

Pedagogy at Scale

Past, present and future

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@sharp1m

Past

Chapter 2

Why no pedagogy in England?

Brian Simon

The term 'pedagogy' is used here in the sense of the 'science of teaching' (OED). The title of the chapter is meant to imply that no such science exists in England; the fact that the term is generally shunned implies that such a science is either undesirable or impossible to achieve. And such, it is argued, is the situation in England.

The contrast here with other European countries, both west and east, is striking. In the educational tradition of the Continent, the term 'pedagogy' has an honoured place, stemming perhaps particularly from the work and thinking of Comenius in the seventeenth century, but developed and elaborated in the nineteenth century through the work of Pestalozzi, Herbart and others. The concept of teaching as a science has strong roots in this tradition.

Not so in England. It is now one hundred years since Alexander Bain published *Education as a Science* (1879). Since then, less and less has been heard of this claim. The most striking aspect of current thinking and discussion about education is its eclectic character, reflecting deep confusion of thought, and of aims and purposes, relating to learning and teaching – to pedagogy.

It may be useful to advance an interpretation as to why the concept of 'pedagogy' has been shunned in England, and why instead our approach to educational theory and practice has tended to be amateurish, and highly pragmatic in character.¹ Relevant here is the practice and approach of our most prestigious educational institutions (historically speaking), the ancient universities and leading public schools. Until recently, and even perhaps

“It may be useful to advance an interpretation of why the concept of ‘pedagogy’ has been shunned in England, and why instead our approach to educational theory and practice has tended to be amateurish and highly pragmatic in character.”

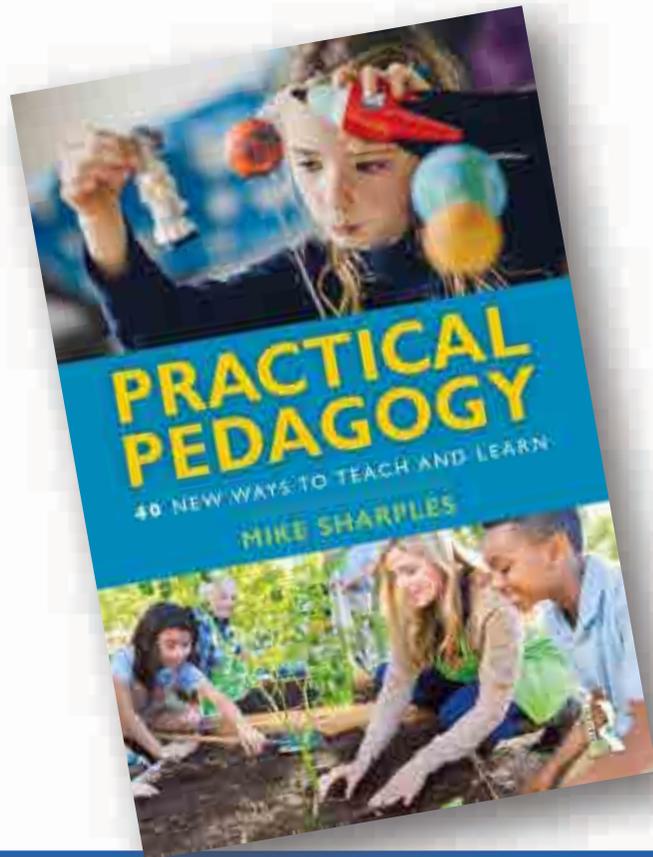
Simon, B. (1981) Why no pedagogy in England? in B. Simon & W. Taylor (Eds) *Education in the Eighties*. London: Batsford.

Amateurism and pragmatism don't work
for distance learning at scale

New educational technology needs
innovative and effective pedagogy

Pedagogy

“Theory and practice of teaching learning and assessment”



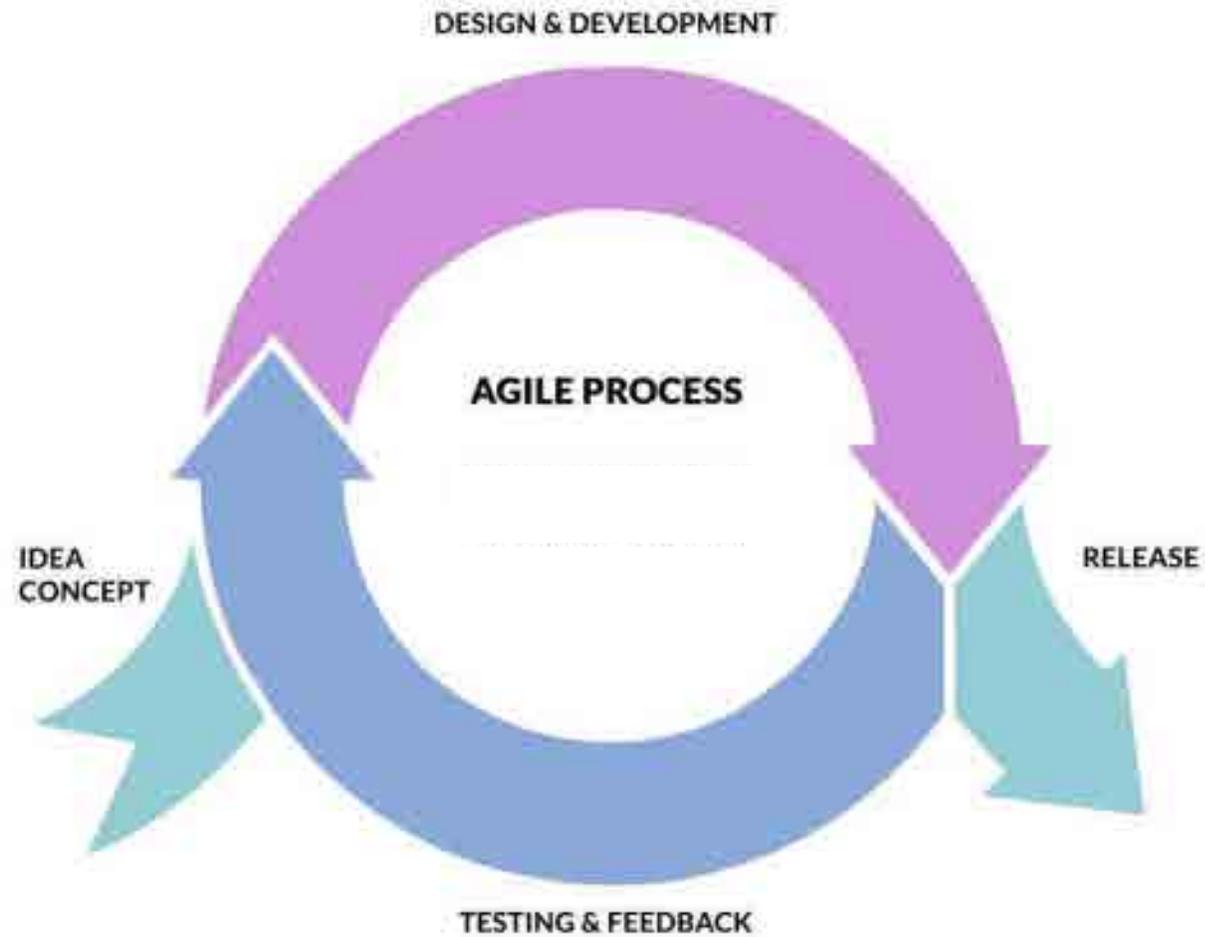
Pedagogies



Pedagogy	Learners...	Technology-based example
Assessing	give or receive constructive feedback	engaging in online peer review
Browsing	seek and collate information	using search engines to find educational materials
Case-based	investigate individual cases	investigating medical cases online
Collaborative	construct shared understanding	creating a shared Google doc
Construction	create artefacts	engaging with big construction set, e.g. Minecraft
Conversation	converse with others	engaging in online discussion
Cross-context	learn across different settings	learning between classroom and home with tablet
Delivered	comprehend information	watching an online video
Embodied	use their bodies to learn motor skills	monitoring exercise with Fitbit activity tracker
Game-based	engage with game environments	multiplayer educational game, e.g. Endless Ocean
Inquiry-driven	investigate authentic situations	using digital probes to collect and analyse data
Networked	interact with networks of peers	educational social networking
Performative	present for an audience	creating a video blogs of learning activities
Problem-solving	try to solve problems	working in online teams to solve problems
Reflective	reflect on information and activities	reviewing e-portfolio of learning activities
Simulation	interact with a simulated tool	learning science in a virtual world

