



Expanding the **'teacher function'**: speculative work on automation in teaching

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[http://bit.ly/
edteacher](http://bit.ly/edteacher)



Centre for Research in Digital Education & Learning, Teaching, and Web

Near Future Teaching

Distance Learning at Scale (DLAS)

MSc in Digital Education

Centre for Research in Digital Education

Digital Education with Cara (Syrian refugee academics)

UKRI GCRF Urban Disaster Risk Hub

Digital Education in Nigeria, Tanzania, Uganda

Digital Education in Nepal

Digital Education in Lebanon

UN Habitat

The World Bank

GSMA

USAID

DfID

Gates Foundation

British Council

BBC Media Action

GIZ

Mastercard Foundation

MOOCs

Course Design

Emerging technologies

Digital pedagogy

Children and technology

Datafication

Open education

SDGs

Mobilities

ICT4D





MSc in Digital Education



World-class Masters programme that will challenge your thinking about education and technological change

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Research-based teaching

The MSc programme is delivered by experienced teachers who are also active researchers in the field. Our programme is linked to the work of the Centre for Research in Digital Education.



Automation

- the technique of making a (teaching) process operate automatically
- valuing an expanded teacher presence
- exploring how human and non-human teachers might work together in a teaching 'assemblage'





Teacher Function

- “assemblage of teacher-student-code that might be pedagogically generative” (p. 465).
- teacher function= a combination of ‘living teacher presence’ working in tandem with ‘an assemblage of code, algorithm and teacher–student agency’ (p. 461).
- Bayne, S. (2015). Teacherbot: interventions in automated teaching. *Teaching in Higher Education*, 20(4), 455-467.



Google Scholar

Alerts

Alerts for Gallagher.MichaelSean@gmail.com

Terry Anderson - new articles Show up to 10 results CANCEL

Sally Matthews - new articles Show up to 10 results CANCEL

author:Niall author:Winters - new results Show up to 10 results CANCEL

Andreas Hepp - new articles Show up to 10 results CANCEL

intitle:"digital education" - new results Show up to 20 results CANCEL

postdevelopment theory technology - new results Show up to 10 results CANCEL

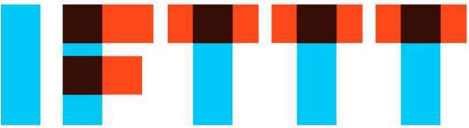
allintitle: critical mobilities - new results

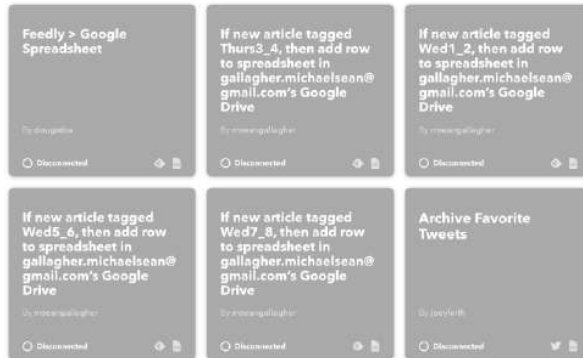
James Ash - new articles

Jeremy Knox - new articles

Larissa Hjorth - new results

Manuel G3mez Guadix - new articles

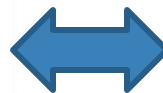

if this then that



The image shows a grid of six Zapier automation recipes. Each recipe is a grey card with a title, a description of the trigger and action, the user's name, and a 'Disconnected' status with a refresh icon.

- Feedly > Google Spreadsheet**: Trigger: 'By Douglas'; Action: 'To Douglas'.
- If new article tagged Thurs_4, then add row to spreadsheet in gallagher.michaelsean@gmail.com's Google Drive**: Trigger: 'By Michael Gallagher'; Action: 'To Michael Gallagher'.
- If new article tagged Wed1_2, then add row to spreadsheet in gallagher.michaelsean@gmail.com's Google Drive**: Trigger: 'By Michael Gallagher'; Action: 'To Michael Gallagher'.
- If new article tagged Wed5_6, then add row to spreadsheet in gallagher.michaelsean@gmail.com's Google Drive**: Trigger: 'By Michael Gallagher'; Action: 'To Michael Gallagher'.
- If new article tagged Wed7_8, then add row to spreadsheet in gallagher.michaelsean@gmail.com's Google Drive**: Trigger: 'By Michael Gallagher'; Action: 'To Michael Gallagher'.
- Archive Favorite Tweets**: Trigger: 'By Larissa Hjorth'; Action: 'To Larissa Hjorth'.





feedly





The screenshot shows the Evernote desktop application. At the top, there are six automation rules (Zaps) for connecting with Google Spreadsheets. Below these is a dashboard for a notebook named 'Intermediate Comp'. The dashboard displays several notes, including 'Intro-Final assignment(1) - The French Revolution', 'Final Essay: The Lack of Affection and Hate...', 'Intermediate: Final assignment 1- Reg...', and 'Final Essay: How can...'. The main note is open, showing the title 'Intro-Final assignment(1) - The French Revolution' and the text: 'Why and How did the current of the French revolution have widespread effects in your society? How do you feel that you talk about "Revolution"? Is it too destructive or violent? It is absolutely true. But revolution is one of the most important, valuable ways to change the social contradiction and corruption. I think that the reason why we study social science is to solve these problems and improve our status quo. Therefore it is worth searching for the mechanism of political revolution. Eric Ernst Hobsbawm, who was the most influential Marxist history scholar, emphasized the importance of the dual revolution in the European history(Hobsbawm, 1988). It means bourgeois revolution and industrial revolution. Of the two parts, I will focus on the bourgeois revolution and speak for the significance. There are a lot of historical changes in the history, but the French Revolution, which was one of the greatest movements in Europe, has influenced on the political regime change.'

