

<b>Institution:</b> University of Edinburgh		
<b>Unit of Assessment:</b> 30 (Philosophy)		
<b>Title of case study:</b> Massive Open Online Learning in Philosophy: Engaging new learners, enhancing the effectiveness of teachers, and improving strategies for online learning		
<b>Period when the underpinning research was undertaken:</b> 2008 – 2018		
<b>Details of staff conducting the underpinning research from the submitting unit:</b>		
<b>Name(s):</b>	<b>Role(s) (e.g. job title):</b>	<b>Period(s) employed by submitting HEI:</b>
Matthew Chrisman	Professor of Ethics & Epistemology	Aug 2006 – present
Andy Clark	Professor of Logic & Metaphysics	Aug 2004 – Dec 2018
Allan Hazlett	Reader in Philosophy	Nov 2010 – Dec 2018
Michela Massimi	Professor of Philosophy of Science	Jul 2012 – present
Duncan Pritchard	Professor of Epistemology	Jul 2007 – Sep 2020
Alasdair Richmond	Senior lecturer	Sep 2004 – present
<b>Period when the claimed impact occurred:</b> August 2013 – December 2020		
<b>Is this case study continued from a case study submitted in 2014?</b> N		
<b>1. Summary of the impact</b>		
<p>Questions about the nature of morality, truth, and science are of huge importance to audiences across the world, but differences in educational opportunity mean that not everyone can engage with these questions in a critical manner. Research spanning the Philosophy department led to the creation of 2 Massive Open Online Courses (MOOCs): <i>Introduction to Philosophy</i> and <i>Philosophy and the Sciences</i>.</p> <p>These MOOCs <b>improved access to current philosophical ideas</b> for diverse learners (568,392 enrolments from 184 sovereign states); <b>changed learners' perspectives and goals; increased learners' understanding</b> of philosophical research at Edinburgh; changed <b>teaching resources</b> in a range of international settings (50,108 non-HEI teachers used, or planned to use, the MOOCs for education purposes); and <b>informed other online learning initiatives</b> globally, e.g. the University of North Carolina (USA) and KU Leuven (Netherlands) were inspired to launch their own Philosophy MOOCs.</p>		
<b>2. Underpinning research</b>		
<p>Research from across Edinburgh Philosophy formed the basis of the MOOCs. 11 academic staff members were filmed, and MOOC content drew on research of at least 12 further staff members. Underpinning research for the MOOCs was consequently extremely broad, including at least 67 journal articles, 40 book chapters, and 18 monographs.</p> <p>The following 6 MOOC topics (out of 17) provide a sample of how individual MOOC topics were underpinned by research outputs (associated research funding for these outputs was GBP1.9 million). A full picture of the underlying research base for the MOOCs was outlined for learners on the “@Edinburgh” webpages of the MOOCs.</p>		
<ol style="list-style-type: none"> <li>1. “Morality: Objective, Relative or Emotive?” (<i>Introduction</i>, topic 2): <b>Matthew Chrisman</b> argues that the three main approaches to morality – objectivism, relativism, and emotivism – are not rivals and can be synthesised in a unified treatment, a view he explores in his monograph, <i>The Meaning of ‘Ought’</i> [3.1].</li> </ol>		

2. “What is Knowledge? And Do We Have Any?” (*Introduction*, topic 3): **Duncan Pritchard** argues for an approach to knowledge he calls “anti-luck epistemology” – knowledge must involve both an “anti-luck” and an “ability” condition, a position he defends in his article, “Anti-luck virtue epistemology” [3.2].
3. “Should You Believe What You Hear?” (*Introduction*, topic 5): **Allan Hazlett** argues in the context of the debate between Hume and Reid on testimony that intellectual autonomy is valuable, not only for individualistic reasons, but also because it would bring broader socio-political benefits, a view he defends in his article, “The social value of non-deferential belief” [3.3].
4. “Time Travel and Philosophy” (*Introduction*, topic 9): **Alistair Richmond** argues that special and general relativity are consistent with a sentient agent having a finitely long personal life that extends infinitely far into the past and future, a view he defends in his article, “On behalf of spore gods” [3.4].
5. “Dark Matter and Dark Energy” (*Sciences*, topic 3): **Michela Massimi** argues that discrepancies in current models of galaxy formation can be remedied either by adding new entities (dark matter/energy), or by modifying the underlying theory (Newtonian gravity). She explains how this is an example of underdetermination of theory by evidence in her article, “Three problems about multi-scale modelling in cosmology” [3.5].
6. “Embodied Cognition” (*Sciences*, topic 4): **Andy Clark** argues that cognition is not always a brain-based process. Our cognitive processes sometimes recruit mechanisms in our body and external environment, a position he defends in his monograph, *Supersizing the Mind* [3.6].

