OPEN LETTER

REVISED Learning from each other in the COVID-19 pandemic [version 2; peer review: 1 approved, 2 approved with reservations]

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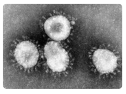
Abstract

The increase in cases of coronavirus disease 2019 (COVID-19) worldwide has been paralleled by increasing information, and misinformation. Accurate public health messaging is essential to counter this, but education may also have a role. Early in the outbreak, The London School of Hygiene & Tropical Medicine partnered with FutureLearn to develop a massive open online course (MOOC) on COVID-19. Our approach was grounded in social constructivism, supporting participation, sharing uncertainties, and encouraging discussion. The first run of the course included over 200,000 participants from 184 countries, with over 88,000 comments at the end of the three-week run. Many participants supported each other's learning in their responses and further questions. Our experience suggests that open education can complement traditional messaging, potentially providing a sustainable approach to countering the spread of misinformation in public health.

Keywords

COVID-19, education, infodemic, MOOC



This article is included in the Coronavirus (COVID-19) collection.

Open Peer Review

Reviewer Status ? ✓ ?

	Invited Reviewers		
	1	**2**	**3**
version 2 (revision) 12 Oct 2021		✓ report	
version 1 26 May 2020	? report	? report	? report

1. **Silvia Lizett Olivares Olivares**, Tecnologico de Monterrey, School of Medicine and Health Sciences, Monterrey, Mexico

2. **Ana Pérez-Escoda**, University Antonio de Nebrija, Madrid, Spain

3. **Cristina Pulido Rodriguez**, Autonomous University Of Barcelona, Bellaterra, Spain

Any reports and responses or comments on the article can be found at the end of the article.

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Author roles: Seale AC: Conceptualization, Investigation, Writing – Original Draft Preparation, Writing – Review & Editing; **Ibeto M**: Investigation, Writing – Review & Editing; **Gallo J**: Investigation, Writing – Review & Editing; **le Polain de Waroux O**: Investigation, Writing – Review & Editing; **Glynn JR**: Investigation, Writing – Review & Editing; **Fogarty J**: Conceptualization, Investigation, Methodology, Writing – Review & Editing

Competing interests: No competing interests were disclosed.

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REVISED **Amendments from Version 1**

We have updated the letter in response to the comments from reviewers. Overall we have adjusted the language to more clearly express the rationale for the letter, to highlight the potential use of education to support public health response in a pandemic. We have provided more supporting information from the MOOC literature, to give context, including quality criteria for MOOCs and key challenges. We have provided information on those completing our MOOC, and how feedback from participants was obtained.

Any further responses from the reviewers can be found at the end of the article

Worldwide connectivity has facilitated spread of the virus causing COVID-19, and this has been almost paralleled by the spread of information and misinformation[1]. Sharing accurate information, for example through reliable, trusted, social media accounts and websites, as well as responding to misinformation with MythBusters is important[2]. However, education may also play an in important role, to support health literacy, and early on in the outbreak of COVID-19, The London School of Hygiene & Tropical Medicine (LSHTM) agreed to develop a massive open online course (MOOC) on COVID-19, in partnership with FutureLearn, as described here, and following courses on previous outbreaks such as Ebola and Zika.

MOOCs offer an opportunity for wide participation, but there is a challenge to engage at scale, and maintain participation, and MOOCs can have high drop-out rates (between 95–98%)[3]. With these challenges in mind, we brought together a multi-disciplinary group to share and discuss, at pace, what a MOOC on COVID-19 could look like, in terms of approach, content and style. We grounded our MOOC in educational theory and utilised social constructivist principles[4]. The pedagogical approach is considered to be the most important dimension in the quality of a MOOC[4], and constructivist approaches, placing the learner at the centre, have explicit expectations for engagement, to better support deep learning, and the ability to appraise information critically[5]; important aspects for public health literacy.