If somebody has some experience it is easy to take a suitable course. One can either search by topic, language etc.. For users with less experience, finding suitable possibilities is challenging.

Evernote 20...2.57.12.wav
95.0 KB
Play

There are many courses offered by universities that require a certificate against additional payment. The general criticism that MOOCs are not equal to traditional education and additional privileges are only accessible after payment. Hodgkinson- Williams and Trotter describe the maldistribution.

Evernote 20...2.58.18.wav
43.2 KB
Play



Expanding the Teacher Function

- 2019-2020
- Research revolves around the 'teacher function' from Bayne 2015
- Many events with students and staff
- Supplementary data collection
- Generating use cases
- Categorising and analysing what this tells us about teaching
- Prototyping
- Testing
- Piloting



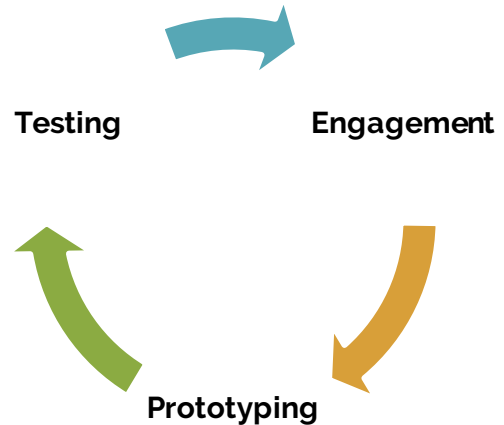


Expanding the Teacher Function

The future shouldn't be designed by FB and Cambridge Analytica.

The University of Edinburgh will determine what it wants for itself.

This is teacher and student-led R&D.





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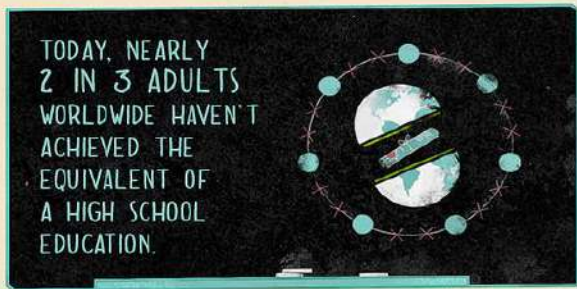


Why is this work necessary?

* some of the imaginaries of edtech in HE are grim (depending on how you feel about teachers)



In five years, the classroom will learn you.



TODAY, NEARLY 2 IN 3 ADULTS WORLDWIDE HAVEN'T ACHIEVED THE EQUIVALENT OF A HIGH SCHOOL EDUCATION.



THE CLASSROOM OF THE FUTURE WILL LEARN ABOUT INDIVIDUAL STUDENTS OVER THE COURSE OF THEIR EDUCATION AND HELP THEM MASTER THE SKILLS CRITICAL TO MEETING THEIR GOALS.



THE CLASSROOM WILL CREATE A SYLLABUS BASED ON INDIVIDUAL LEARNING STYLE AND PACE, NOT ON AN ARBITRARY TEACHING SCHEDULE.



THIS SYSTEM WILL LEVEL THE PLAYING FIELD BY ENSURING THAT BARRIERS TO EDUCATION BECOME LESS OF A FACTOR FOR SUCCESS.

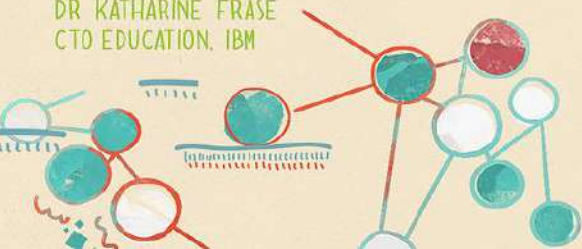


A SYSTEM FUELED BY SOPHISTICATED ANALYTICS OVER THE CLOUD WILL HELP TEACHERS IDENTIFY STUDENTS WHO ARE MOST AT RISK. PREDICT THEIR ROADBLOCKS AND THEN SUGGEST MEASURES TO HELP THEM OVERCOME THEIR CHALLENGES.



“ IN FIVE YEARS, THE CLASSROOM WILL LEARN ABOUT EACH INDIVIDUAL STUDENT, AND PROVIDE A TAILORED CURRICULUM FROM KINDERGARTEN THROUGH HIGH SCHOOL AND TOWARD EMPLOYMENT. ”

DR KATHARINE FRASE
CTO EDUCATION, IBM





FOCUS EDU

Real-time Feedback

Focus EDU provides a portal for teachers to receive real-time classroom attention feedback. Teachers can easily reflect on their teaching methods and content to achieve further improvements in class performance.



Ben Williamson @BenPatrickWill 1d

With the OECD and all the major global policy influencers pushing social-emotional learning as the solution to workforce automation, expect massive growth in next few years in student emotion detection research funding & commercialization of student affects

0 0 0 0

Intelligent campus

So how could it work?

Students enter their lectures as normal and take their seats with no need to sign in, scan ID cards or provide fingerprints. Once settled, a camera records the audience and forwards the image to a face recognition system. Individuals faces are recognised and matched with the student image held on the student records system. All students identified are recorded as present at the lecture. The camera records the audience several times during the session ensuring that the students attend the full lecture. Following the lecture the attendance record is then used to provide reports to the Home Office and the Student Loans Company as required. Also the attendance data is used to help build a picture of the students engagement and wellbeing along with course work submissions, recorded logins to university systems and a range of other data.



