Provocative question

Use a provocative question to help spark live debate and then move it into a student led asynchronous discussion forum.

Provocative question OR "virtual poke"

Problem

We do not simply want our learners to be passive participants in synchronous fora but instead want to increase their cognitive presence through a visible flow of interaction. When you have a 'flat' live synchronous forum, with a room full of lurkers, then how to you spark activity? And by extension, how do you flow this into an asynchronous online discussion space.

Context

This pattern has derived from running a FISHBOWL session using the conferencing tool Adobe Connect. This worked as a synchronous convergence session with two or more tutors chatting live with an attending audience having access to the chat room. This concept could be applied to a live lecture/lab session where students have their own devices and can login into a back channel. This back channel would need to be monitored/managed by a support tutor.

Solution

- During the live session throw in something provocative. It may simply be a question (but should be related to the material of the course or discipline i.e. not a random question) with a simple response expected e.g. by a poll. Avoid asking the banal - focus on agitation and stirring up.
- The question should be one that potentially divides opinion - being provocative does not mean being alienating. But the advantage of the mix of chat and video is that the chat can continue while the lecture continues. It requires a reponse - or will evoke a reponse. Ensure that the responses are made visible (polling software is great for this) and can brought back into the session - though the continuing side-chat can be left to run.

NOTES: This is not likley to be a scaelable solution? Can this be done asynchronously e.g. polling and then releasing the result. Or have an ongoing poll that runs throughout the course? Ethical and moral decision making?

Examples

MSc Systems Biology - we used a a single provocative question mid-way through the open online session. Ours was: "If you could be told what you are likely to die of would you want to know?". This fits in the live Q&A session that we run. See the design narrative.

Data and References

In their study of student and instructor postings in an UG astronomy course, Mazzolini and Maddison (2007) found "the more instructors posted, the fewer postings were made by students and the shorter were their discussion threads on average, and instructors who attempted to increase the amount of discussion by initiating new postings did not succeed."

Mazzolini, M., & Maddison, S. (2007). When to jump in: The role of the instructor in online discussion forums. Computers & Education, 49(2), 193-213.

Therefore finding other ways to spark inter-learner discussion that do not involve huge instructor overheads are valuable.

Scaffolded MOOC

Avoid reinventing content by spending time to aggregate, evaluate and contextualise open educational resources.

Problem

A lot of content already exists on the subject matter. A lot of this is from the 'global North', and time constraints mean that more time should be put into the aggregation, evaluation and contextualisation of content than originating new content.

Context

TESS-India project is helping to support teachers in India in making changes in their practice. India needs 1.33 million teachers, 75% of teacher ed. colleges in Bihar (one of the seven states the project is working in) did no training between 2007-2010.Teacher educators in India are a key target audience in achieving the project goals. Teacher educators we will be focussing on for this are based in DIETs (District Institute for Education and Training) so work with primary teachers. Course content will be relevant to teacher educators across India and globally.

Some teacher educators will be targeted by employers to take part in the MOOC so their drivers will be different.

Solution

Utilise already existing content (OER) to deliver the learning outcomes. Contextualisation will be delivered through scaffolding and support mechanisms.

Scaffolded MOOC

Have learners build group artefacts as sparks for discussion forum participation.

Creating small individual tasks that help in producing an artefact which contributes to a group product, around which learners can interact and begin discussions.

Problem

Active partipaction is desirable and beneficial t learning, for example when collaboration is needed, or co-creation of learning is desired, as well as where interaction serves a supportive social function. Yet it is not always straightforward to help learners overcome their initial reluctance to post or visibly participate in fora.

Context

In the early stages of a MOOC, when learners have not yet developed relationships within the learner body, or might not have confidence to participate visibly. Development of trust between learners is desired to support the increased peer-peer interactions. It is necessary to facilitate learners making their participation visible without undertaking risky or overly challenging tasks. To achieve this specific tasks are created that are individual tasks, but which are shared and benefitted from by the whole group, increasing participation and deriving a sense of value from the interaction.

Solution

1. Define a simple task that is relevant to the learning in this MOOC.
2. Ensure it is do-able by the level of learner for this MOOC.
3. Establish a linked site within the platform for learners to post their artefact where others can see it. (Possibly create a site such as Padlet for learners to post their artefact)
4. Create a thread in the forum for discussion on the contributions, make suggestions to take them further.