We began with consideration of who the intended learners might be, and what they would know, and we structured the course simply, in terms of what was known at that time about COVID-19, what a public health response may look like in various settings, and what research was needed to understand more. Within this, each step of the course had defined intended learning outcomes, which contributors were asked to address. We included international contributions to share global perspectives on the pandemic. To support engagement and maximise opportunities provided by the platform, we used varied formats including short video lectures, audio interviews, articles and quizzes. To maximise accessibility for learners we included subtitles and transcripts, in several languages. A key part of the engagement occurred after each part of the course, where we encouraged participation and engagement through specific questions posed by course facilitators.

At the outset we didn't know what the uptake to the course, in the context of a pandemic, would be, or who would enrol. There was also the concern that evidence would have moved on before the course had even started, as materials were developed 3–4 weeks before the course start (to allow time for translation), and the number of publications and preprints on COVID-19 was increasing rapidly. In a time of heightened public anxiety, by taking a participatory approach to the course, which included sharing uncertainties in terms of what was known, and encouraging discussion and questioning, we, and our institution, took a substantial risk. It could, for example, have resulted in the mass sharing of extreme views by participants. In subsequent iterations it still could. However, as teachers and researchers we work to both learn more, and to share this learning. We are supported institutionally with the academic freedom to do so; there was no corporate "sign-off" from LSHTM.

For the first run of the course, starting in late March, we had very high uptake, with over 170,000 participants in the first three weeks, and over 200,000 in total in the first run, from 184 countries. We also noted very high levels of engagement, with over 88,000 comments, and many people supporting each other's learning in their responses and further questions, demonstrating peer-learning and connectivism[3]. Within LSHTM we set up a system to respond to as many queries as possible, even with a small team, to provide feedback and guidance to learners. Non-technical hosts read through discussion fora and collated queries and synthesised areas of interest for each course step, which academics then responded to, helping to keep the course current.

Much of the feedback on the course, captured through course comments and the end of course survey, has been positive, highlighting the opportunity to gain new knowledge and skills, and in the first run, just over a third of those enrolled completed the course. Running the course, we felt that developing participants' own learning, and providing a space where ideas – and fears – could be expressed and addressed was central to their learning and participation. But what surprised us was the level of expressed gratitude, perhaps reflecting a gap in such educational opportunities in public health.

Our experience suggests that MOOCs can be developed at pace, with an appropriately skilled and motivated team, to support learning in a public health emergency, and maintain quality across pedagogical, organisational, technological, and social domains[6]. From a public health perspective, we consider that building individuals' own capacity to question, to query the data, reports and guidance is essential, and complementary to the circulation of accurate public health information. Further investigation of the role of MOOCs to support health literacy, which has an established role in the context of patient

behaviour change[7], should be considered in the particular context of infectious disease outbreaks[2], to better understand and inform public health practice.

Data availability

No data are associated with this article.

Acknowledgements

We would like to acknowledge all those who have, and continue to, contribute to the MOOC, "COVID-19: Tackling the novel Coronavirus", as well as all those who have and are participating in it.

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Open Peer Review

Current Peer Review Status: ? ✓ ?

Version 2

Reviewer Report 18 November 2021

https://doi.org/10.21956/wellcomeopenres.19089.r46370

✓ **Ana Pérez-Escoda**
Department of Communication, University Antonio de Nebrija, Madrid, Spain

The authors have improved their proposal in response to the suggestions made, and it is therefore considered that the proposal meets the requirements for publication and dissemination. Congrats for the authors!

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: New learning approaches, digital literacy, digital skills, digital communication, learning methodology.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard.