Ben Williamson @BenPatrickWill · Feb 28

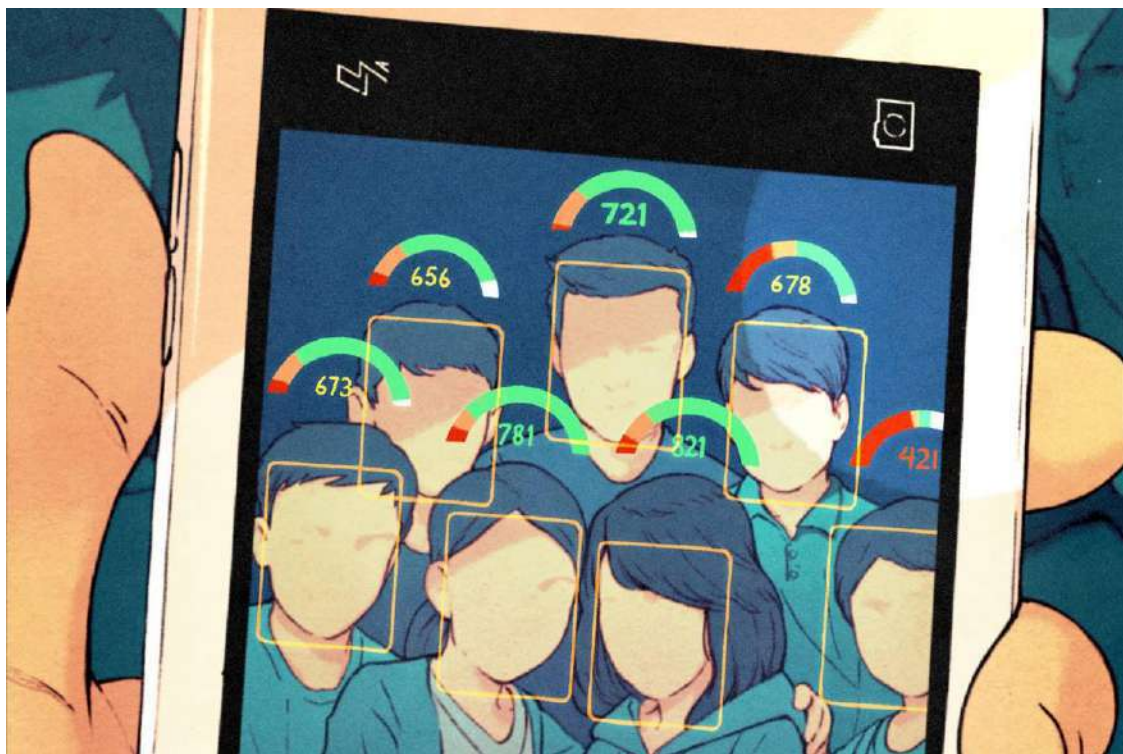
Interesting glimpse into the work that's going on to promote [#edtech](#) in **UK** - quite a mix of government, business, research, funding, & social impact strategy, ie an **edtech policy** network in the making



Will AI replace university lecturers? Not if we make it clear why humans matter

Cash-strapped universities might be tempted by AI tutors, but they cannot reproduce human creativity or insight





<https://www.wired.co.uk/article/china-social-credit-system-explained>





UNHCR and Zain Wallet use IrisGuard biometrics for refugee aid disbursement

🕒 Aug 23, 2019 | [Chris Burr](#)

CATEGORIES [Biometrics News](#) | [Financial Services](#) | [ID for All](#) | [Iris / Eye Recognition](#)

Iris biometric technology from [IrisGuard](#) is being used to provide identity verification for refugees in Iraq under a partnership between mobile wallet Zain Cash and the United Nations High Commission on Refugees (UNHCR).

Zain Cash is an Iraq-based mobile wallet, and subsidiary of regional telecom Zain Group, and will provide money transfer, electronic bill payment, and funds disbursement in Iraq with the new EyePay Cash platform, developed in partnership with IrisGuard. Iris



Emerging ID Technology Helps Refugees, at a Cost to Privacy

DHS and UNHCR are Sharing Biometric Data of Refugees

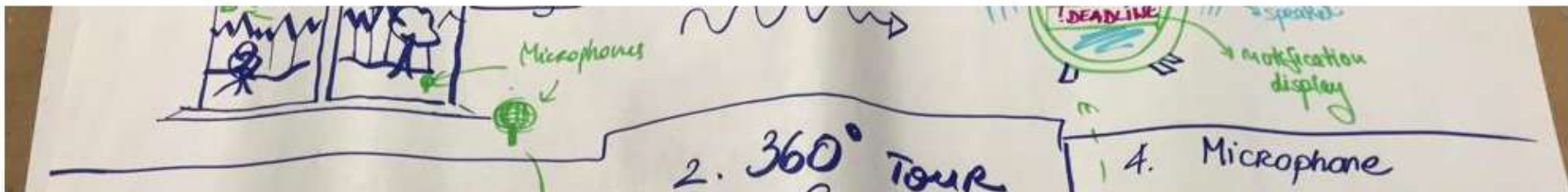
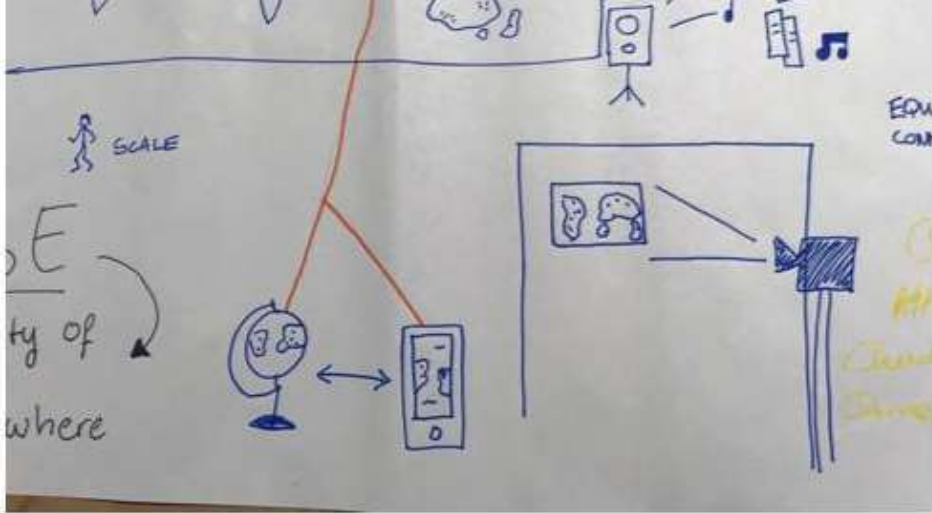
Posted on August 23, 2019

