bit more information so that you can put what I say in context.

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www.alt.ac.uk newsletter.alt.ac.uk
researchinlearningtechnology.net repository.alt.ac.uk
youtube.com/clipsfromALT @A_L_T
<http://www.alt.ac.uk/events/lecture-capture-conference>

I spent the ten years from 2003 till last year running the Association for Learning Technology (ALT), which is a UK membership association for people and organisations interested in the astute use of learning technology. It is through ALT that I had the luck to meet Enrique, Carlo, and Marco from ICTP. Enrique and Marco were our international stars at an event we ran in 2011 called “Lecture Capture – Doing It Well And At Scale”. (Link above to all the assets from the event.)

But I want to go a bit further back.

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This is the mouth of the 5km Viehla Tunnel – at one time the most dangerous road tunnel in Europe, and until 1964 the longest road tunnel in the world.

I biked to it and through it in May 1985 with my friend and wonderful colleague Andy Fairclough (who later died of cancer in his early 40s) on a Spanish and French bike trip between Bilbao and Barcelona.

At that time my job was running courses on how to be a trade union representative.

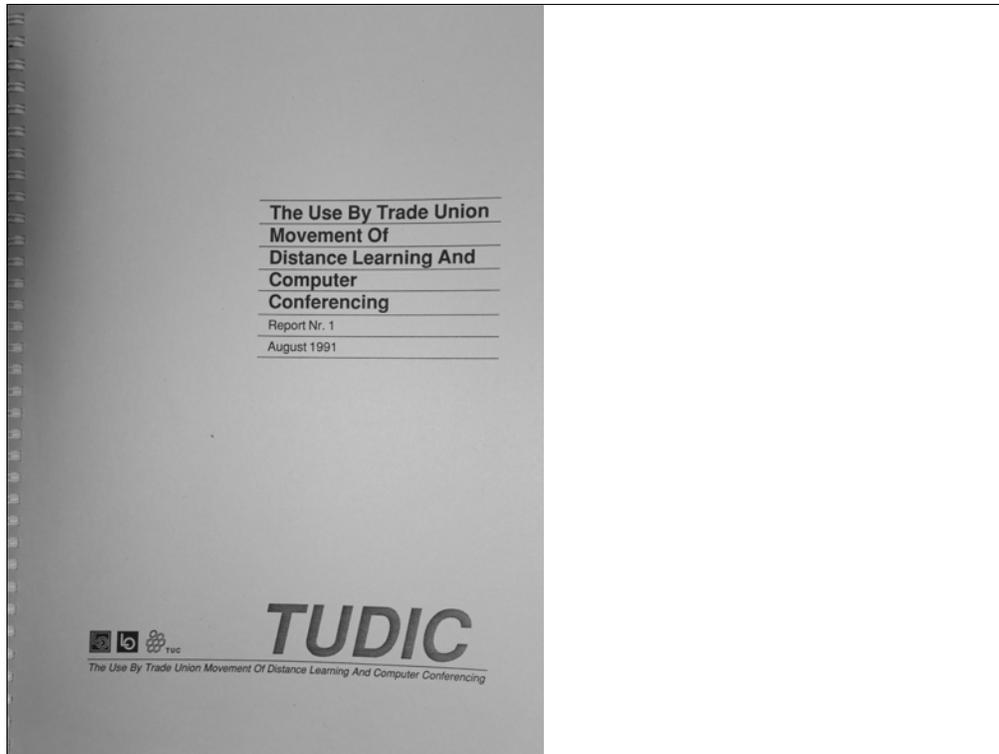
I'd just bought a pre-IBM computer with an 8 bit operating system called an Amstrad PCW, and I had begun to “see the point” of IT; so had Andy.

During the up-and-down 160 km ride to and through the tunnel that day we talked a lot about IT in education.

Flowing from that conversation, and from Andy's work for UK's Trade Union Confederation I got asked to run an online distance learning project.....

This project involved making and running a online distance learning courses for union representatives in Denmark, Sweden and the UK about European integration.