Adapted from Appendix 1 of Sharples, M., Cook, C., Jones, L., Kay, D., Chewcat, L., Balmer, K. & Stokes, J. (2009). *New Modes of Technology-enhanced Learning: Opportunities and Challenges*. Becta, http://dera.ioc.ac.uk/1532/1/becta_2009_int_cur_ped_new_modes_opps_challenges_report.pdf

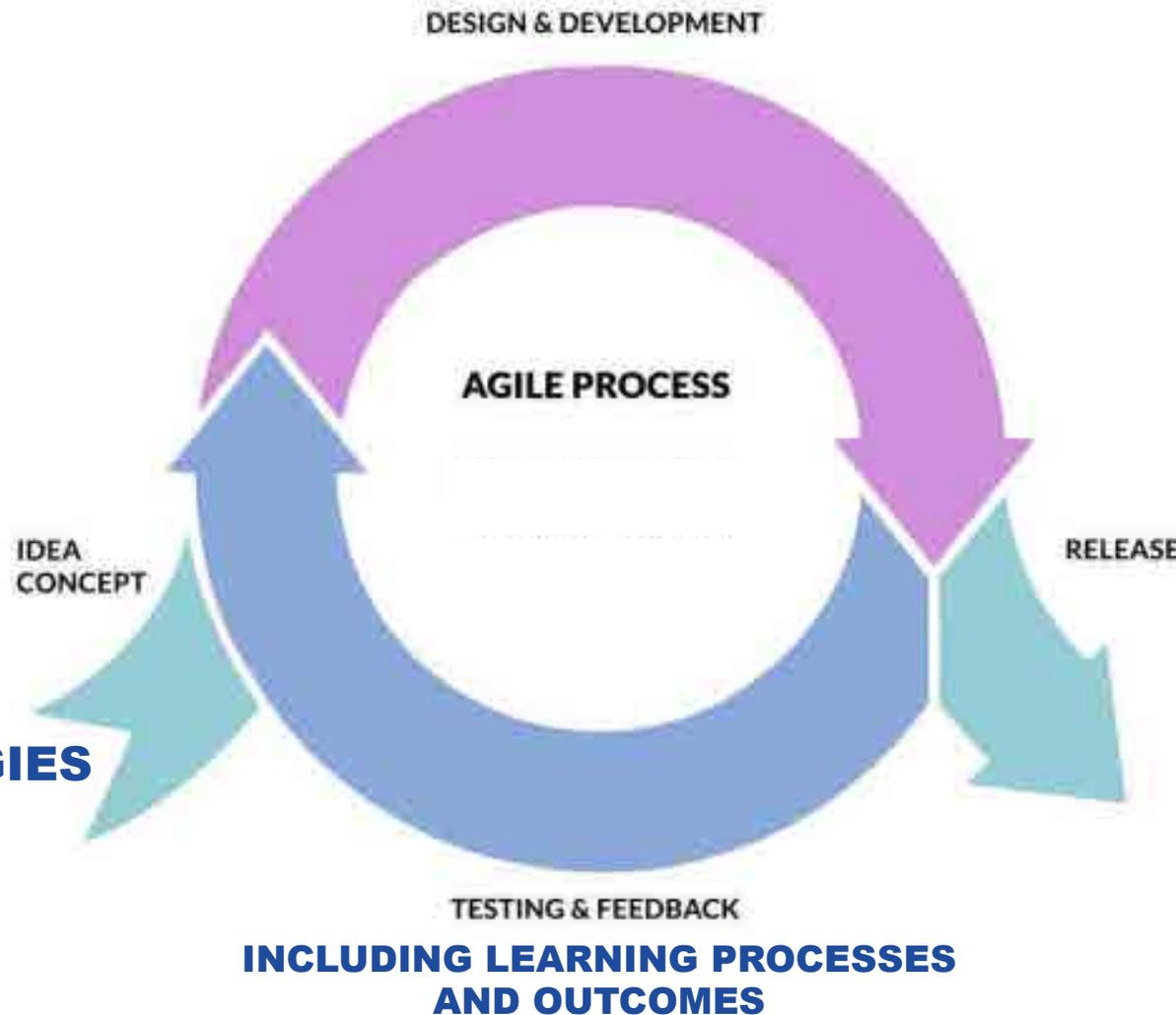
Pedagogy-informed design



Pedagogy-informed design

Assessing
Browsing
Case-based
Collaborative
Construction
Conversation
Cross-context
Delivered
Embodied
Game-based
Inquiry-driven
Networked
Performative
Problem-solving
Reflective
Simulation

PEDAGOGIES



2013



Khan Acade



F/L
FUTURELEARN

MOOCS EXPLAINED NEWS ABOUT CONTACT / FAQs



Futurelearn will bring together a range of free, open, online courses from leading universities, in the same place and under the same brand.

Introduction from Simon Nelson, Launch CEO Futurelearn

The role that entertainment plays in learning is often overlooked. Take a glance at massive open online courses (MOOCs). They're often very conventional, based on lectures broadcast "at" students, rather than engaging with them...

News

British Museum and four more universities join the FutureLearn revolution
3 May 2013

British Council to Join Futurelearn: Announced as partners visit Middle East
5 Mar 2013

Top UK Institutions Take Futurelearn to India on PM Trade Mission
19 Feb 2013

▶ SIGN UP TO MAILING LIST

Ideas & User Stories

We want to know what you think Futurelearn should feature

▶ SUGGEST AND COMMENT

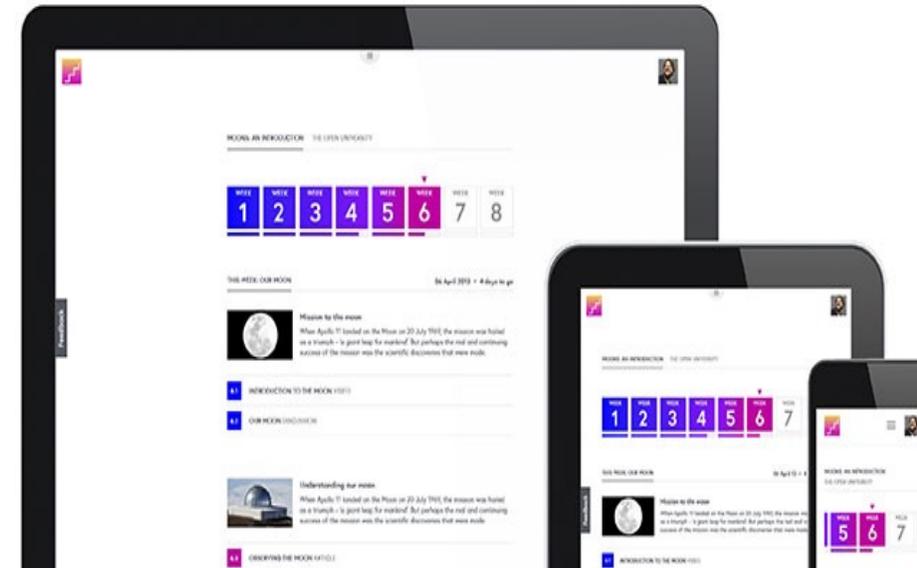


Open University, 1970s

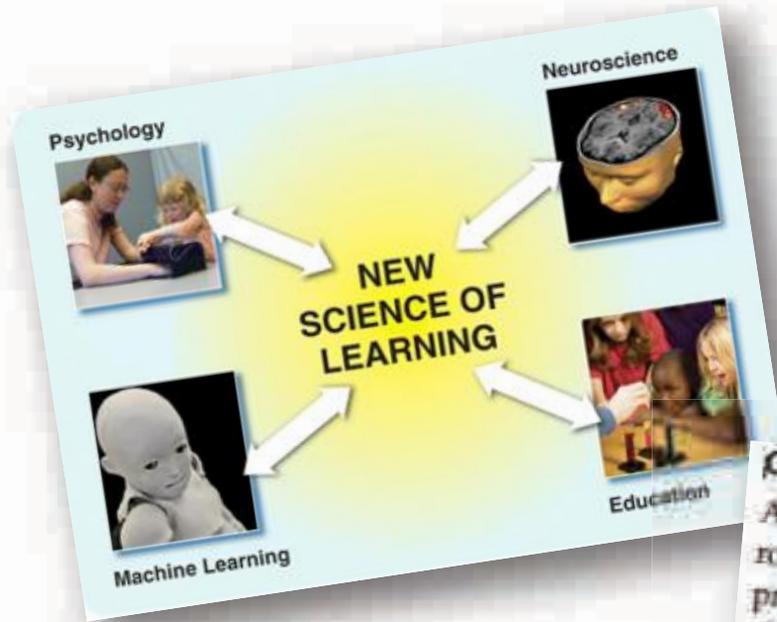
Building FutureLearn



New software platform
For massive-scale learning
Millions of people across the world
Accessible on mobile devices
Innovative pedagogy



Social interaction and learning



A.N. Meltzoff, P. K. Kuhl, J. Movellan, & T. J. Sejnowski (2009) Foundations for a New Science of Learning, *Science* 325 (5938), 284.