Examples

h8717open - Openness to Education had learners created artefacts as a response to a learning activity, the media used was the learners' choice and they were encouraged to experiment with the form of response. This catalysed considerable discussion in the various social media forums, e.g. Google+

See-do-share

Problem

How do you introduce new concepts, tools or practices, in a way that would be accessible and meaningful, assess learners understanding, and facilitate the emergence of social constructs, with very limited resources and large number of students?

Forces

- A wide variety of topics to introduce and explore.
- Aiming to introduce these topics in a manner that would engender both deep insights and practical use.
- Learners distributed across the world.
- Direct contact between facilitators and learners will be sporadic.
- Some learners will follow a predefined path, others will chart their own path, and others will only visit selected activities.

Context

Massive open online course, following a collaborative project-based pedagogy. Over 1200 registered participants, although impossible to predict how many will actually show up. We expect a significant portion of participants to follow through the MOOC, dedicating 3-10 hours a week, while others will participate casually, dipping in and out and choosing the activities they want to complete.

Solution

- Study - read a short text / view a video presenting the rationale and the core ideas.
- Review - examine and critique a worked example.
- Play - experiment with the tool / method.
- Do - perform a structured task, using the tool / method, and produce outputs.
- Share - publish these outputs to the web, and link to them from a shared space.
- Assess - review your peer's productions.
- Reflect - post an entry to your learning journal
- Discuss - participate in an online discussion.

Variations

- Research (in more depth) before or in parallel to the Do.
- Discuss before Reflect, or Reflect - Discuss - Reflect.
- Demonstrate (after discuss): bring together whatever you think demonstrates what you got out of the activity, display it and apply for a badge.

Examples

This pattern was the core structure of most activities in the OLDS MOOC. It was later reused by the Handson MOOCs.

Notes: Originally posted on the OLDS MOOC blog

Fishbowl

Simulate intimate interaction between teacher and students in a large scale online course by broadcasting sessions where selected students act as proxies for the cohort

Problem

In a traditional classroom setting, learners and teachers will occasionally pause the flow of educational activities and discuss their experiences, expectations, concerns - and any issues that have emerged. Such discussions, whether planned or ad-hoc, offer teacher and learners invlable opportunities to callibrate their view of the state of the course and make any neccesary adjustments in their practice.

This allows learners to understand if the issues they are struggling with are personal or common to others, to alert the teachers to specific obstacles, and to recieve confirmation for their chosen path and learning practices.

At the same time, these discussions offer teachers invlauable opportunities to validate their teaching stratagy and practices, and receive feeback from the learners.

MOOCs do not have the capacity to entertain such interactions: learners are dispersed geographically, the numbers are too big for synchronous sessions, and the teacher to student ratio is such that personal interaction is all but impossible.

Context

Applicable to online courses where face-2-face sessions are not incorporated. It works best when the course size (in terms of student numbers) pass the tipping point at which providing indivdiual repsonses to queries/issues is unmanageable. The course tutor should be involved.

Solution

Set up a synchronous online conferecning tool to host the fisbowl session. An example would be the use of Google Hangouts to provide the bowl. Invite the fish and advertise the event to the intended audience. Composition of the group can vary but the recommendation would be one or two tutors and a few invited participants.

Conduct the session as a tutorial, where participants reflect on their experiences from the last week's activities, and tutors comment on those reflections and respond to participants questions.

Examples

OLDS-MOOC (http://www.olds.ac.uk) convergence sessions (http://ilde.upf.edu/moocs/v/azm)

HandOn ICT (http://handsonict.eu)

MSc Systems Biology taster course

Data and References

See literature on the role of "teacher presence" in contributing to the success of online courses.

Anderson, T. et al. (2001). Assessing teaching presence in a computer conferecning context. Journal of Asynchronous Learning Networks, 5(2), 1-17.

Induction

Image CC BY SA - Alan Kotok

Providing orientation and guidance to get participants started on a course.

Problem

We want our learners to understand how to make the most of the MOOC structure. This is challenging when our learners come from diverse backgrounds, often with very different expectations of and drivers to complete the MOOC.

Context

Learners are not used to working in an online environment or in a massive open context.

Solution

Induction to include learning journey, learning online (digital literacy), how to make the most of the platform.

For example: FutureLearn provides a video on how to use the platform, how to orient around it. This generic video is good because if the learner is taking more than one MOOC from the same platform they need not repeat it. On the other hand, if the tutor wants to personalise the video for his/her course, this may be an opportunity to add 'teacher presence' and demonstrate the unique features of the course.

Examples

University of Leeds MOOCs on FutreLearn include a welcome section.