[Tweet](#) [Like](#) [Plus](#) [Pin It](#) [Share](#)

The US Department of Homeland Security (DHS) has been discreetly gathering the biometric information of tens of thousands of refugees, many of whom may never make it to America. According to a recent [Privacy Impact Assessment](#), the information is being collected through a sharing arrangement with the United Nations High Commissioner for Refugees (UNHCR), which sends profiles to federal agencies when referring refugees for resettlement.

The profiles include biographic information like name and date of birth, in addition to face, fingerprint, and iris data. These profiles





**Alternative imaginaries:
building the future**

4. Graduations
campus
tour



Co-designing a values-based future for digital education at The University of Edinburgh.



Where does this sit in our near future?

'Critically evaluate and build capacity for high quality automated assessment and feedback appropriate to disciplines, as a way of augmenting and supporting human assessment.'

THE UNIVERSITY of EDINBURGH

NEAR FUTURE TEACHING

Codesigning a values-based vision for digital education at the University of Edinburgh

www.nearfutureteaching.ed.ac.uk

Playful and experimental

Aim: enabling creative, academic and student-led R&D for digital education.



Manifesto for Teaching Online (2016)

'Automation need not impoverish education: we welcome our new robot colleagues.'

Manifesto for teaching online 2016 * Online can be the privileged mode. Distance is a positive principle, not a deficit. * Place is differently, not less, important online. * Text has been troubled: many modes matter in representing academic knowledge. * We should attend to the materialities of digital education. The social isn't the whole story. * Openness is neither neutral nor natural: it creates and depends on closures. * Can we stop talking about digital natives? * Digital education reshapes its subjects. The possibility of the 'online version' is overstated. * There are many ways to get it right online. 'Best practice' neglects context. * Distance is temporal, affective, political: not simply spatial. * Aesthetics matter: interface design shapes learning. * Massiveness is more than learning at scale: it also brings complexity and diversity. * Online teaching need not be complicit with the instrumentalisation of education. * A digital assignment can live on. It can be iterative, public, risky, and multi-voiced. * Remixing digital content redefines authorship. * Contact works in multiple ways. Face-time is over-valued. * Online teaching should not be downgraded into 'facilitation'. * Assessment is an act of interpretation, not just measurement. * Algorithms and analytics re-code education: pay attention! * A routine of plagiarism detection structures-in distrust. * Online courses are prone to cultures of surveillance. Visibility is a pedagogical and ethical issue. * Automation need not impoverish education: we welcome our new robot colleagues. * Don't succumb to campus envy: we are the campus.
* Written by teachers and researchers in Digital Education, University of Edinburgh - www.de.ed.ac.uk





padlet

Michael + 14 @ 4h


IDEL 2019: Technology and the Teacher

Expanding the Teacher Function

My Favourite Things bot @FavThingsBot

After exploring many different Twitterbots, this still remains my favourite. This bot assembles text in more or less the correct rhythm and rhyme to create lyrics which fit with the tune of My Favourite Things from The Sound of Music. I particularly like it as the words do scan and I love singing along using the Twitterbot's words as I often enjoy making up my own words for songs. :D I'm not convinced it has any specific practical use apart from demonstrating how you can make up new lyrics to an existing melody. Fun though!



Jane



My bot of the week: @tinycarebot


This bot sends you reminders every hour for self care. Some are very cute, and it did make me look away from the screen every now and then and I even found myself getting up from my desk for a glass of water after it's reminder. :)

Joy Christensen



Auto Charts (@autocharts)

I like to imagine topics and issues in mind maps, diagrams, charts and other graphic




Tweet my Cloud Bot @TwitCloudBot

This bot creates a word cloud of all your most commonly tweeted words! My cloud really was an eye opener when I looked at the bigger words versus the smaller ones. The bigger word reflected more on the aspects that didn't really make me unique from my own perspective but I guess not the perspective of the Bots. Try it out!

Here is my cloud


Dima Kandalaf:



Deep Question Bot @deepquestionbot

Having trawled through the web to see what interesting bots that were out there I saw this one and kept coming back to it, for no other reason other than I found it amusing. Really asking those deep rooted questions like 'why must a newspaper be rolled?' and 'Why must a chowder be a soup? is a bisque a soup as well?' Despite 'not being on the Twitter' myself, I did find it quite amusing looking through these. It does waste a lot of time instead of studying!!


Marcello



Bot in the Woods @botinthewoods

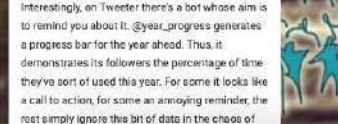
@congressedits used to be my favorite, it showed anonymous Wikipedia edits that are made from IP addresses in the US Congress. It has been suspended... no comment.

To get over my anger on that, I like @botinthewoods. It generates animated GIFs of strolls through a forest.