Conclusions
A convergence of discoveries in psychology, neuroscience, and machine learning has resulted in principles of human learning that are leading to changes in educational theory and the design of learning environments. Reciprocally, educational practice is leading to the design of new experimental work. A key component is the role of "the social" in learning. What makes social interaction such a powerful catalyst for learning? Can key elements be embodied in technology to improve learning? How can we capitalize on social factors to teach children better and to foster their natural curiosity about people and things? These are deep questions at the leading edge of the new science of learning.

“What makes social interaction such a powerful catalyst for learning? Can key elements be embodied in technology to improve learning?”

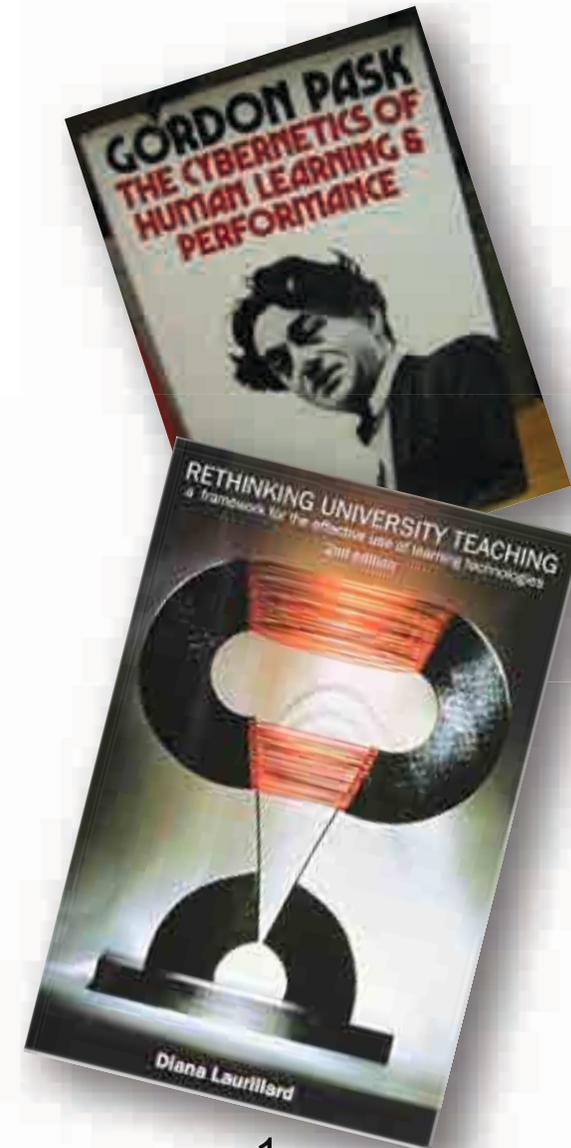
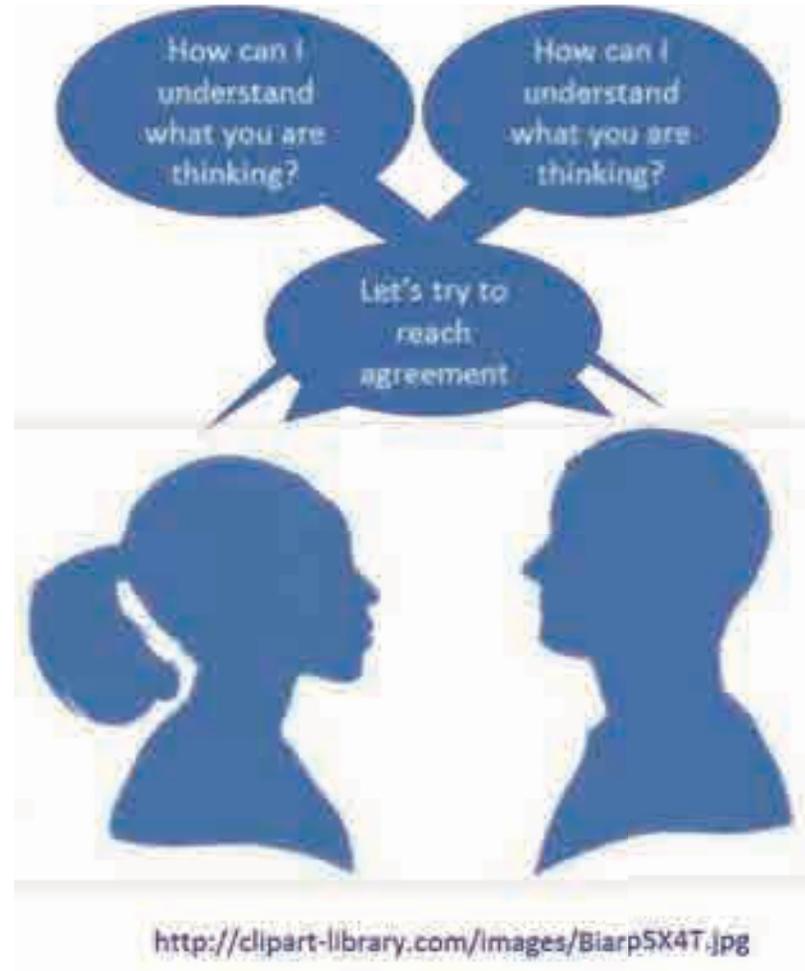
Learning as a conversational system

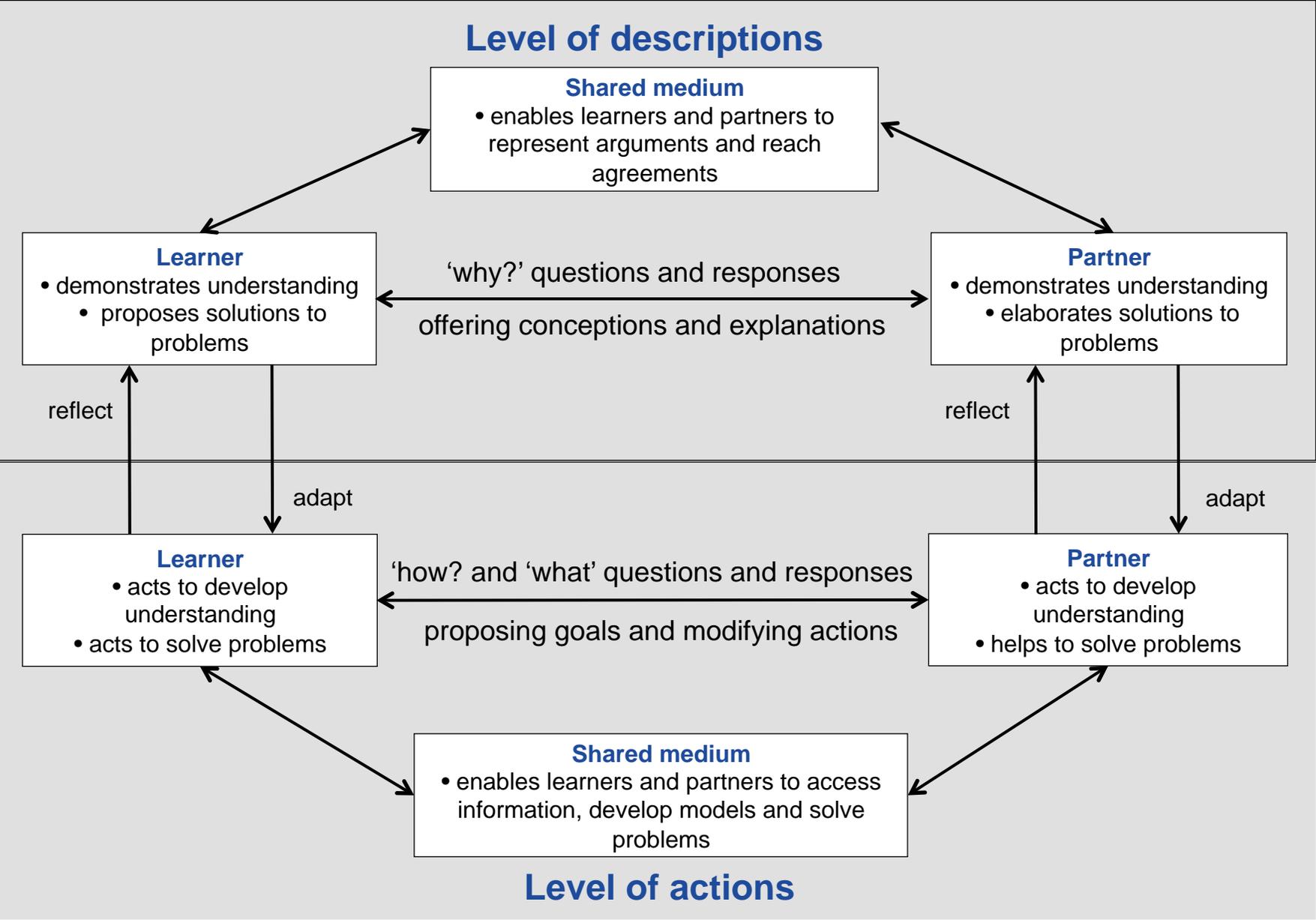
All human learning involves conversation