Know your audiences

Focus your course design by using tools to find out who your core learners are and what they bring to their learning journey.

Problem

The nature of MOOCs is open; the barriers to signing-up are low therefore anyone can become a participant. Yet when we design a course we often have a particular type and indeed level of learner in mind. With a MOOC, knowing the learner is an almost impossible task. So who do we design for?

Context

The course designers delimma is often in level setting and ensuring that learners have the necessary background knowledge to fully engage and succeed on a particular course.

Solution

Sketch out your key audiences and design a flexible approach working on your prioty groupings. Build in multiple pathways where possible to ensure that more than one type of audience/learner background is catered for. Accept that you may not be able to cater for all who register. Work to create a good experience for your core audiences by asking yourself 'who' is this course for?

To gather data on your audience you can use:

- Short pre and post surveys
- Analytics data
- Multiple pathways
- Adaptive learning
- Background materials
- 'Go the extra mile' material

Build a small number of personas based on these core audience/s then design your course with these participants as the focus. Keep in mind this idea of consistency in terms of 'who' your audience/s are.

Examples

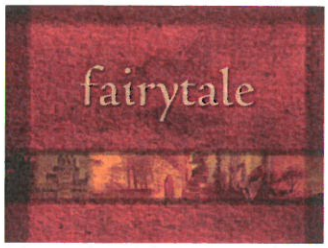
Design patterns: uses PERSONAS similar to CONSISTENT 'WHO' (a design pattern for pattern writing http://europlop.net/sites/default/files/files/1_2003_Harrison_AdvancedPatternWriting.pdf)

Data and References

"If I had to reduce all of educational psychology to just one principle, I would say this: The most important single factor influencing learning is what the learner already knows. Ascertain this and teach him accordingly."

David Ausubel (1968) points out one of the fundaments for constructivism as theory of learning and knowledge.

Knowing the story



Mark out the beginning, middle and end of your learnign journey to help the learner build a pathway.

Problem

Knowing what to do when studying a complicated discipline at a distance is not easy. There is a meta-narrative to any learning activity which touches on the idea of a journey and of personal transformation. How does the learner use this an understanding of this to his/her advantage? Inventing a 'new story' is not always a useful exercise and learners do so at their own risk.

Context

How to guide or trust people to find their way through an online course at a distance with what is minimal instructor interaction.

Solution

Studying a course is a journey in its own right. As a story it will at the very least have recognisable nodes ... a beginning, middle and an end. Exploit key story nodes, or points to help the learner travel through your module/course/programme. By having a picture of how the path and the potential ending (who I will be or become) can create empowered learners who realise they can safely delineate their own pathways through a discipline or domain. Use a familiar story to prompt contextual meaning.

Examples

Three little pigs. The narrative arc.

Agricola boardgame - you may not know the every rule by heart but you know how a farm operates.

Zombicide boardgame - the narrative is simple kill the zombies and do not get bitten.

These ideas all use familair mechanics and this idea of core mechanics can be used to help learners orientate themsleves and feel in control.

Data and References

Links with design pattern: CHECKPOINTS

Learning as a personal jorney: van Halen-Faber, C. (1997).
Encouraging critical reflection in preservice teacher education: A narrative of a personal learning journey. New directions for adult and continuing education, 1997(74), 51-60.

See 'game mechanics' definition and listing on wikipedia.
http://en.wikipedia.org/wiki/Game_mechanics

MOOC Legacy

Create an open archive to extend the life of a course beyond its final assessment point or closing week.

MOOC legacy to extend the openness beyond the final assessment ponit / closure of the course.

Problem

Closing the course down alters its "open" status and so creating a legacy format for the course ameliorates this problem and facilitates expectation management for repeat sessions.

Context

Once a course ends the material goes into hibernation. Creating a legacy can reduce or remove this situation. This maintains the course's status as Open.

Solution

- Used alongside adjacent platform then cross posting / hosting can achieve a legacy by leaving the content on active platforms post the closure of the course.
- Export content from the MOOC and repurpose via alternative tools elsewhere.
- Make sure that the open archive is on a platform that is not contigent on regular support etc.