@year_progress

The time flies they say. Interestingly, on Tweeter there's a bot whose aim is to remind you about it. @year_progress generates a progress bar for the year ahead. Thus, it demonstrates it's following the percentage of time they've sort of used this year. For some it looks like a call to action, for some an annoying reminder, the rest simply ignore this bit of data in the chaos of




@TinyCareBot

I'm with Joy on Tiny Care Bot. We are exposed to so much information on a daily basis. Any new

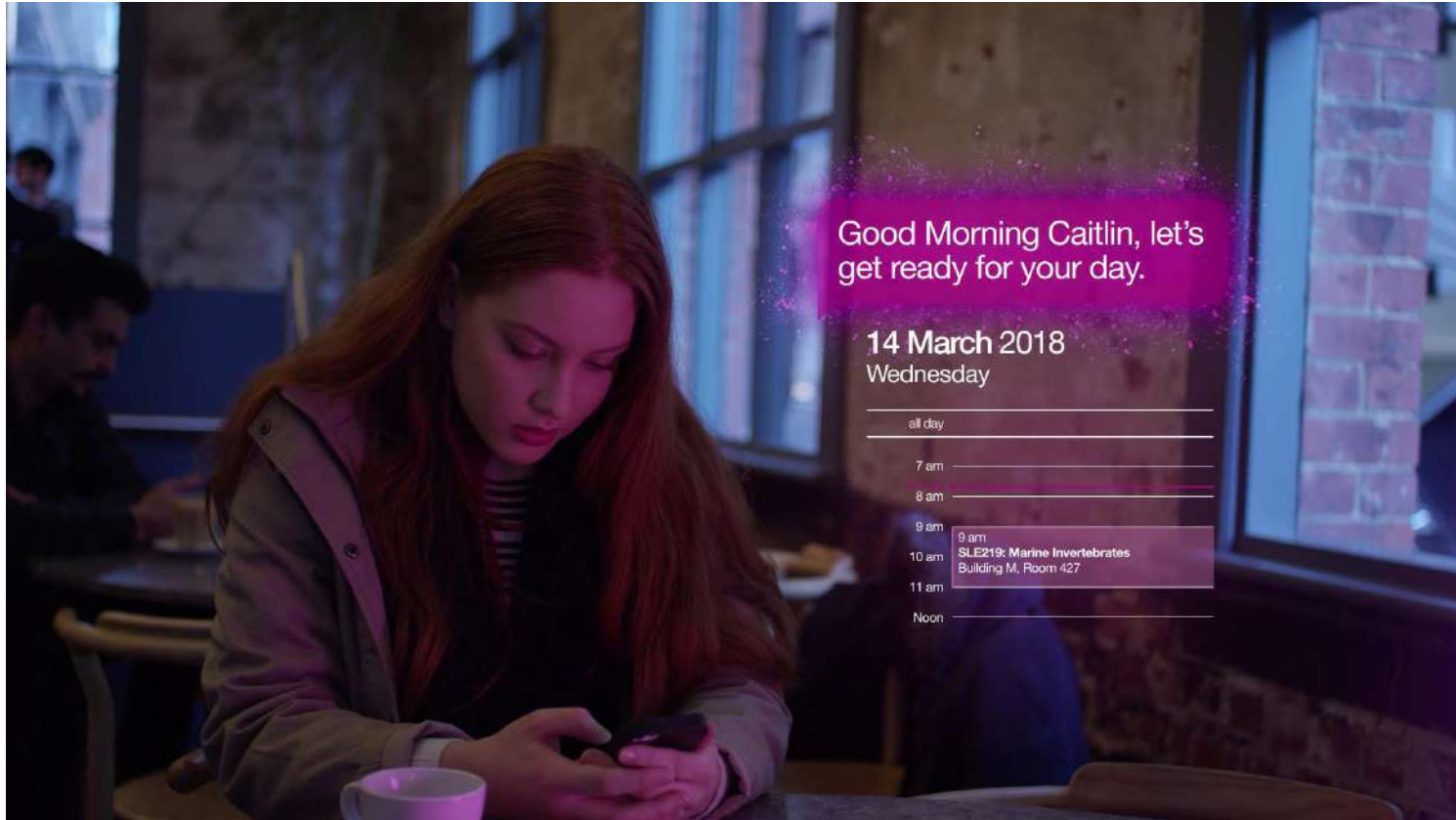


Every Color Bot @everycolorbot

Just a really nice bot that tweets every colour. It looks at the hex code in the last