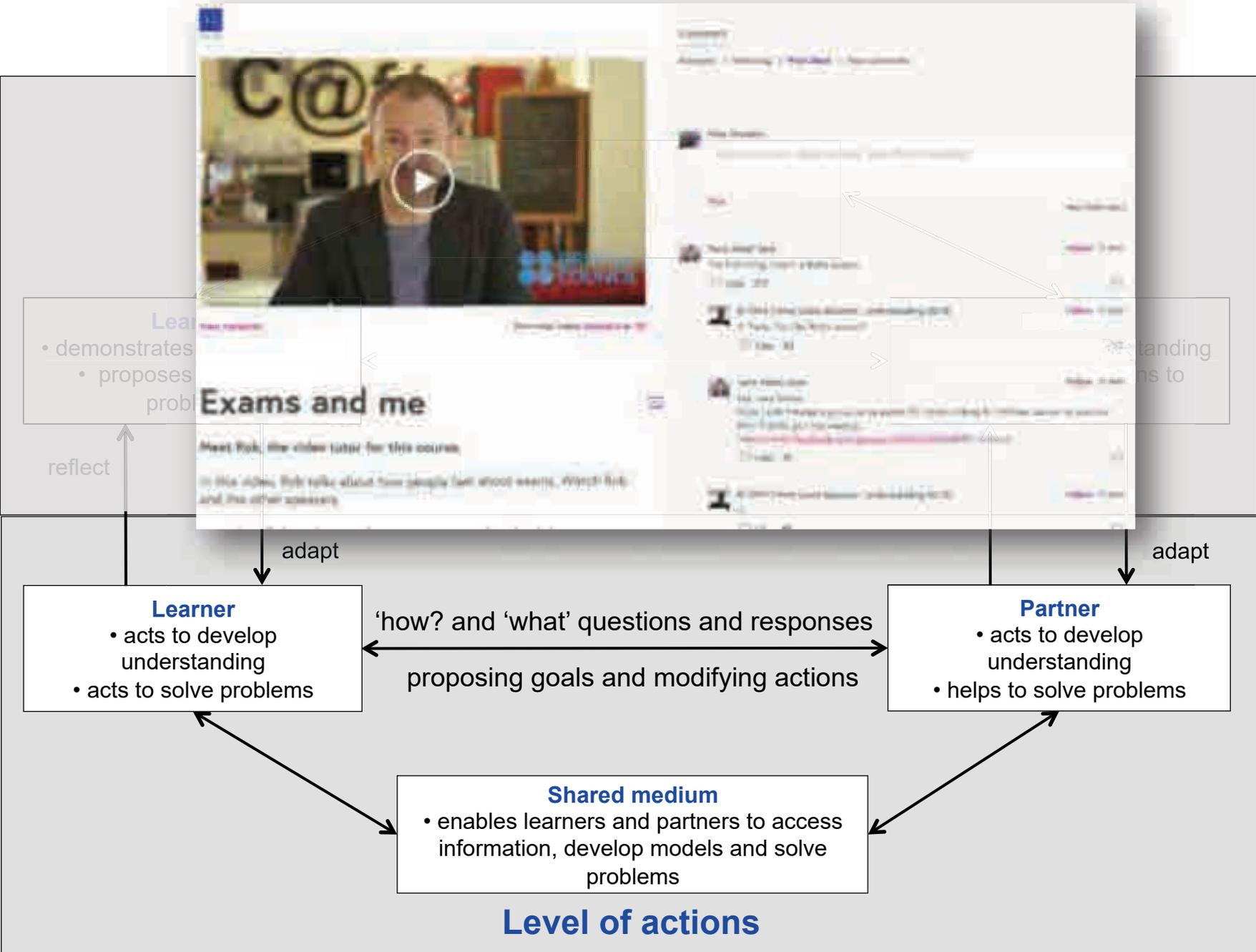
We converse with ourselves to reflect on experience

We converse with teachers to understand their expert knowledge

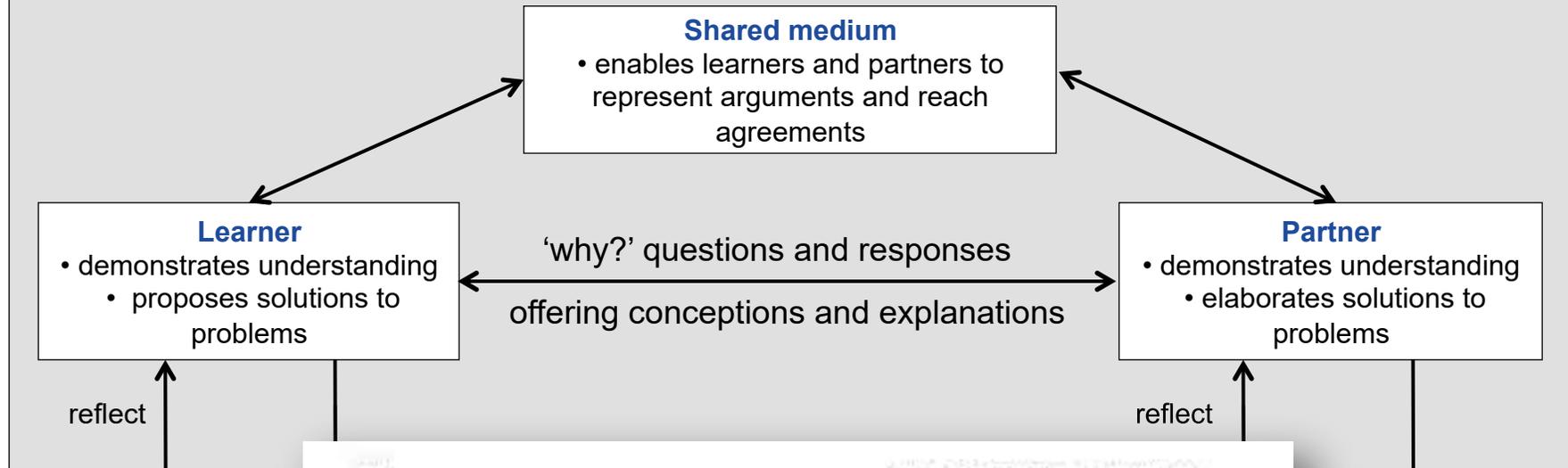
We converse with other learners to try and reach shared understanding







Level of descriptions



3.4 | YOU'VE COMPLETED 4 STEPS IN WEEK 3

What advice would you give?

As a result of what you've learned this week, what three pieces of advice would you give to a learner in your country to help them improve their listening?