Examples

lawsfolio.londoninternational.ac.uk/eclmooc

www.phonar.ac.uk

www.ds106.us (headless)

This approach has also been used with the OLDS-MOOC which remains available as an open archive of resources and materials at http://www.olds.ac.uk/

Also the OCTEL MOOC delivered via ALT at http://octel.alt.ac.uk/2014/

Team work

Build, plan and structure the team to ensure successful MOOC development and delivery

Engendering Team Work **(in the MOOC Production Team)**

Problem

Building a successful MOOC is a team effort, it requires more than just one person and more than one expertise. Teaching the 'MOOC team' to work collaboratively needs a plan that will gather every party involved - academics, MOOC learning design team, librarian (for copyright clearance), media production team, legal services - all with a clear content and delivery strategy.

Context

New teaching platform: online, away from traditional lecturing, requirement for high quality, engaging video content, academics not used to deliver such quality content, reputation tool more than student conversion, aimed at people with teenage children, teachers themselves, tell people about my univeristy.

Solution

- Collaborative approach, co-creation
- Take into account each party
- Make sure there is a plan, a fully populated plan inclusive of all parties

How?

Editorial committee with all parties that meet initially and work out the plan, meeting each week agily assessing the plan, adjusting the strategy. BE FLEXIBLE: what we delivered never necessarily is what initially planned but works out well.

Requirements: agree on the editorial content, get material and full cooperaton from the academics, train the video team how to make academics come accross well, train them to deliver the content we need, academics should not be just talking heads, create a professional comfort zone for academics to express their personality.

Asset register: ie deal with copyrights issues, everything has to be license cleared i.e. open: challenge as a lot of our content is not copyright cleared. "open access"

(Other people that may be in the team at a later stage include Marketing and QA)

Examples

See the design narrative - "Planning - and keeping to the plan"

Adjacent platforms

Additional *platforms which support/underpin MOOCs are often used as places to share resources or provide bespoke tools to create learning objects. These are used when the mooc platform falls short e.g. for technical, flexibility, quality or other reasons.*

Problem

You want to make your online course rich and diverse but find that the large MOOC provider platforms such as Coursera/FutureLearn/edX are somewhat limited in their scope as they try to provide a common base for all. When extra functionality is required, course teams need to find suitable tools and services to fulfil extended learning and teaching needs.

Context

Applicable when you are delivering a MOOC from a large provider platform that offers a limited and constrained toolset.

Solution

Accept that people use a range of platforms, tools, approaches for online teaching and learning - build this into your MOOC course design by integrating platforms together e.g. using LTI etc. *This will improve the learner experience by not being restricted to the tools / functionality offered by the single learning envrionment.*

Examples

Twitter hashtags
Website support e.g. «ECLnotes.laws.londoninternational.ac.uk»
Google Hangouts
BlackBoard Collaborate
Wordpress
Image pinning sites e.g. Pinterest, Flikr
Group working tools e.g. Googledocs, Asana
Conceot mapping e.g. Popplet
Notepads e.g. Hackpad

Data and References

Related patterns

- Use INDUCTION to make sure that participants have and opportunity to test these platforms using the related pattern.
- Put into practice using SHARING WALL pattern.
- Avoid overusing tools by checking anti-patern TOO MANY TOOLS

Bring them along

Use pre-introductory materials and pointers to help baseline your leaners and increase course engagement.

Problem

We want as many people as possible to stay on our courses and be able to enagage with the materials that we have spent s long preparing. With an open course delivery the diversity of levels i.e. partipcant's previous knowledge is

likely to be wide and variable. How do you pitch a course at the right level to avoid losing people quickly. What can you do to bring along as many people as possible on the journey?

Context

For an introductory course it is relatively easy as you are starting with the basics but as soon as you move beyond this and attempt something at for example Masters level then the expectations or demands on prior knowledge are far more demanding.

Solution

Provide pre-introductory materials that lead into the main content delivery. Provide micro-foundation course type snipets with pointers throughout the course to offer scaffolds forthe more difficult material. Consider detailing the threshold concepts and making these explicit in the course.

Examples

For an MSc in Systems Biology we have considered the use of a glossary, 5 minute pre-lecture speed roundups and the use of concept mapping to help show the interelations within the knowledge areas under study within the particular discipline -> this provides a mechanism for helping to identlfy the threshold concepts.

Data and References

Threshold Concepts and Transformational Learning (2010)

Edited by Jan H. F. Meyer, Ray Land and Caroline Baillie

Sense Publishers, Rotterdam, 2010

For an extensive bibliography in this area see:
http://www.ee.ucl.ac.uk/~mflanaga/thresholds.html

Bend Don't Break (v2)

Be clear what parts of your course are flexible and can bend, and those that when changed will break your MOOC.

Problem

Bend it but don't break it. Flexibility is key.