Version 1

Reviewer Report 01 June 2021

https://doi.org/10.21956/wellcomeopenres.17518.r41135

? **Cristina Pulido Rodriguez**
Department of Journalism and Communication Sciences, Autonomous University Of Barcelona, Bellaterra, Spain

The open letter "Learning from each other in the COVID-19 pandemic" accomplishes this type of submission instructions, but there are improvements that could increase the impact of this contribution. The open letter describes the MOOC on Covid-19 developed and how many people were engaged and what they learnt in general terms. But, the following specific instruction is not well addressed "The rationale for the Open Letter should be explained, including an outline of existing challenges and the purpose of the letter, different views and opinions in the field should be referenced appropriately". The open letter describes more the specific experience obtained with the "MOOC on Covid-19", but a general overview on this topic with different views is missed. Another improvement to be considered is to illustrate results with specific examples, not as a research paper because the open letter does not require this, but it could help to identify the real benefits and improvements of applying this type of MOOC.

Is the rationale for the Open Letter provided in sufficient detail?
Partly

Does the article adequately reference differing views and opinions?
Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?
Partly

Is the Open Letter written in accessible language?
Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?
Partly

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: My areas of research are: communication sciences, education and sociology.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 01 March 2021

https://doi.org/10.21956/wellcomeopenres.17518.r42469

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Ana Pérez-Escoda

Department of Communication, University Antonio de Nebrija, Madrid, Spain

The Open letter states that education would be one of the main benchmarks for avoiding misinformation by presenting the impact of the MOOC developed by the London School of Hygiene & Tropical Medicine partnered with FutureLearn. Although the topic is certainly relevant and timely it is suggested to add more references to support the arguments that could build up a more suitable and relevant theoretical framework.

It is suggested to add some literature about MOOC focusing on specific features, about learning communities, which is a specific research topic in the open letter; and, also it is recommend some literature about misinformation, authors state that education is in the basis of facing misinformation but it is barely explained. This is essential for a better understanding of the main statements contained in the open letter.

The authors provided the rationale for the Open Letter however they should also outline existing challenges in the field for instance the level of dropout in MOOCs. The Open Letter just focus on descriptive numbers in terms of participants, countries or comments, but how many of that first run participants finished the MOOC?

Facing misinformation is challenging in different dimensions and globally speaking as acknowledged by WHO with the “infodemic” problem. In this regard, it should be better if authors are less enthusiastic with their statements such as: ”By using open platforms to build communities of learners, to share the values of academia through education, we can support sustainability in countering the spread of misinformation”. A more cautious and realistic wording is suggested, underlining the value of these initiatives in alleviating part of the problem.

Is the rationale for the Open Letter provided in sufficient detail?

Partly

Does the article adequately reference differing views and opinions?

No

Are all factual statements correct, and are statements and arguments made adequately supported by citations?

Partly

Is the Open Letter written in accessible language?

Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?

Not applicable

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: New learning approaches, digital literacy, digital skills, digital communication, learning methodology.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.

Reviewer Report 22 February 2021

https://doi.org/10.21956/wellcomeopenres.17518.r42470

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Silvia Lizett Olivares Olivares
Tecnologico de Monterrey, School of Medicine and Health Sciences, Monterrey, Mexico

The open letter describes a MOOC with high impact on participants learning about an important topic. The purpose to educate the public is important to address their concerns and misinformation about COVID-19.

I would recommend supporting information with MOOC literature, specially about quality dimensions, design and specific features.

Results from the MOOC are only oriented by numbers (participants, countries, or comments). I recommend describing the type of feedback received from quotes, or satisfaction measures.

Is the rationale for the Open Letter provided in sufficient detail?
Yes

Does the article adequately reference differing views and opinions?
Partly

Are all factual statements correct, and are statements and arguments made adequately supported by citations?
Partly

Is the Open Letter written in accessible language?
Yes

Where applicable, are recommendations and next steps explained clearly for others to follow?
Yes

Competing Interests: No competing interests were disclosed.

Reviewer Expertise: Higher education research, especially health sciences education.

I confirm that I have read this submission and believe that I have an appropriate level of expertise to confirm that it is of an acceptable scientific standard, however I have significant reservations, as outlined above.