© British Council

[D935 Join the discussion](#) [Mark as complete](#)

Learner

- acts to develop understanding
- acts to solve problems

Partner

- acts to develop understanding
- acts to solve problems

Labels: **reflect** (upward arrow from Learner to Shared medium), **adapt** (downward arrow from Partner to Shared medium).

Level of descriptions

Comparing and contrasting



Question 4

Giving contrasting data

It is noticeable that the 60-75 age group read more than 3 times the amount per day than the 20-30 age group. _____, the 20-30 age group spend 4 times more time than the 60-75 age group on the internet. (TWO CORRECT ANSWERS)

By contrast

However

In contrast

Learner

- demonstrates understanding
- proposes solutions to problems

reflect

adapt

Learner

- acts to develop understanding
- acts to solve problems

Level of actions

Massive scale conversational learning

Understanding IELTS, British Council, May 2015

270,000 learners

From 190 countries

For many, their first time learning online

25% on mobile devices

65,000 comments on the first video of the course



Social learning

Filtering	Following	Moderating	Roles
<p>COMMENTS</p> <p>Everyone Following Most liked Your comments</p> <p>Mike Sharplee</p> <p>Like in a comment? Well, this one only. You will be soon @ @ @ @ @</p> <p>0/1200</p> <p>OOI C-D Follow 21 SEP</p> <p>Agreed with the diverse views. However, despite the physical and emotional stress that exams bring, I have come to know that when we are well prepared, we get to do well. Even though I have had some bad exam experiences (all of them painful), I just dust myself off, learn from my mistakes and perform extremely well in the next attempt. Overall, I love exams as it give me an opportunity to evaluate my worth.</p> <p>Like 4 Reply</p> <p>Wajdan Alshahr Follow 22 SEP</p> <p>I totally agree that we may feel nervous about exams but they are also a good way to evaluate your own standard of the language skills. One can know his needs, strong and weak sides of the language acquisition and how to do well.</p> <p>Like 8 Reply</p> <p>Maria Kallayev Follow 21 SEP</p>	<p>PROFILE</p>  <p>Ingrid Freitas</p> <p>Activity</p> <p>20 Activity 154 Followers 21 Following</p> <p>Ingrid Freitas replied to Beedy Defica 04 OCT</p> <p>WHERE ARE YOUR #TITLE</p> <p>Great!! Haha! I already have a guide! Thank.</p> <p>Reply</p> <p>Ingrid Freitas replied to Ingrid Freitas 04 OCT</p> <p>WHERE ARE YOUR #TITLE</p> <p>Puppe and Maria, I'm falling in love for some places people has told me or showed me in Indonesia. I have to</p>	<p>COMMENTS AND THE COMMENTS THEMSELVES</p> <p>have talked are really helping me a lot. [A great hug to my "Our IELTS group" friends!!! :D:D:D)!!! (edited)</p> <p>Like 186</p> <p>Diogo Reis Follow 21 SEP</p> <p>This comment has been removed by a FutureLearn moderator</p> <p>Siti Ramadhani Yudatita Follow 21 SEP</p> <p>I'm one hundred percently agree with you guys. ^-^ I love our group :D</p> <p>Like 8</p> <p>Natalya Yakunina Follow 21 SEP</p> <p>Hugs to you, too, Ingrid! A</p>	<p>to learn English and be able to speak confidently. :)</p> <p>Like 7</p> <p>Rebecca White LEAD EDUCATOR Follow</p> <p>Hi Anna, I'm glad you found it! Welcome to the course</p> <p>Like</p> <p>Dagnare Dulak Follow 19</p> <p>My name is Dagnare. I am Polish. One year ago I have decided to stay in England and learn English. I am always looking for opportunities to realise my goals, as I hope it is a good idea to spend a little bit of time in some with these materials and with you of course. It is a good way to broaden my knowledge.</p> <p>Sign up</p> <p>Like 2</p> <p>Kevin Watters (EDUCATOR) Follow 19</p> <p>Welcome Dagnare :)) How do you find life in the UK? Is it very different from Poland?</p> <p>Like</p> <p>Dagnare Dulak Follow 19</p> <p>I am so sorry, but I will try to answer for all of your questions tomorrow. It is very late at this moment and I have to go to</p>

Is social learning at massive scale effective?

Massive-scale social learning

All these approaches need to work with huge numbers of learners, so that comments don't just flash past, and reputations can be built over time. That's why we decided to create a new massive-scale social learning platform, drawing on expertise from The Open University, BBC, social media designers, as well as our FutureLearn partners. It's a new way of learning.

<https://www.futurelearn.com/using-futurelearn/why-it-works>

Comparison of MOOC platforms prior to March 2015



Group	Description	FutureLearn	Coursera	edX
Registrants	Mean number of people who register for a course	12,753	87,000	52,605
Learners (% of registrants)	Registrants who visit the course	53%	54%	65%
Active learners (% of learners)	Learners who engage with course material	83% <small>'Mark as complete'</small>	83% <small>'Viewed lecture material'</small>	N/A
Social learners	Learners who post at least one comment	36%	9%	12%
Completing learners	Learners who complete the course	17%	5%	8%

Present

To enhance social learning on FutureLearn:

Conversational peer review

Adaptive support for reflection

Collaborative annotation

Peer mentoring

Supported small group tutoring

Can other pedagogies work at scale?



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Construction



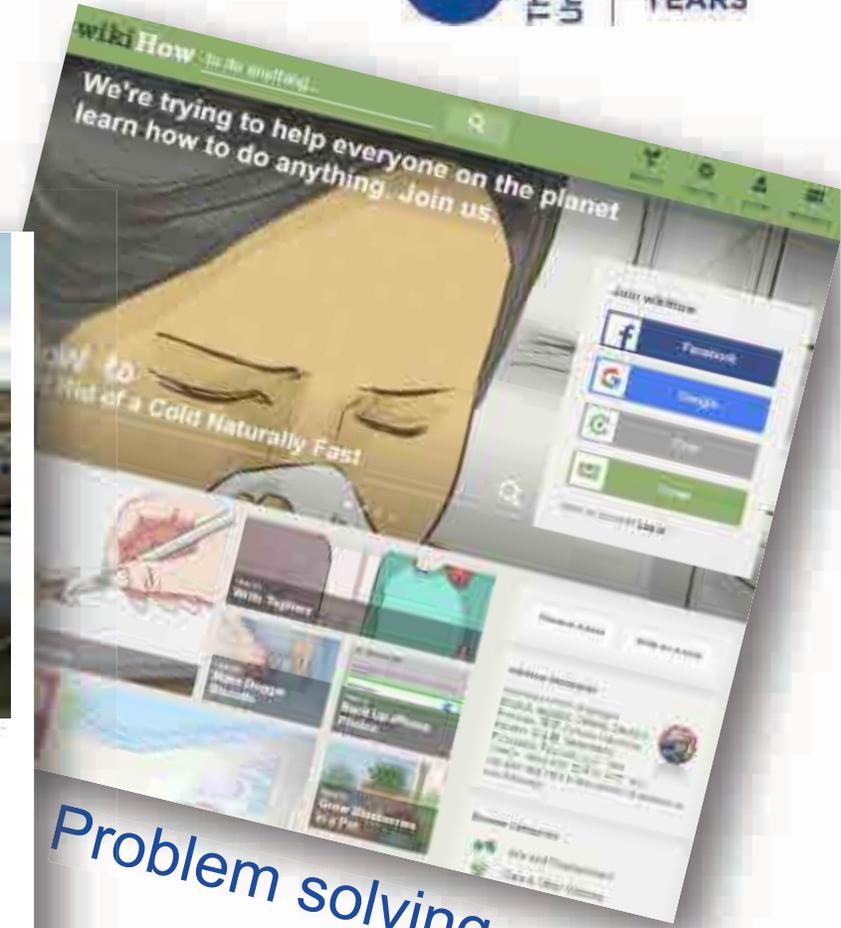
© Dr Matthew Naylor, University of Reading, 2017

Your impressions

We asked you to think about the range of facilities needed for the smooth running of the games. Did any of buildings surrounding the Colosseum surprise you?

Did you try 'sitting' in the various categories of seats within the digital model and did the different perspectives change your understanding of how people experienced the games?