In a MOOC setting, ‹flexible› can potentially entail jettisoning the ‹massive›, the ‹online› and the ‹course›, leaving just the ‹open›. How flexible can a Mooc be before it either disappears, or is spoilt, or (in some cases) becomes a misleading rider for a more formal distance learning course? Which learners do you lose if you aren›t flexible, and what part of MOOC do you lose if you are flexible?

Context

It depends on the subject area. Is the Mooc a media item? If so, how do you consume it?

The Mooc is a piece of marketing (enrolments in a formal course) as well as philanthropy (widening participation), and learning, and data collection on teaching (eg comparing track A to track B).

Flexibility must have its limits on any course. Rather than accommodating the different ways of learning across the globe, is it better to avoid all of them (eg the week, the mid-term).

But in fact, online learning is rarely so flexible - especially if it is credit-bearing.

There are at least two kinds of flexibility - access is one, and interaction with resources (including peers) is another.

Solution

What breaks? What cannot be sacrificed in a MOOC to increase flexibility?

- learning outcomes - curriculum embodied in the assessment.
- when the grading algorithm runs (on Coursera) which in turn dictates when the assessment is scheduled.
- that people who have commenced the final assessment should be excluded from the discussion forums.

What bends? What does flexibility?

- Do not expect students to be able to purposefully navigate excessive choice.
- Allow different languages and group people accordingly.
- Allow access to all materials at any time, online or offline.
- Signal core and discretionary activities but do not restrict access.
- Flexible assessment tracks.

- Explicitly relate learning outcomes to pathways - by skipping [activity x] you will lose the opportunity to [outcome d and outcome f].
- You could have a visible basic schedule, but the platform could signal opportunities in response to your individual work (but this depends on being online).

Give access the lecturer via online questions and up-voting.

- Adjacent platforms (eg youtube for video - these incidentally leave a Mooc legacy which bring attention beyond the lifespan of the Mooc).

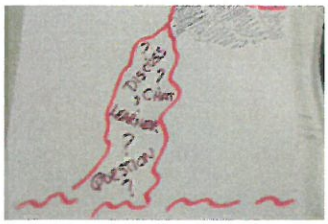
Examples

Design narrative relating to ECL MOOC at the University of London

Data and References

Extended by ADJACENT PLATFORMS

Chatflow (v2)



Problem

In face-to-face teaching situations the discussion is led and managed by a central point - often the tutor, and all participants are part of this process including having an understanding o the historical context.

In an online environment both synchronous and asynchronous discussions occur. Where the asynchronous discussion occurs, the management of discussions for the learner can become difficult and the historic context is often lost. The loss of context can limit learners ability to engage with the discussion in a timely fashion - particularly when chat or forum posts are pushed down the list and effectively lost.

Context

This is relevant in a number of contexts:

- Where the platform used does not offer threaded discussion tools.
- Where the discussion thread becomes very long either with a high numbers of posts or very long posts.
- Where you cannot make particular high impact posts 'sticky'.

Solution

As a top level solution using a MOOC platform that offers threaded discussions should be considered, where this is not possible you might consider:

- Third party forum tools that provide threaded discussion - this would off the platform so may cause issues around monitoring users input if this is required
- Adding the ability for learners to vote on threads and posts within that thread to enable learners to understand where the most popular or relevant discussions are taking place.
- Ability to identify threads or discussions that course tutors have contributed to suggesting these threads are of importance / higher quality / raise salient points
- Enable tutors to highlight worthwhile threads. Again as an indicator to learners that this has relevant or important discussions taking place. This may be quite labour intensive if there are a lot of different forums and discussions.
- Ability to re-run the thread as the discussion occurred, introduce "next""previous" buttons? not sure of the value here
- Run discussion through twitter with specific forum tag direct learners to create storify type meaning from the discussions as way of engaging post event.
- Wiki as part of the course with comments (may run into similair problems with using Google doc)
- Make sure forums can be filtered by the previous points as well as showing openly the kind of activity that has been going on in the forums included dates.

Examples

Third party forum tool

- Google groups used in OLDS (Open Learning Design Studio) MOOC
- proBoards forum http://www.proboards.com/
- https://shareflow.net/

Voting on posts

- Coursera platform

Filtering of threads and posts

- Coursera platform

Creating meaning from discussion

- Storify - https://storify.com/

In Commonwealth of Learning MOOC on mobile for development learner lead use of Google doc as a collaborative document creation, this needs to be carefully managed as only 50 simultaneous editors allowed.