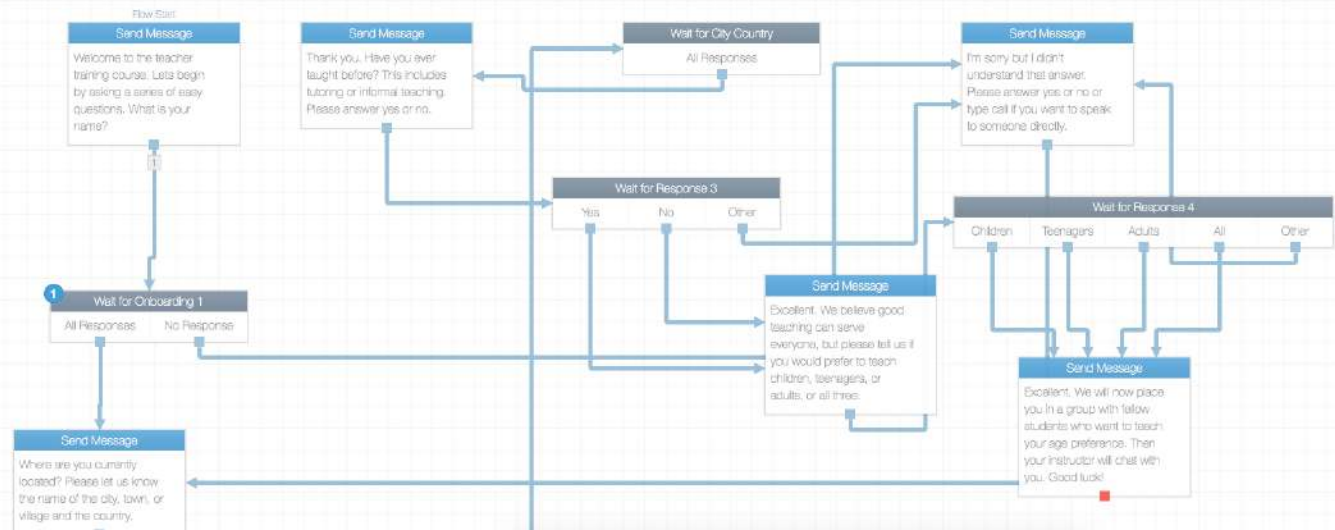








Mobile Teacher Training: Onboarding and Orientation





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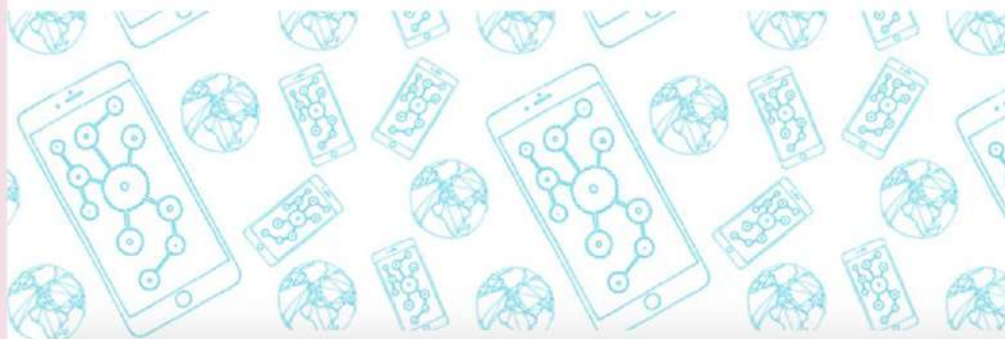
TEACHERBOT

HOME

TEACHERBOT FAQ

SIGN UP

LIVE BOTS



Search...

- RECENT POSTS -

Teacherbot Dev-Log #3: The End of
the Beginning

Teacherbot Dev-Log #2: On the Rise

Teacherbot Dev-Log #1: Z.I.P.



[http://bit.ly/
edteacher](http://bit.ly/edteacher)

Expanding the Teacher Function



- The practices and pedagogies emerging in engagements with emerging technologies are poorly understood or in a state of 'not-yetness' (Collier and Ross 2017).
- 'Working with the not-yetness of digital education means engaging with complexity, uncertainty and risk, not as factors to be minimised or resolved, but as necessary dimensions of technologies and practices which are unknown and in flux' (Ross 2017: 214)



Ross, J. (2017). Speculative method in digital education research. *Learning, Media and Technology*, 42(2), 214-229.

Expanding the Teacher Function

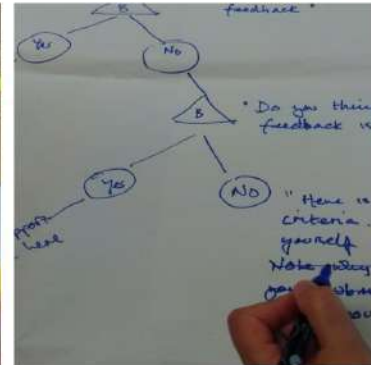
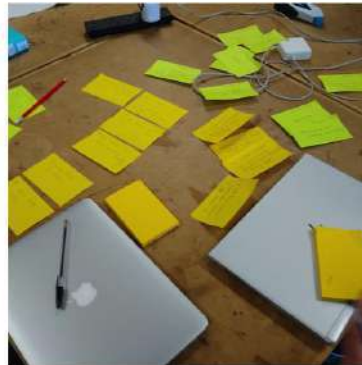
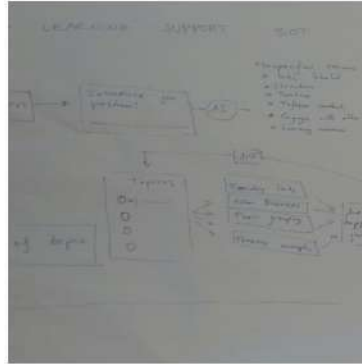


Teacher Function

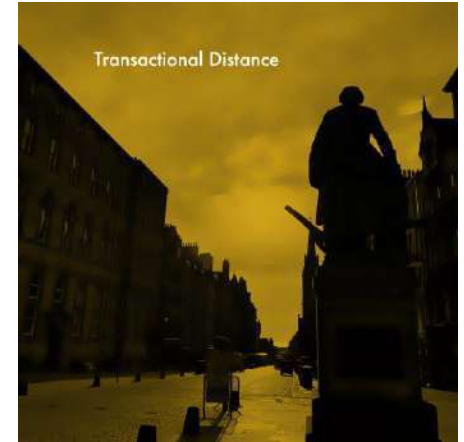
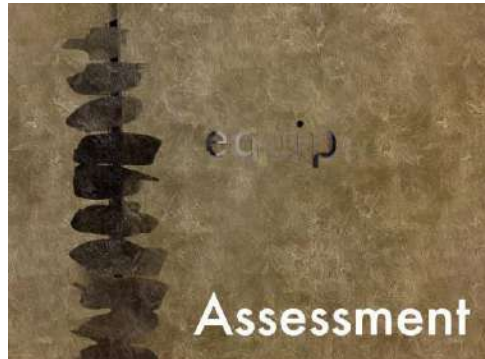
1. Scope/scale/space
2. 'Proper' teaching
3. 'Contact time'