Simulation

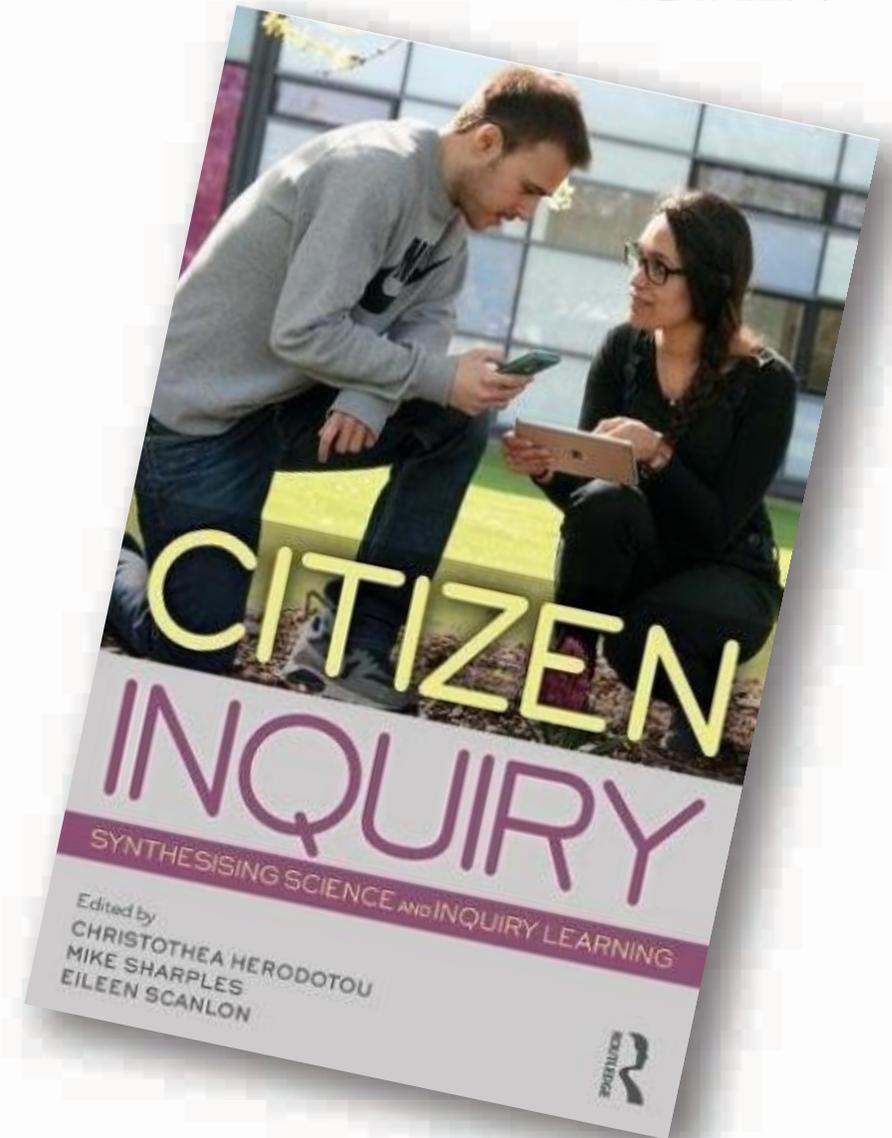


Problem solving

Inquiry at scale

Citizen Inquiry: Inquiry-led investigations into wellbeing and environment with members of the public

- citizen science
- + collaborative inquiry learning
- + crowdsourcing



nQuire platform

www.nquire.org.uk

Collaboration with BBC

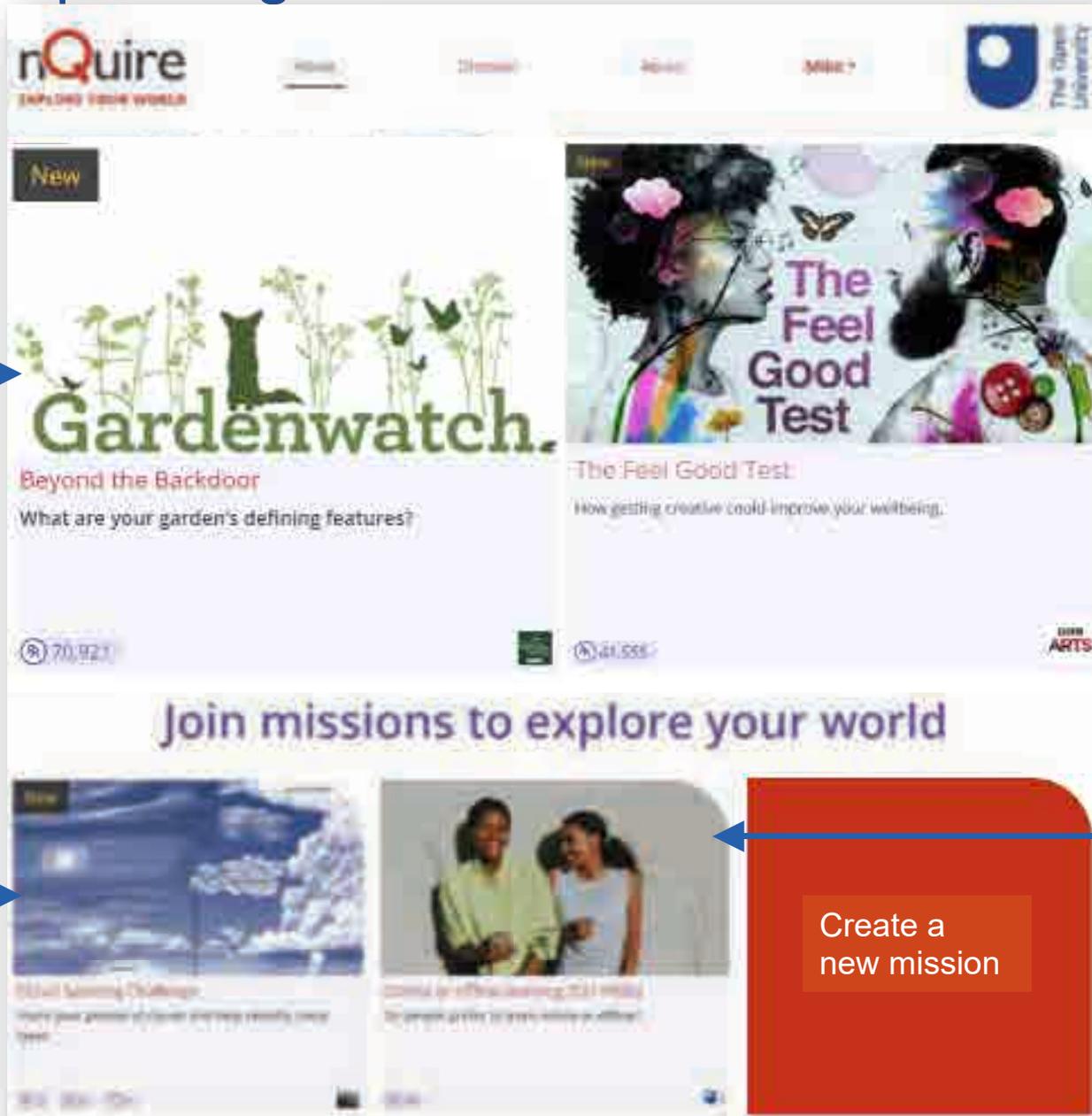
Extends citizen inquiry to include mass surveys

Confidential 'survey' missions, and open 'social' missions

'Explore myself and my world'



BBC/British Trust for Ornithology national survey of UK gardens. Over 70,000 completions.



BBC/UCL investigation into creativity and wellbeing, with personalised feedback. 41,000 completions. 70% completion rate.