Data and References

Forum use

Designing asynchronous online discussion environments:
Recent progress and possible future directions
http://onlinelibrary.wiley.com/doi/10.1111/j.1467-8535.2012.01330.x/abstract;jsessionid=7390769887EF1F1F76AFF2D372AC493A.f03t03?deniedAccessCustomisedMessage=&userIsAuthenticated=false

Wiki as a threaded discussion

Student engagement in distance learning environments:
A comparison of threaded discussion forums and text-focused Wikis
http://journals.uic.edu/ojs/index.php/fm/article/view/2018

Google doc broke my MOOC

- http://www.insidehighered.com/news/2013/02/04/coursera-forced-call-mooc-amid-complaints-about-course#sthash.YXSnm1kE.dpbs
- http://onlinelearninginsights.wordpress.com/2013/02/01/how-not-to-design-a-mooc-the-disaster-at-coursera-and-how-to-fix-it/

Drumbeat (v2)

Use a regular repeating pattern of communication to help establish a sense of community.

http://fc07.deviantart.net/fs70/i/2011/170/b/8/animal_drum_kit_by_metalheadache-d3i6o5l.png

Problem

MOOCs are massive and so participants may not feel part of a community. Often they feel their voice is not heard, and so they can become disenfranchised and dissatisfied with the educational experience, which may impact on their learning.

In other educational contexts learners can have more regular and focussed contact with tutors that can help to overcome this problem. The nature of massive and open means that to provide this type of contact would become very resource intensive and unrealistic in most scenarios.

Can we create the sense of faculty presence (or the illusion of presence) in the course, without fragmenting the cohort? Can we encourage engagement and increase retention by establishing this kind of relationship between students and faculty?

Context

This is in the context of massive cohorts (thousands plus)

The examples are based in an externally developed online learning environment with pre-established functionality.

We have all the usual problems of online courses: time zones, connectivity, cultural differences ....

Solutions

Solution A

- Creation of a step at the end of each Week that asks
- "How's it going so far?
- This activity is entirely optional, but we're really interested to know how you're finding the course in Week x. We'd be really grateful if you could leave a comment or share some part of your experience so far in the discussion board."
- The educators and other members of the course team post responses, and "like" participant's posts.

Solution B

- Regular summary posts (emails, announcements, videos) from the educators that cluster and address commonly occurring themes, from across learner posts.

Examples

Example A

Birmingham's "Good brain bad brain" - weekly forums asking "how it is going"

Examples B

Reading's "Begin programming:..." had regular mid-week summaries written by different educators summarising what is happeing in the course (with some quotes) and what actions are taken

Reading's "Mangaing people" - one of the course team produces weekly videos summarising and responding to what is happening in the course, supplementing an email (as above)

Example C

All FutureLearn courses have a Welcome to the Week email and these frequently contain reference to participant comments.

Overlaps

- Crowd bonding
- Chatflow

Sharing Wall

Use a shared social space to gather and comment on resources to help coalesce large diverse groups. Padlet wall with images and reflective comments about learning in different contexts

Supporting media-rich peer collaboration.

Problem

Meaningful dialogue and interaction are important parts of learning together but how can we structure and support peer communication and collaboration among large, diverse groups.

Context

The large and diverse student groups engaging with MOOC platforms (whether in Moodle, FutureLearn or Coursera) make it meaningful discussion difficult, because individuals may not get a response to their post. Additionally, within MOOCs for Continuing Professional Development, learners may have limited time to engage in the MOOC, which may mean that they miss the social and pedagogical benefits of learning with others. In these circumstances, there is a need for a mechanism which will support the sharing of ideas and lead to meaningful discussion. It is important for students to gain an immediate snapshot of the activity of their peer community which will stimulate their further practice, investigation and discussion.

Solution

Start the activity with an individual task to post to an image (possibly accompanied by a short commentary) to shared space such as a wiki. It is important that the wiki or similar collaboration tool is easily accessible from within the MOOC platform (ideally it will not require additional log in) and will support the easy embedding of digital media (e.g. images, weblinks and videos). Then create a group task to identify another student's image from the wiki and begin a discussion thread based on it. Then structure the discussion by asking students to reply to another's initial posting by asking questions, providing a further example or contributing their own perspective on how the answer relates to the course content. This activity will encourage students to enage with others in a way that is easy and has immediate benefits. By encouraging students to create a resource together using digital media, the resulting collaborative product will be sufficiently stimulating to promote further learning.