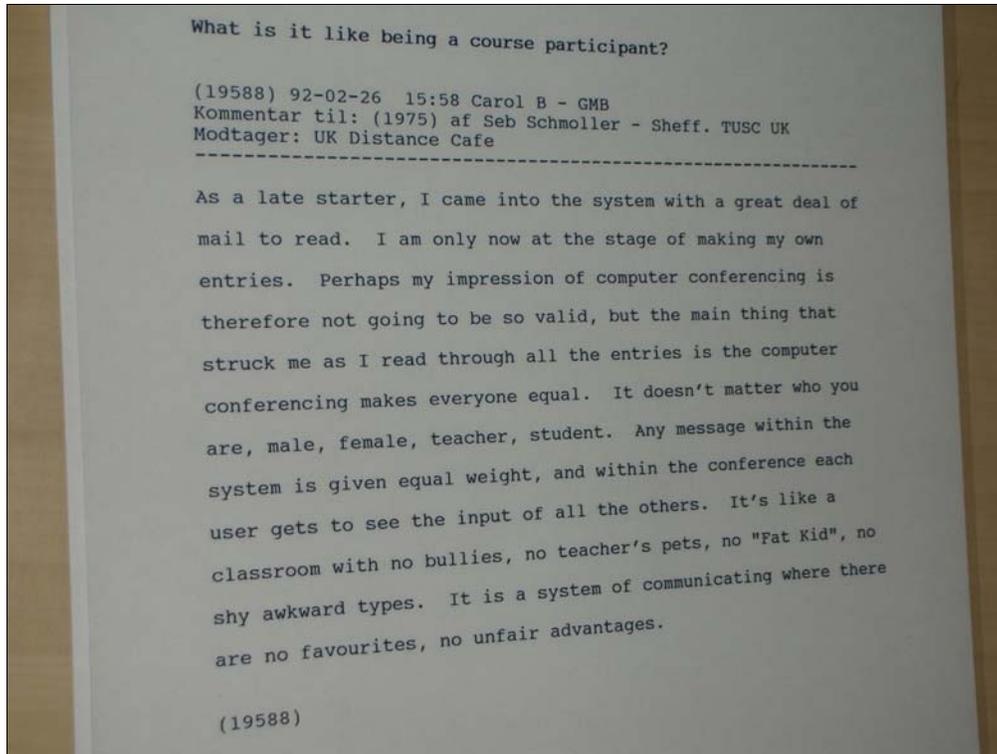
Here is one of



..... the project outputs – from 1991. Europeans in the room with long memories may recall the EC funded COMETT programme.

And here is an artefact from one of the courses.....

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It is a 1992 posting by Carol, a student in our PortaCOM Online Conferencing System.

I do not know how this compares with your own experience, but I knew, when I read it and many like it, over 20 years ago, that

online learning could change learning for the better in a fundamental way

I got involved in the design and running of a course about how to be an online tutor – called Learning to Teach On-Line a.k.a LeTTOL.

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 Wayback Machine **81 captures** 2 Oct 99 - 11 Nov 10 1999 **2001** 2002

LeTTOL - Learning to Teach On-Line

[Introduction](#)
[Course details, accreditation and prices](#)
[Course philosophy and team](#)
[What others have said](#)
[Entry requirements](#)
[Contact and registration information](#)
[Tell someone about LeTTOL](#)

Introduction

Over 600 people have completed LeTTOL to date, from all over the world, from the private and public sectors, and from schools, colleges, and universities. Our client list is [here](#), and you can read a selection of comments from past learners [here](#).

LeTTOL was developed in the UK, by the South Yorkshire Further Education Consortium (SYFEC), a collaboration between the 8 FE colleges in South Yorkshire. LeTTOL won the "Beacon" British Educational and Communications Technology Agency Award for Information, Learning, and Communications Technology to Support Effective Learning, in 1999, and a "Threshold" award in the UK's 2000 National Training Awards Competition.

LeTTOL is for teachers, lecturers, trainers, materials developers, and academic or technical managers. It provides an opportunity for participants to gain an understanding of how on-line learning works, and it equips participants to:

- teach learners on-line;
- support learners using email and conferencing;
- manage on-line learning provision;
- employ the Internet as a resource for teaching and learning;
- apply appropriate learning methods in the design of on-line learning materials.

The course launched in 1999 and was quite successful – employers from all over the UK and further afield paid good money for their staff to do the course. It still runs from time to time.

LeTTOL was unusual at that time because we had course tutors in the UK, Australia, and Canada so we had all time zones covered.

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18
2000 2001 2002

LeTTOL - Learning to Teach On-Line

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June 2001.

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LeTTOL had what at that time was an unusual license – an Open Content license – based on a very early precursor of the now common Creative Commons license.

So LeTTOL was a

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TOOC!

It was
a **Course** with a beginning, a middle, an end, and, importantly, certification
Online – because there was no face-to-face contact between any of the participants
Open – because anyone could take and re-use the course content.
and a **Course**.