No prior knowledge of philosophy among learners was assumed. The aim was to introduce underpinning research in a way that would be accessible, engaging, and clear to new audiences. Links between specific journal articles/monographs and MOOC content were forged for learners in three ways:

1. Key findings from research outputs were discussed directly by authors in their MOOC videos, after introducing them via motivating questions and the surrounding context.
2. “@Edinburgh” webpages for each MOOC topic provided a lay description of the Edinburgh research underpinning the topic and a summary of the key research findings, relevant publications, and hyperlinks to open-access research (approximately 1,000 words per MOOC topic; 17,000 words in total).
3. A textbook accompanied each MOOC. Each chapter was written by the staff member who taught the MOOC topic and aimed to help bridge gaps in understanding between their research and expected learner’s knowledge (approximately 6,000 word chapters for each MOOC topic).

### 3. References to the research

- [3.1] **Chrisman, M.** (2016). *The Meaning of ‘Ought’: Beyond Descriptivism and Expressivism in Metaethics*. Oxford: Oxford University Press.  
<https://doi.org/10.1093/acprof:oso/9780199363001.001.0001> (can be supplied by HEI on request)
- [3.2] **Pritchard, D.** (2012). “Anti-luck virtue epistemology.” *Journal of Philosophy* 109/3: 247–279. <https://www.jstor.org/stable/43820700>
- [3.3] **Hazlett, A.** (2016). “The social value of non-deferential belief” *Australasian Journal of Philosophy* 94/1: 131–151. <https://doi.org/10.1080/00048402.2015.1049625>

- [3.4] **Richmond, A.** (2017). "On behalf of spore gods." *Analysis* 77/1: 98–104.  
<https://doi.org/10.1093/analys/anx042>
- [3.5] **Massimi, M.** (2018). "Three problems about multi-scale modelling in cosmology", *Studies in History and Philosophy of Modern Physics* 64: 26–38.  
<https://doi.org/10.1016/j.shpsb.2018.04.002>
- [3.6] **Clark, A.** (2008). *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*. Oxford: Oxford University Press.  
<https://doi.org/10.1093/acprof:oso/9780195333213.001.0001> (can be supplied by HEI on request)

#### 4. Details of the impact

*Introduction to Philosophy* was launched in spring 2013 as one of the first UK MOOCs. *Philosophy and the Sciences* launched in October 2014. In 2016, *Sciences* was split into two "mini" MOOCs focussed on the *Physical* and *Cognitive* sciences respectively. All of the MOOCs were free for learners to take.

##### Engaging new audiences with philosophy

The MOOCs **enabled learners from diverse backgrounds to access philosophy**, many for the first time. Between August 2013 and August 2019, there were 326,598 enrolments for *Introduction*, and 128,938 enrolments for the *Sciences* courses [5.1, pp. 11, 12], with the learners being drawn from 184 out of 195 sovereign states as recognised by the UN [5.1, p. 33].

25% of *Introduction* learners, and 21% of *Sciences* learners, did not have a university degree (142,099 people) [5.1, p. 16]. In a survey of course alumni (629 respondents), 54% of *Introduction* learners, and 25% *Sciences* learners, said the course was their first encounter with academic philosophy [5.1, p. 3].

37% of learners came from outside Europe and North America, and 52% of learners did not have English as their first language [5.1]. Learners voluntarily posted transcripts of course videos and translated them into 16 languages. In 2016, a full Chinese-language version of *Introduction* was created by the hosting platform (Coursera) in response to demand from China, generating 13,015 enrolments between 2016 and 2018 [5.2].

The reach of these courses is unusual in the humanities. In 2017, *Introduction* was ranked the 17th all-time most popular MOOC across all subject areas and all providers. Only 9 humanities MOOCs made this global top-50 list, including only 1 other philosophy MOOC (*Introduction* was the higher ranked of the two) [5.3]. Alongside the British Council, Edinburgh (with *Introduction*) was the only non-US MOOC provider listed inside the top 50. Within the UK, *Introduction* was ranked 7th and *Sciences* ranked 20th most popular MOOC by enrolment in 2016; they were also the only philosophy courses that made this list [5.4].

Compared to more formal educational approaches, completion rates tend to be lower in the MOOCs sector. According to FutureLearn (the UK's largest MOOC provider), 7% of learners who begin one of their courses complete it. Completion figures are comparable for *Introduction* (6% completion rate), and markedly higher for *Sciences* (17% average completion rate) [5.1, p. 14].

The MOOCs **increased understanding of the underpinning Edinburgh research**. 88% of learners testified that it was "valuable" to hear about contemporary Edinburgh research [5.1, p. 21]. Learner Stories (free-text feedback collected by Coursera) include references to how the courses "changed my perspective on algorithms, computers, and human mind" (*Cognitive Sciences*), and being "totally absorbed by debates on the very nature of scientific knowledge" (*Physical Sciences*). From the overall positive reception of the MOOCs, it was evident that the focus on contemporary research, rather than a simple historical overview, was appreciated by learners, for example:

“What I particularly liked about the course [...] was the fact that the material was very up-to-date.” [5.1, p. 23]

Learners reported that the courses “improved their understanding” of specific Edinburgh research outputs. For example, with respect to the research outputs [3.1]–[3.6], 74%, 79%, 65%, 49%, 72%, 65% of learners agreed with that statement respectively [5.1, p. 21].