Examples

An initial version of this activity was used in the BLOOC - a CPD MOOC in online learning aimed at Higher Education educators. Students were encouraged to practice their skills by uploading or linking to an image or video they used in their teaching on a Padlet wall accessible via a link from within Moodle. This enabled students to model their learning for each other and build a community. It received many favourable comments, and prompted discussion in the forums.

A link to a Padlet wall was created within the ULIA ICT in Primary Education Coursera MOOC. This was not directly linked to a discussion activity. The activity resulted in a number of media rich, co-constructed resources which were highly valued by the student group, and helped to build the professional community of educators enrolled on the MOOC.

Examples

The full activity (including the two staged collaboration-then-discussion) was implemented in the ULIA What Future for Education? Coursera MOOC. This resulted in a wealth of meaningful exchanges in the discussion forum, and media-rich co-constructed resources. Students accompanied many of their images with reflective posts, and so the collaboration itself became an easy access route to the discussion and reflection activities which were at the heart of the MOOC's learning design.

Data and References

Refs to pedagogy of discussion and collaborative learning e.g. Laurillard, 2012.

Facilitating large diverse groups

Use facilitators in discussion fora to help promote learner-learner interactions.
Managing discussion to facilitate interaction for learning.

Problem

Where collaboration is needed, or co-creation of learning is desired, as well as where interaction serves a supportive social function, how do we manage large diverse groups to ensure easy participation, inclusivity and valuable discussion?

Context

These are interatactions taking place in Moodle and FutureLearn style platforms, with very limited forum management tools available to faciliatators and moderators. The design of the forum platforms is separate from the individuals who execute the management of the forums.

This makes it dificult to ensure that every individual gets a response to their posting.

Solution

1. The vision must be designed and executed by a team.
2. The team must represent all the roles of the team that will execute the MOOC.
3. During execution the communication lines between those delivering and those creating and designing the platform tools. Communication needs to be rapidly repsonded to.
4. Use facilitators to post on threads were greater interaction is desired, as this attracts learners who seek closeness to the academic educator and team.
5. More immediate management of potentially problematic posts is needed.
6. As an alternative to group discussion, using collaboration tools to create specific tasks that are individual tasks, but which are shared and benefitted from by the whole group, increase participation and a sense of deriving value from the interaction.

Examples

The effect of educator presence was apparent in h817open - Openness to Education, where even in spontaneous forums formed on other platforms generated activity on that thread.

On the h817open MOOC, access to forum management tools improved as the technologists and forum facilitators communicated directly when the amount of communication being channelled through the designer proved unworkable.

On Begin Programming, a FutureLearn beta platform course, the number of posts in the first week was so high that the activity feed would only show them for coulple of minutes (activity feed shows all new posts in the course but limited to some 100 posts). Some learners posted the same question several times even though their initial post had been answered to because of difficulties of finding their own posts as search functionality and a reply respones system was unavailable.

Data and References

**Since the first and second run of the FutureLearn begin programming MOOC the educator/facitlitator team requested for the search facility and a reply response system. On the third run of the offering the MOOC platform has implemented a reply response system.

** On coursera platform it allows learners to start their own threads. However, when one types in the title for the post, it brings up a list of already existing threads that has similar word patterns in them. This gives the participant to see whether his/her question is already answered in those threads and if appropriate to post on an existing thread rather than creating a new one.

Six minute video

Maintain studnet attention when delivering content by keeping video material down to six minute chunks.

Problem

You are aware that creating a full length video of your lecture for online delivery is too demanding, from both a teaching and a student learning perspective. You cannot maintain your enthusiasm and passion for a full hour video and you know that student attendtion will drop dramatically at various points across a long single recording. Threfore you need to create smaller discrete episodes that you can feel confident will be watched in their entirety by your learners.

Context

This pattern relates to the production of online teaching material that is delivered in video format. This means any leacture capture style teaching resource that students are expected to follow to gain subject knowledge i.e. disciplinary content and/or particular threshold concepts.

Solution

Organise your video lecture material into sensible six minute chunks. You can then be confident the student attention will be kept until the end of the video. If available check this using the anlytics within your delivery platform.

Examples

'How Video Production Affects Student Engagement: An Empirical Study of MOOC Videos' - available for download at

https://www.cs.rochester.edu/hci/pubs/pdfs/edX-MOOC-video-production-and-engagement_LAS-2014.pdf

Recommendation 1: (of seven total recommendations): Instructors should segment videos into short chunks, ideally less than 6 minutes.