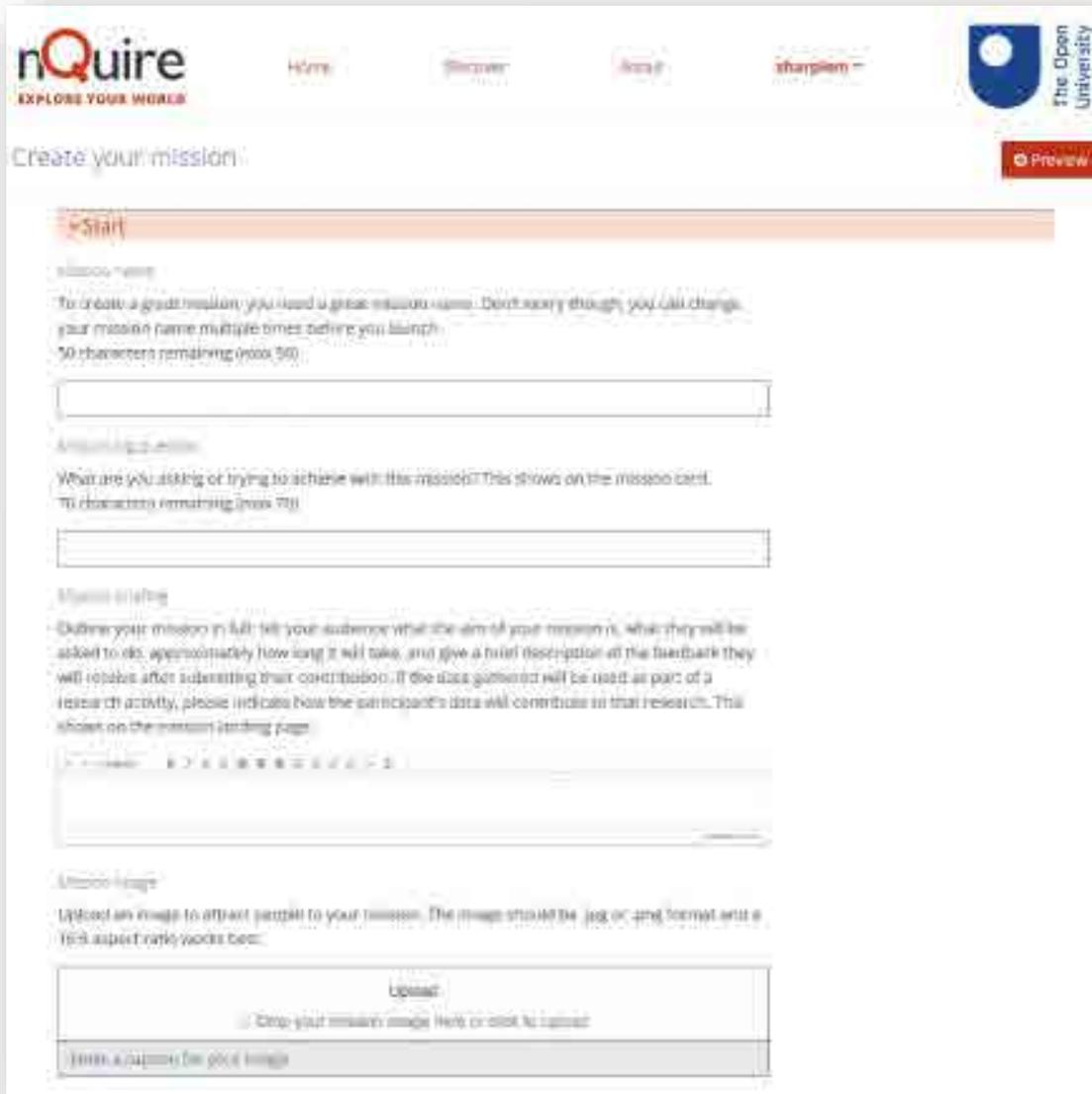
Open 'social' investigation to learn about clouds and weather



Students on OU FutureLearn course run investigations into online and offline learning



Open for authoring



nQuire
EXPLORE YOUR WORLD

Home Discover About sharpen

Create your mission Preview

Start

Mission name
To create a great mission, you need a great mission name. Don't worry though, you can change your mission name multiple times before you launch.
50 characters remaining (max 50)

Answer questions
What are you asking or trying to achieve with this mission? This shows on the mission card.
70 characters remaining (max 70)

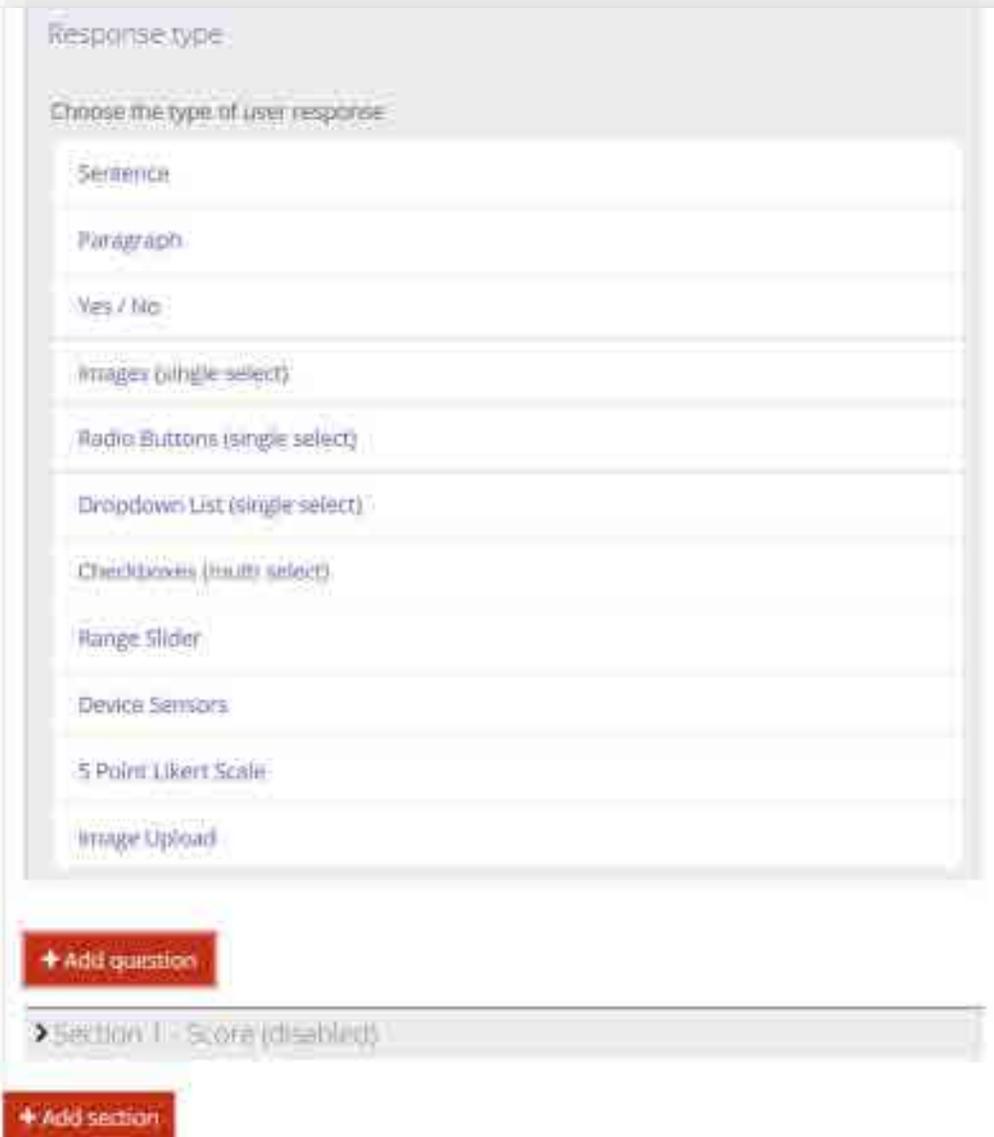
Terms of use
Outline your mission in full: tell your audience what the aim of your mission is, what they will be asked to do, approximately how long it will take, and give a brief description of the feedback they will receive after submitting their contribution. If the data gathered will be used as part of a research activity, please indicate how the participant's data will contribute to that research. This shows on the mission landing page.

Mission image
Upload an image to attract people to your mission. The image should be jpg or png format and a 16:9 aspect ratio works best.