Teaching Sequences

1. Rethinking practice with or without automation
2. Redefining contact



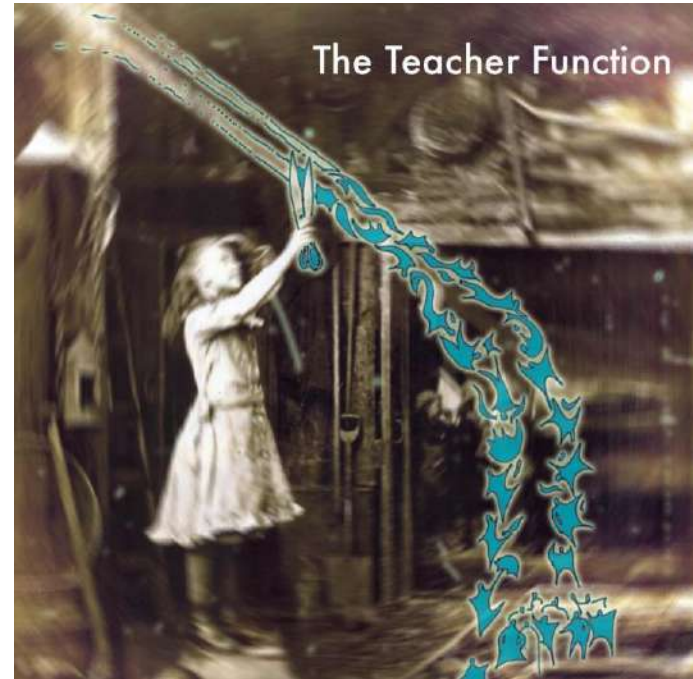
Typology



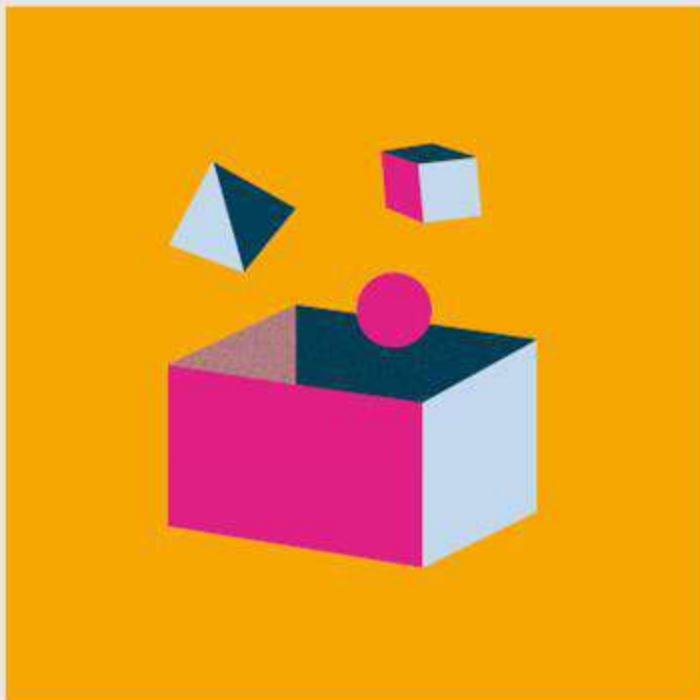


Evaluation Criteria

1. Expanding the teacher function: pedagogically generative
2. Expanding the research function: research generative
3. Expressions of university values*
4. Potential impact on the student and teaching experience
5. Ethical
6. Professionalising



Remix of Adam Diston: Cutting a Sunbeam (1886)



Experience over assessment

Learning should not be over-assessed and instrumentalised.

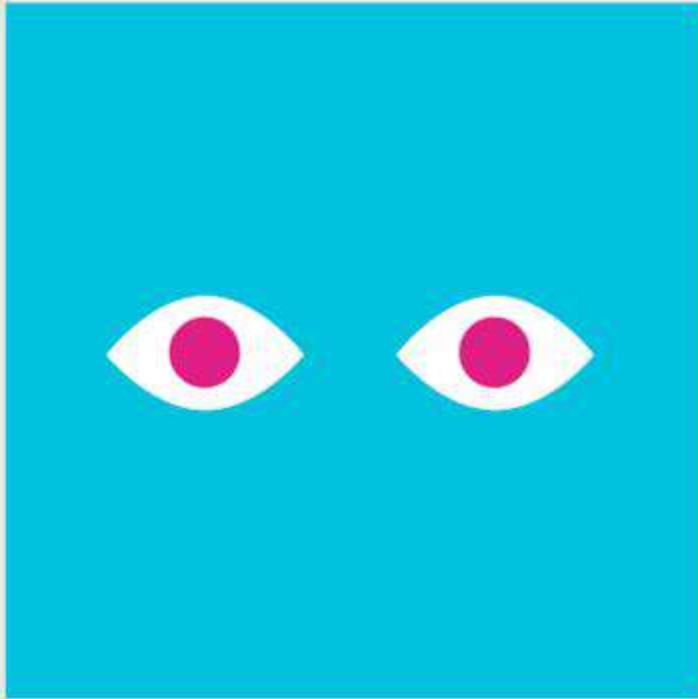
Teaching should share a focus on employability and success with an understanding of the value of rich experience, creativity, curiosity and – sometimes – failure.



Diversity and justice

Education should design-in meaningful diversity and real inclusion across all areas of activity.

