Assessment and teaching in the 21st century: the MOOC

Reflections on the experience of the team from The Assessment and Teaching of 21st Century Skills project in using a MOOC for global engagement with the education profession

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Research origins

- From 2009 to 2012 UniMelb led an international research program, focused on 21st century skills aimed at identifying 21st century skills, and how they can be assessed and taught.
- It involved a collaboration of 255 researchers globally, support from six national governments, practical exploration ins schools and funding from Cisco, Intel and Microsoft.
- It produced a number of white papers, developmental learning progressions, prototypes of digital assessment tasks, and professional development modules.

MOOC production

- Funded by the University of Melbourne.
- Collaborative effort of 18 UniMelb staff over a 12 month period, including CIs as presenters, together with script editors, audio-visual materials and resource producers, production crew, learning designers, copyright experts, librarians, extra ‘talent’, marketing, forum moderation, quality control, technical support staff and teaching assistance.
- Platform and platform support team by Coursera.

The MOOC ingredients

- A strong focus and compelling story line
- Learning activities designed to engage professional interest
- Feedback affordances and activities targeting learning not grading
- Crowd wisdom, collegiality, collaboration
- Self regulated learners supported

Reflections from participants on the topic

- “Collaborative problem solving should be explicitly taught, either naturally or artificially in the classroom. Students need to be exposed to the benefits of working with others and not to rely so heavily on their own selfish gain. In this way, the time they reach the workforce, collaboration will be routine and sensible to them.”
- “I agree that strategies for collaborative problem solving should be explicitly taught, either naturally or artificially in the classroom, but I also think CPS could be used as a standard lesson strategy for teaching 21st century skills.”

Peer evaluations: not just about the grades

- “In the peer evaluation I had three different CPS x point for my performance, in fact, I did five peer evaluation cause you see many things you didn’t before, I learned a lot and I think the marks I evaluated also learned a lot when they evaluated others, that’s why I gave the highest grade to everyone, of course, I gave them feedback, from my perspective. This is a experience to learn and to grow up.”

MOOC reach: 18,477 highly educated, experienced education professionals

MOOC indices: how we compare

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Quotable quotes from MOOC forum participants

- “Our standards might have been a bit high!”
  “I am looking at Assignment 2 and I feel as if I have been kicked abruptly out of my comfort zone! My gut reaction is: I am really going to have to do some work to get a good grade in this one! I might be back here whinging again!”
  “I have just completed the week 1 assignment and now looking out for an answer to this problem to get a good grade in this one! I might be back here whinging again!”

Effect of peer interaction in forums

- “I am starting to learn...I expected at least 10-11 (out of 13) but I got 8... I have to agree with you my English is not good as it is my second language...I am starting to realise what you meant by ‘never get any deeper than the cognitive/social perspectives’...It is the exact point I think I needed to learn...I really hope my forum friends teach me...what exactly I needed to work at...at least an example.”

Benefits and lessons

The course focused on engagement with practitioners on new research rather than extending a pre-existing teaching program.

It appeared to have high representation from people fulfilling professional development obligations or professional learning interests. There was institutional support for use of the MOOC for professional learning and in institutional settings, both locally and abroad. We will explore opportunities for extending this, and using mixed mode teaching in the future.

It provided engagement with the profession about the research and development program

- supported astonishing reach into the global learning space
- provided opportunities for extended interaction with well-educated, experienced professional cross-section
- provided opportunity to extend our own thinking about the research (e.g. from forum input)
- we all learned something, so it was a collaborative learning activity.

Collaborative learning

Much value of the course for participants and the course team alike was provided by participants who contributed vibrantly in the forums and peer assessments. They demonstrated a high level of goodwill and generosity by posting and commenting to help others with their thinking, to contribute viewpoints and resources to the debate and to assist with course evaluation.

Benefits for participants

Over 18,400 registrants at least read a two-page overview of the 21st century learning theme. Nearly 11,000 visitors spent between few minutes and up to over 60 hours watching videos, participating in assessment activities, reading or suggesting resources, or contributing to forums. Over 8500 posts were made, nearly 14,000 exercises completed. Appro, 10,000 people were awarded certificates. Over 400 used Signature Track.

It’s harder than it looks to do it well. We look forward to improvement in Vn 2 in the breadth, depth and quality of engagement. It is very different medium. On-the-fly staff needs to be facilitative, not didactic, and must leave room for peer response. The topic needs to be cast to engage practitioner interests. Pre-packaging high quality content needs to be balanced with the opportunity to deal with weaknesses, and misunderstandings or concerns raised by participants. Live interactions such as Google hangout will be one direction to explore. We need to address criticisms, such as too much chitchat and talk, too much emphasis on peer assessment for grading, etc. Need different strategies for those with limited English language competence and to extend opportunities for participants to collaborate on teaching projects.

Our investment in planning paid off: we were able to develop a strong focus, a compelling story-line and carefully designed activities to engage participants in their own professional terms.

It doesn’t finish when the course closes. We now have a community expecting future collaboration: high performing participants in round 1 will be used as online tutors for subsequent rounds – Harvard system - Project Zero. Big appetite for ongoing collaboration.

Timing is important for educational topics: avoid school holidays.

MOOC platforms are at early stages of development. E.g. need a better understanding of the ways in which thousands can be assessed. Need to find a way to support meaningful collaboration. Need to scaffold peer evaluation.