But it was **not** Open in the sense that it was not free. You had to pay to do LeTTOL,
because we had to cover the costs of the teaching.

And with 15 to 25 learners on each run of the course, LeTTOL was not Massive.

In fact it was **Tiny**

LeTTOL was predicated on the idea that to understand a medium for learning you need to experience the medium from **the point of view of a committed learner**

I do not think you can understand a way of learning just from looking at a course from the outside

Would a novelist write without being a reader of novels?

Would a film producer make films without watching them?

Could you describe what swimming is like without have swum?

Much current MOOC commentary on both sides of the hype barrier comes from people who've not bothered to experience the medium properly.

So what lessons did I learn from

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INTRODUCTION TO
Artificial Intelligence

In partnership with
STANFORD ENGINEERING

Course Discussion Progress **Information** Profile

You are not signed in. [Sign in](#) to save your progress.

Bayes Rule

Next

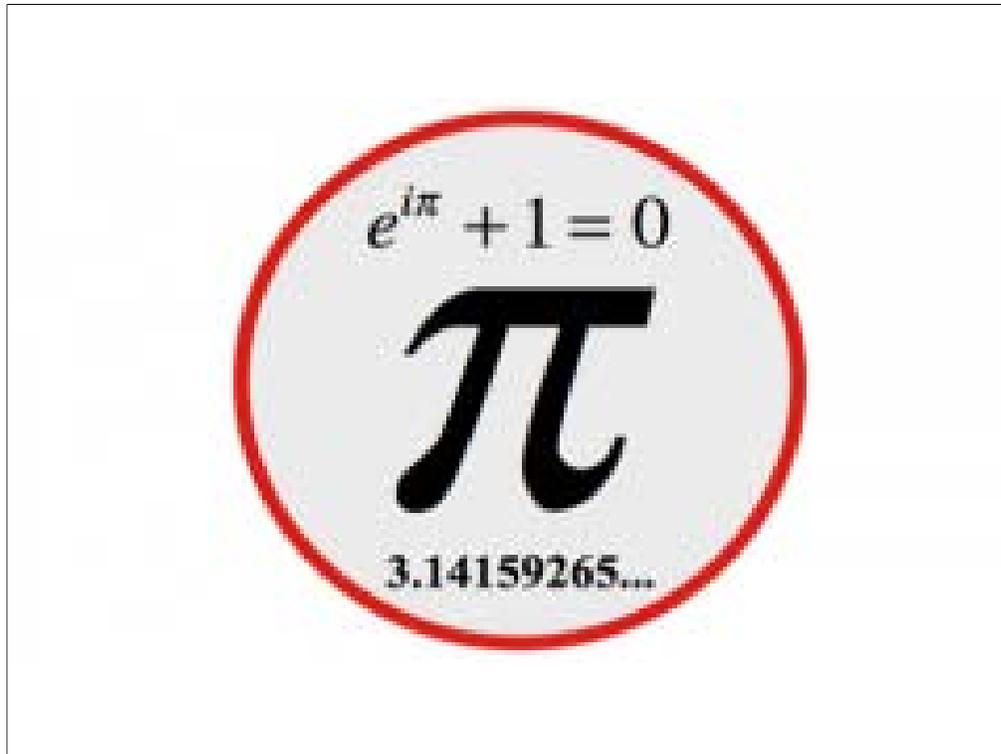
Available units:

- ▶ 1. Welcome to AI
- ▶ 2. Problem Solving
- ▶ Homework 1 (closed)
- ▼ 3. Probability in AI
 - 1. Introduction
 - 2. Probability/Coin Flip ?
 - 3. Coin Flip 2 ?
 - 4. Coin Flip 3 ?
 - 5. Coin Flip 4 ?
 - 6. Coin Flip 5 ?
 - 7. Probability Summary
 - 8. Dependence ?
 - 9. What We Learned
 - 10. Weather ?
 - 11. Weather 2 ?
 - 12. Weather 3 ?
 - 13. Cancer ?
 - 14. Cancer 2 ?
 - 15. Cancer 3 ?
 - 16. Cancer 4 ?

0.5/1.0

The AI course and from

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the Coursera Introduction to Mathematical Thinking course?

I've organised the lessons under the following six headings.

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Lessons

1. One-to-one tutoring
2. Inducing effort
3. Complexity
4. Community
5. Grading to learn (peer-assessment)
6. MOOCs struggle to.....