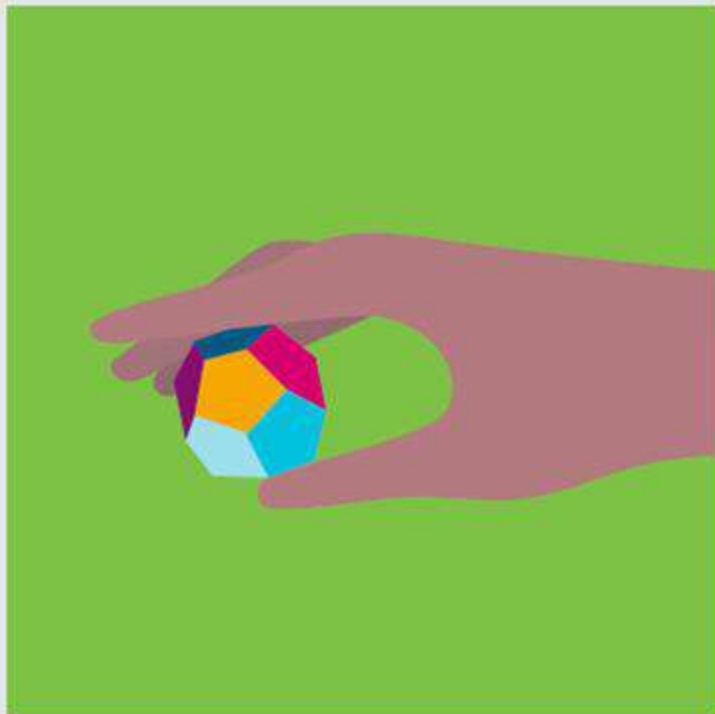
All near future teaching should further social responsibility and global justice.



Relationships first

Relationships, dialogues and personal exchanges between students and staff build understanding in a way that is not possible via transmissive forms of teaching.

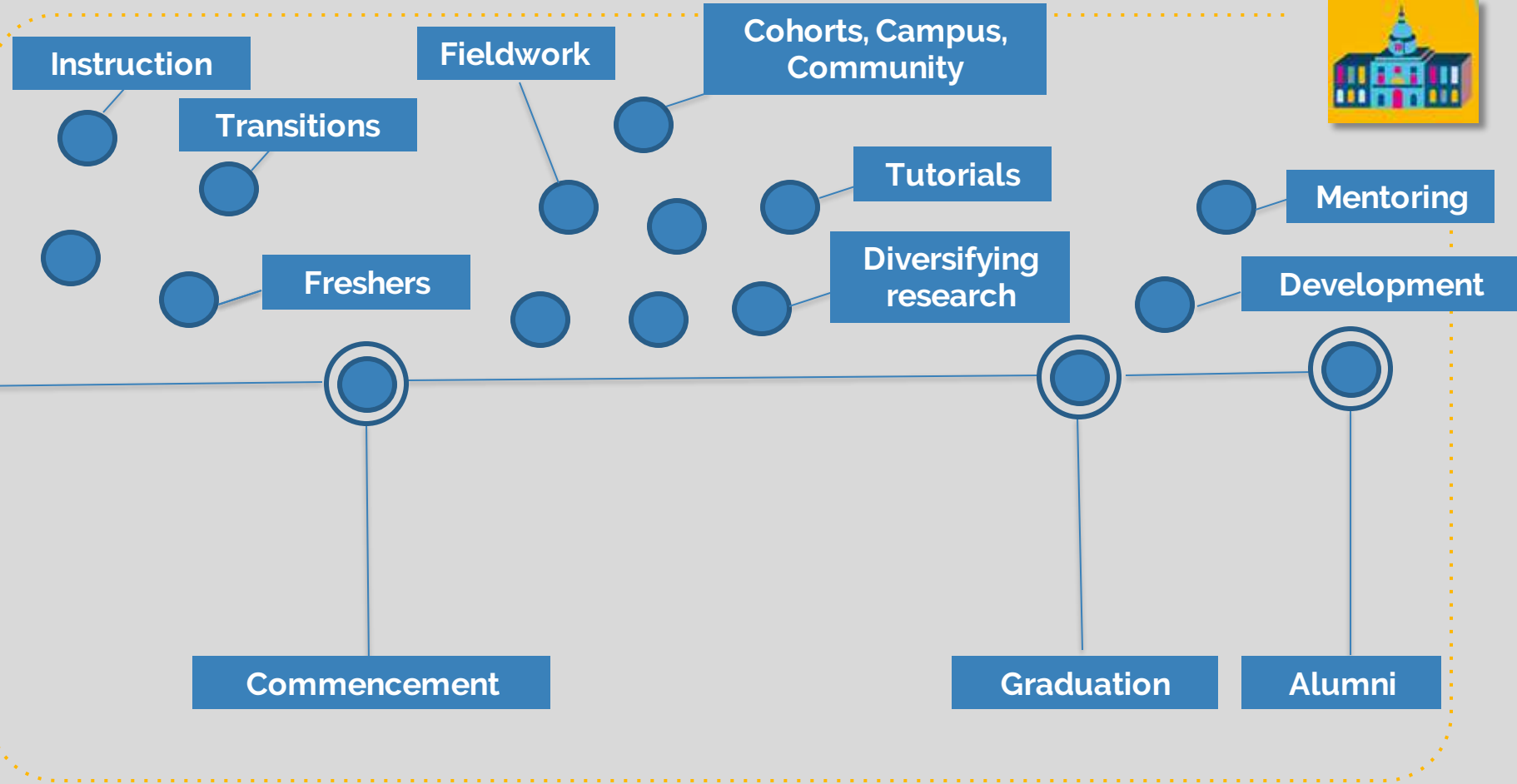
Teaching should be designed to provide the time and space for proper relationships and meaningful human exchange.



Participation and flexibility

The University community should cooperatively shape how – and what – it learns and teaches.

Flexibility for individuals, fluency across disciplines and cooperative responsibility for curricula should shape near future teaching.





Expanding the Teacher Function

Transitions

Instruction

Freshers

Support

Demystifying
the university

Fieldwork

Diversifying
research

Tutorials

Dissertation
modularity

Cohorts, Campus,
Community

Development

Mentoring



<http://bit.ly/edteacher>

Summing up



- 1. Teaching is...**
- 2. Contact time**
- 3. Diversity / diversifying**
- 4. Time and temporal orders**
- 5. Peripheral participation**



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