The MOOCs **inspired learners to engage further with philosophy**. 87% of learners said they had undertaken further reading or study of philosophy because of the MOOCs [5.1, p. 19]. The optional accompanying textbooks sold 6,100 copies (December 2017) [5.5]. Feedback from Learner Stories describes learners advancing to read source texts, such as this *Introduction* student, reading Pritchard’s monograph on epistemology:

“I am just reading *What is [this] Thing Called Knowledge* - not easy but interesting.” [5.1, p. 18]

Others cited the MOOCs in their decision to study philosophy:

“I have been out of education for over 15 years and this has encouraged me to enrol in further philosophy courses.” [5.1, p. 19]

The MOOCs also **changed learners’ wider perspectives**. 77% of learners said the courses changed the way they think about the world [5.1, p. 3]. The courses acted “like a door to open a new world of perspectives”, or enabled participants to “learn the necessary skills [...] to become a better thinker in this digital age” [5.1, p. 24]:

“I learnt that it is in fact okay to question EVERYTHING ABOUT EVERYTHING. I am now able to approach and appreciate all subject matter in a way that I would have never been able to before.” [5.1, p. 24]

### Impact on educational practice

The MOOCs **changed teaching resources and delivery**. 10% of learners (50,108 people) were education practitioners. In a survey, 21% confirmed that they had or planned to use the MOOCs for education purposes [5.1, p. 28]:

“I took the course because I am a Philosophy teacher in High school and I wanted to improve as an individual. Everything about the course was just perfect.” [5.1, p. 27]

Teachers reported using MOOCs for lesson planning, materials, and leadership teaching. One learner notes that the section on embodied cognition will help “in my job in the education sector, particularly in our current thinking about meta-cognition and self-talk” [5.1, p. 27]. MOOCs were used to bolster teaching provision in existing philosophy courses: exploring points further, supporting reading groups, or as pre-course watching for A-Level Philosophy [5.1, p. 28].

The MOOCs influenced teaching internationally: *Introduction* is a pre-requisite for the Bachelor of Elementary Education in Mindano State University, Philippines; *Cognitive Sciences* is recommended for students at Moscow’s Higher School of Economics; and *Physical Sciences* has helped teachers deliver science material on the IB diploma [5.1, pp. 26–27]. A high-school teacher in Mexico reported that *Introduction* allowed him to offer his pupils “better content” and showcase new areas of philosophy to which they did not previously have access [5.1, p. 27]. In 2014, the MOOC videos were released on the University of Edinburgh’s Open Education YouTube channel (4,430 channel subscribers; more than 120,000 views for *Introduction* and *Sciences* MOOC videos as of December 2020). The videos were released under a Creative Commons license, which allows teachers and pupils around the world to freely view, use, and adapt the course videos without permission or enrolment on the MOOCs [5.6].

### Impact on online learning initiatives

The MOOCs **informed other online learning initiatives** by showing that online learning in the humanities could reach a large, diverse, and global audience [5.7]. According to Coursera, the platform that hosted the MOOCs, the success of *Introduction* “opened and pioneered the way for other humanities MOOCs to even be written” [5.8]. As of February 2020, the Coursera platform hosts nearly 750 courses relating to philosophy.

In Edinburgh, the MOOCs **directly led to the creation of two new online Masters degrees** in philosophy (MSc Epistemology, Ethics and Mind; and MSc Philosophy, Science and Religion, which from 2014–15 to 2019–20 (inclusive) attracted 413 students, and generated GBP1,954,000 in income), as well as three further MOOCs which drew on content from researchers at other HEIs (*Philosophy, Science and Religion; Intellectual Humility; Know Thyself* – total 30,555 learners) [5.7, 5.9].

The MOOCs also helped **convince other HEIs of the benefits and feasibility of online learning in Philosophy** at both MOOC and degree level. For example, the University of North Carolina (USA) and KU Leuven (Netherlands), were both inspired by Edinburgh’s example to launch their own Philosophy MOOCs, while Birkbeck, University of London, notes that “Edinburgh’s Coursera course *Introduction to Philosophy* helped convince us of the effectiveness of well-produced video lectures” [5.10].

### 5. Sources to corroborate the impact

- [5.1] Evaluation of “Introduction to Philosophy” and “Philosophy and the Sciences”, report commissioned by the University of Edinburgh, 2019
- [5.2] “Studying MOOCs at University of Edinburgh”, report from the University of Edinburgh, 2018
- [5.3] Thee 50 most popular MOOCs of all times, an Online Course Report, 2019
- [5.4] *UK MOOC REPORT 2016: An insight into MOOCs provided by UK Institutions*, by Carolyn McIntyre for MocoLab, p. 10
- [5.5] Email from MOOCs book publisher, Taylor and Francis, 2019
- [5.6] UoE Open Education YouTube account reach summary document, 2020
- [5.7] Statement from former manager of University of Edinburgh’s distance Education Initiative, University of Edinburgh, 2019
- [5.8] Testimonial from the Director of Learning Teaching & Web Services, University of Edinburgh, 2020
- [5.9] University of Edinburgh details of courses and student numbers, 2020
- [5.10] Statements from higher education institutions: the University of North Carolina at Chapel Hill; Katholieke Universiteit Leuven; Birkbeck, University of London, 2019