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1. One-to-one tutoring

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One-to-one tutoring - 1

“This class felt like sitting in a bar with a really smart friend who is explaining something you haven’t yet grasped but are about to.”

Rob Rambusch’s [piece about the AI course](#) in my Fortnightly Mailing

Counterintuitive and paradoxical

How was this achieved?

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One-to-one tutoring - 2

1. Thrun [teaching from his sick \(?\) bed](#)
2. [Quirky](#), authentic, loosely scripted
3. Plenty of ambiguity
4. Speaking to “you” not “the class”
5. Shortness of videos
6. [Napkin](#)-like quality

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2. Inducing effort

Effort is a necessary and insufficient condition for learning. If and when a MOOC induces the right kinds of effort from learners, then it will succeed.

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Inducing effort - 1

1. Showing progress and achievement - [example](#)
2. Frequent quizzes or other challenges (not necessarily just “within” the course)

With video lectures “one had a sense of **viewing an artefact of an event that one was not involved in**. Here there was a feeling of immediacy. The professors were either looking directly at a camera with no-one else in the picture or drawing/writing on a piece of paper that filled the camera frame. Peter and Sebastian – I’ll refer to them by name because while I was taking the course there was no one else in the room – **clearly were talking to me**.” Rob Rambusch

3. Motivating effect of excellent teacher/deep knowledge/passion for subject, and authenticity
4. Timetables and deadlines

On #2 the AI course was much better than ITMT, but the AI course had patches where the quiz density was much too low.

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3. Complexity

Both courses were complex in different ways.

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Complexity

1. A **lot** of assets to organise and maintain
2. Heavy duty infrastructure needed
 - at deadlines
 - if thousands of learners
 - if serving video directly
3. Therefore use someone else's big platform!
4. Independent methods to communicate with learners if things go wrong

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4. Community

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Community

1. Translation
2. Clever forum systems that promote and reward effective contributors (OSQA)
3. Unexpectedly good discussions [outside the course](#) [link to archive of Laplace Smoothing piece]
4. 1 : very many feedback is **not** impossible
 - voting systems to filter questions for response
 - back-end tracking of which problems learners are getting stuck on

Translation by volunteers created a sense of community.

Moderation by “promoted” community members

It can feel individualised, though it is nothing of the sort.

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5. Grading to learn

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Grading to learn/peer assessment

1. Use of rubrics ([link to sample rubric](#))
2. Can scale up
3. Peer-assessment “across levels”
4. Don’t underestimate the design challenges
(links: [article by Keith Devlin](#); my reports [1](#) and [2](#))
5. Requires careful integration into the fabric of the course
6. Probably requires deadlines and set dates

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6. MOOCs may struggle with...

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MOOCs can struggle with...

1. Ideas? – but to counter this, see [Ian Chowcat's report](#) about Coursera's Modern and Contemporary American Poetry course
2. Those who have not got determination?
3. “Induction” into a field or discipline?

“True teaching and learning are about more than information and its transmission. Education is based on mentoring, internalization, identification, role-modelling, guidance, socialisation, interaction, and group activity.”

From Eli Noam's 1995 [“Electronics and the Dim Future of the University”](#)

Even if physical proximity does not have to play a role in this, for many people, it helps.

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Concluding points

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Concluding points - 1

Decision-makers need to be MOOC learners

When I and others got it into our heads to develop the LeTTOL course in 1996, we were met with strong opposition.

Learning on line will never work. It will never be as effective as face-to-face. In my own organisation, the tactic I adopted was to get key influencers to do the LeTTOL course as students. For them to feel the value (and problems) for themselves. This altered their attitudes.

This is what I think has now to happen with MOOCs. Everyone in this room is a key influencer in their own country and organisation. Otherwise you would not be here.

Discussing MOOCs is part of the story. But it is not a substitute for taking the step of being a “full on” MOOC learner in different kinds of MOOCs. If you are not already doing it.....

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Concluding points - 2

From a course-design point of view, **effort by learners, its effectiveness, and the cost to learning providers of enabling it** is (one of) the most important thing(s) to think about

For organisations that run courses, the total **cost per hour of effective learner effort** is a key factor. Determined by factors like the:

- learner;
- subject;
- level.

A MIX. Each element can be provided at a range of qualities and by different means; and at different costs depending on the method(s) chosen.

I think big strides could be made if courses (MOOCs or otherwise), are designed from the bottom up based on this approach.

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