Pedagogy Perspectives: MOOC case studies

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Introduction: Online learning creates a unique set of challenges for educators. Learning activities created for face-to-face classes don’t always directly translate successfully to the online environment. Using case studies from three University of Melbourne Massive Open Online Courses (MOOCs), this poster will explore the importance of framing your learning and teaching activities around a specific pedagogical perspective to improve the learner experience and increase student success and engagement.

Authentic learning

Authentic learning adds context and reflects real-world challenges and situations. It is experiential learning that increases learner engagement by putting learners in work-like situations to do their study and assessment tasks.

This case study explores the use of authentic learning activities in the Essentials of Corporate Finance Specialization taught by Professor Paul Kofman and Associate Professor Steven Findler from the Faculty of Business and Economics.

Learning activities in the course, such as financial analysis calculations, were drawn from real-world company reports and data freely available on the Internet. This gave learners insight into how analysts work by providing them with datasets commonly used in the workplace. Additionally, this Specialization was developed in partnership with the Bank of New York Mellon (BNYM), adding another layer of authenticity to each course by bringing in a staff member from BNYM to share “A View from Industry with BNY Mellon”.

Learners enrolled in the Specialization were also invited to participate in simulated real-play “real world” web conferences. During the real-time sessions, learners accepted the role of ‘Investor’, a financial analyst based in China, and are required to meet with senior managers (played by the course instructors) in a fictional setting called UOMBank. Each weekly web conference sets the scene for the assessment tasks learners are required to complete as part of the Capstone.

Learners have highly appreciated the practical examples throughout the courses and the overall Capstone approach.

“All 4 courses were extremely well structured and delivered, thank you! I’ve also highly appreciated the practical examples throughout the courses and the overall Capstone approach.” – Learner comment


Developmental learning

This case study draws on an example from the Assessment and “Learning of 21st Century Skills” (ATC21S) MOOC for which a dynamic Progress Map providing learners with a weekly update of their course progress was developed. The teaching team, led by Dr Sandra Milligan, a specialist in online assessment, worked together developing a more progressive assessment and feedback methodology for learners. Progress Maps apply the principles of developmental assessment to assessment in a MOOC. This represents a learning-based approach to assessment rather than a grading-based approach, and is consistent with the teaching content in the ATC21S MOOC on how to assess complex abstract competences.

In this approach, the description of what is to be learned in the course is expressed not just as topics covered each week, but as a learning progression. The development of complex learning outcomes, incorporating all of the knowledge, understandings, attitudes, values or skills required, is described. A learning progression is used as a developmental map of the learning opportunities offered by the MOOC.

The Course Progression for ATC21S is based on five levels, each with five levels. A personalised Progress Map is built for every MOOC participant, showing where he or she is up to in the Course Progression. The Personal Progress Map updates each week and a learner’s position on the Personal Progress Map is calculated on the basis of performance in both the graded and formative assessment activities. A learner can mouse over any part of the Map to see the details of their progression at any level for any strand – this gives some level of interactivity.

Results are not used to calculate a grade but to help the learner judge to what degree their performance is consistent with attaining the course objectives. The Course Progression and the Personal Progress Maps represent a developmental approach to assessment, focused on learning, not just grading and judging.

“I really like the concept of the Development Progression as a means of helping me identify my learning behaviours in this MOOC. I felt that I could clearly identify where I am currently on the Progression (without any sense of success/failure/exposure/judgement) and also identify what I need to do in my next MOOC to advance along the Progression and further develop my C21 learning skills.” – Learner comment


Fable based learning

Fable based learning is a pedagogical approach adopted in the design of Modeling for Discrete Optimization courses jointly developed by Professor Peter Stuckey from The University of Melbourne and Professor Jimmy Lee from The Chinese University of Hong Kong.

Most videos in these courses start with a short animation posing a challenge that the learner needs to solve using the techniques described in the video. The animations set the scene and provide some authentic context for the learner to apply in the lesson.

Fable based learning creates a strand that weaves the learning journey together for the learner. In this case, the story of “The Remains of Three Kingdoms” was chosen – each video animation relates to this tale and learners are motivated to move onto the next video and chapter in the story by solving new problems in an almost low-level gamified set of scenarios.

The scripted narrative adds an aspect of storytelling to the lesson and the animation is both visually attractive and engaging. The animations seemingly add a level of authentic learning by posing challenges and problems that need to be solved, even in a modern-day context. Production planning, resource allocation, rostering, routing, scheduling, banquet seating plans, food/wine pairing, and packing are just some of the problems posed to the learner.

“The assignments are challenging and they were really well designed. The lessons were also very comprehensive, with great examples and a interesting way to explain the motivation behind the topics, aligning the puzzles and learning to a story.” – Learner comment


Conclusion

While all three perspectives have been successful, it must be remembered that the medium does not dictate the message. The learning and teaching created in each lesson is elegantly framed to encourage the learner to gain more than just knowledge and understanding. Considering the learning platform you are using to design your online course in context, the tools and supplies are going to provide some boundaries to what you may wish to achieve educationally. However, by incorporating good learning design, you may be able to develop more engaging and successful learning and assessment activities.

The learning experiences map from HeTIE’s (Holistic Approach to Technology Enhanced Learning) and TeachThought’s 21st Century Pedagogy diagram are quick reference guides to give you other pedagogical perspectives that can inform MOOC. Considering the pedagogical theories that are woven into the fabric of learning that you are creating. By finding a theme that runs through your course, you can design a learning journey that is pedagogically sound and engaging, thus creating a unique learning experience.