Upload

Drop your mission image here or click to upload

Enter a caption for your image



Response type

Choose the type of user response

- Sentence
- Paragraph
- Yes / No
- Images (single select)
- Radio Buttons (single select)
- Dropdown List (single select)
- Checkboxes (multi select)
- Range Slider
- Device Sensors
- 5 Point Likert Scale
- Image Upload

+ Add question

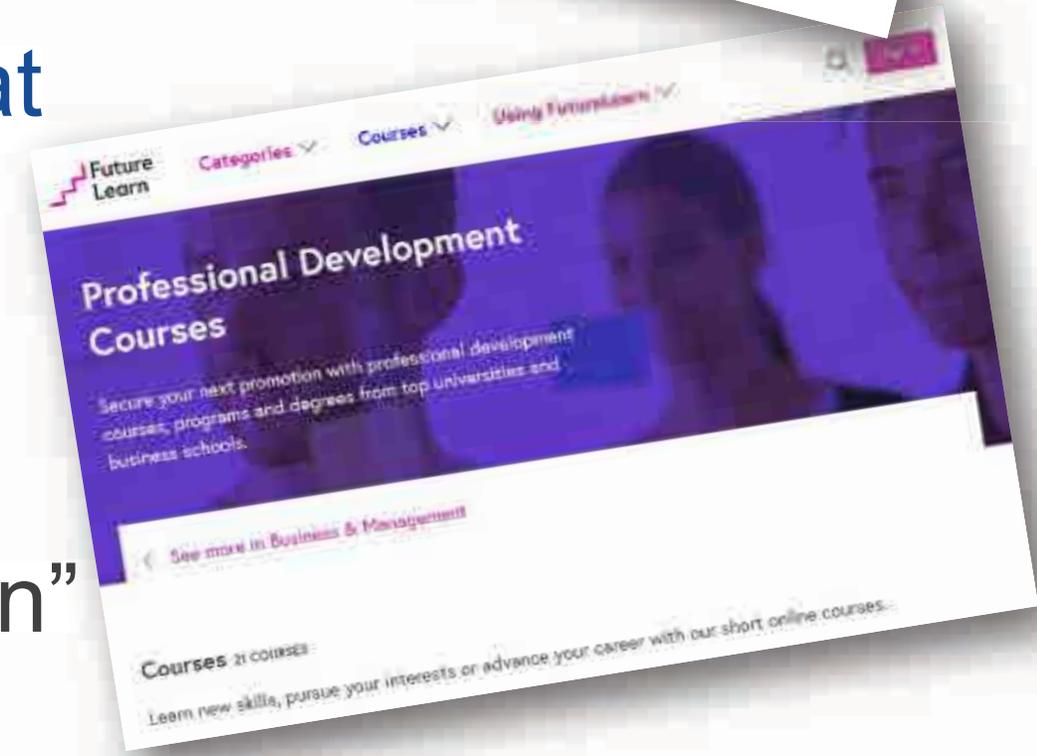
> Section 1 - Score (disabled)

+ Add section

Future

FutureLearn needs a pedagogy of professional development at scale, to extend the platform and fulfil its mission to “transform access to education”

FutureLearn takes \$65M from Seek Group for 50% stake in UK online degree platform



Pedagogy of professional development at scale

Social learning

to share workplace knowledge

Coached team learning

to develop and practise specific skills

Case-based learning

for problem solving and decision making

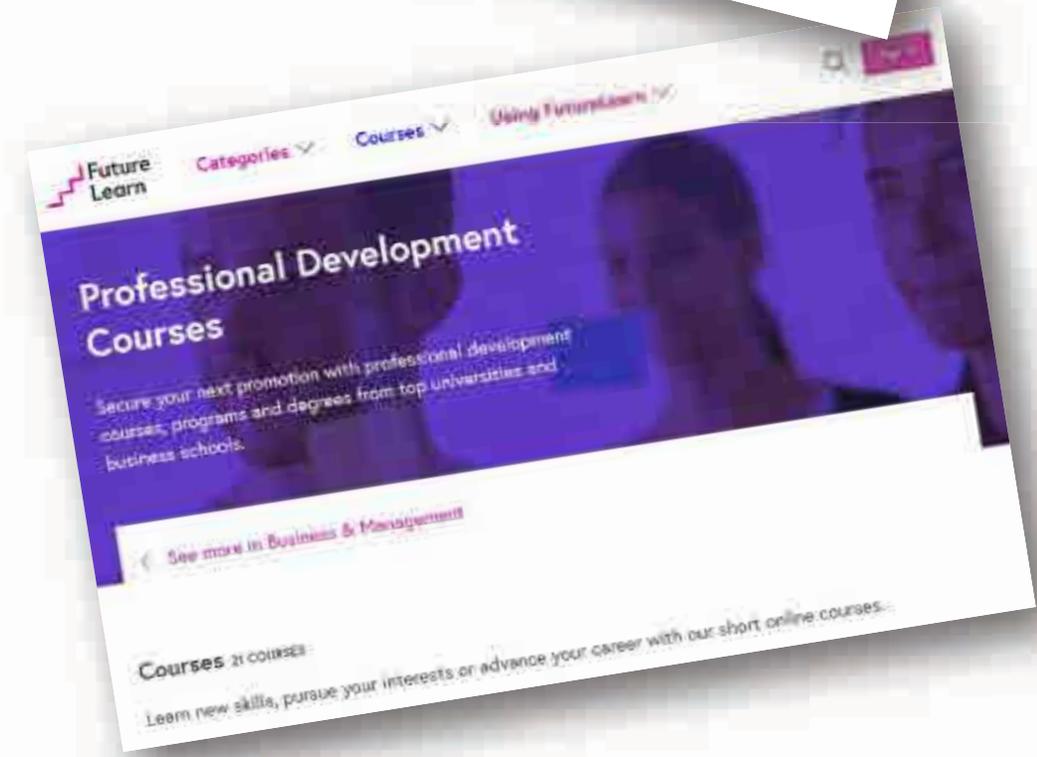
Experiential learning

to capture, share and reflect on situated experience

Competency-based learning

to achieve and demonstrate mastery

FutureLearn takes \$65M from Seek Group for 50% stake in UK online degree platform



Pedagogy of professional development at scale

Social learning

to share workplace knowledge

Coached team learning

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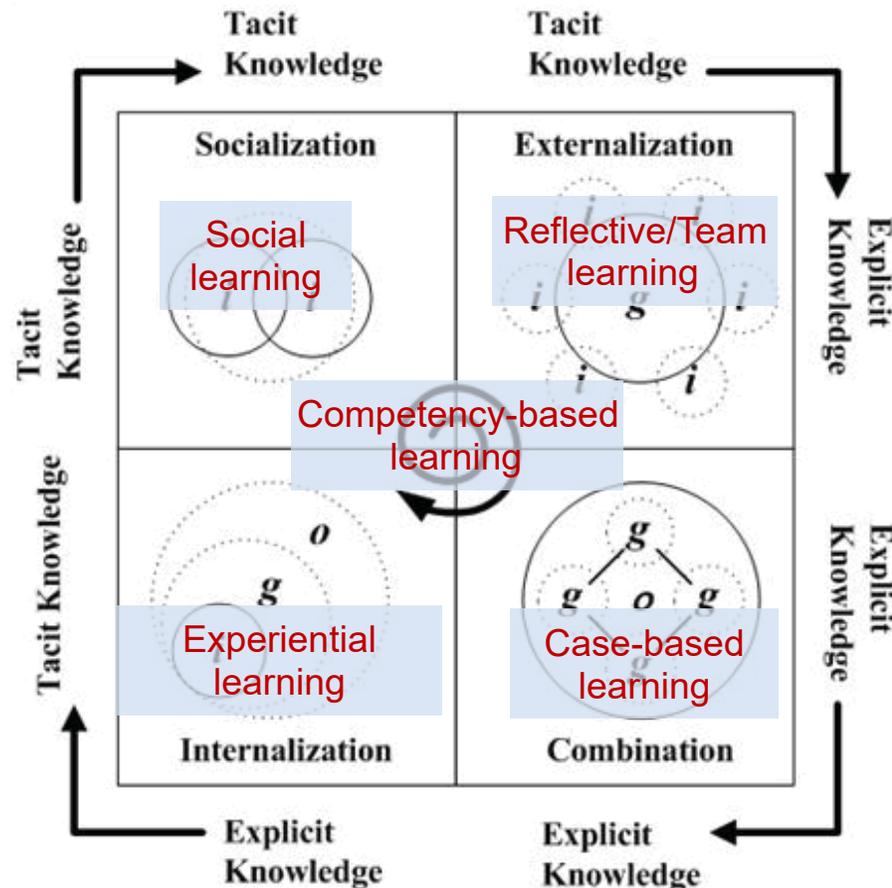
Experiential learning

to capture, share and reflect on situated experience

Competency-based learning

to achieve and demonstrate mastery

(Ikujiro Nonaka)



Legend
i - individual
g - group
o - organization

Pedagogy-informed design



Works for innovative educational technology
at massive scale