Data and References

Research at the University of Rochester (Guo, P., 2013) established that the optimal length for online videos is six minutes or less. The author notes: "The optimal video length is 6 minutes or shorter -- students watched most of the way through these short videos. In fact, the average engagement time of any video maxes out at 6 minutes, regardless of its length. And engagement times decrease as videos lengthen: For instance, on average students spent around 3 minutes on videos that are longer than 12 minutes, which means that they engaged with less than a quarter of the content…The take-home message for instructors is that, to maximize student engagement, they should work with instructional designers and video producers to break up their lectures into small, bite-sized pieces."

Guo, P. (2013, October 29). Optimal Video Length for Student Engagement. Retrieved from https://www.edx.org/blog/optimal-video-length-student-engagement

Kim, J.; Guo, P. J.; Seaton, D. T.; Mitros, P.; Gajos, K. Z. & Miller, R. C. (2014), Understanding in-video dropouts and interaction peaks inonline lecture videos, in 'Proceedings of the first ACM conference on Learning@ scale conference', pp. 31-40 .

Guo, P. J.; Kim, J. & Rubin, R. (2014), How video production affects student engagement: An empirical study of mooc videos, in 'Proceedings of the first ACM conference on Learning@ scale conference', pp. 41-50 .

Also:

TED talks - 18 minute rule

https://www.linkedin.com/pulse/20140313205730-5711504-the-science-behind-ted-s-18-minute-rule

Chris Anderson explained the organization's thinking this way:

"It [18 minutes] is long enough to be serious and short enough to hold people's attention. It turns out that this length also works incredibly well online. It's the length of a coffee break. So, you watch a great talk, and forward the link to two or three people. It can go viral, very easily. The 18-minute length also works much like the way Twitter forces people to be disciplined in what they write. By forcing speakers who are used to going on for 45 minutes to bring it down to 18, you get them to really think about what they want to say. What is the key point they want to communicate? It has a clarifying effect. It brings discipline."

And ...

Attention span in the classroom: first spike of inattention at 10 to 18 minutes.

http://teachingcenter.wustl.edu/Journal/Reviews/Pages/student-attention.aspx#.VM5Fp2SsXXo

Crowd Bonding (v2)

Manipulate discussion forum threads to encourage desired group formations. Forming discussion groups to facilitate interaction for learning.

Problem

Working together is a fundamental part of learning but catalysing the formation of groups from a diverse participant cohort is not easy when collaboration and co-creation of learning is desired, as well promoting interaction to serve a supportive social function.

Context

These are interatactions taking place in Moodle and Coursera style platforms, with only limited forum management tools but with the facility available to faciliatators and moderators to create threads in the forums or creat sub-forums. Discussion forums are unwieldy, many find it difficult to identify others with whom to share meaningfully.

** In some cases participants may even feel intimidated by the posts if they find that there is a huge gulf between their knowledge and other participants who are taking the course.

Solution

1. Determine natural or desireable groupings which might be sought for this learning topic.

For example, if the topic is about computer programming perhaps grouping learners based on their opereating system will be more useful because they are likely to have similar problems in installing software and running it.

2. Can be done by observing the nature of posts and posts seeking interaction in the opening days.
3. Form forum threads or sub-forums which are accessible to everyone on the fornt page of the forum.
4. Those threads should be inofrmatively titled according to the groups defined.
5. Allow the learners to form additional threads as needed.
6. Review for further weeks and phases of MOOC/ODL.
7. This will prevent students being isolated in dying threads as other learners dropout. Students have access to other discussions and can link discussions from multiple groups depending on similar themes

Examples

After a chaotic first week on h817open - Openness to Education, learner requests led to the forming of threads titled according to the area of interest accoring to their working context. IN addition spontaneous forums formed based on other ciriteria, so that sub-groups could form and learners find othes of similar interest. Discussion across groups to share ideas still occurred.

In a FutureLearn MOOC introducing Programming to beginners we saw that there were lot of posts that were operating system specific. Since all these posts were posted in FutureLearn forums which at the time did not have specific threading mechanism when the number of posts were large participnats had to read lot of unrelated posts to find information relevant to them. Had there been separate discussion areas for different operating systems, it would have been more meaningful for people posting on each thread discussion. It would have made it easier for participants to find answers to their quesstions. Also participants will be able to answer others questions more easily because the posts will be more 'visible' to a group of people who use the same operating system, experiencing same difficulties encouraging more meaningful interaction.

In the Coursera ICT in Primary Education MOOC, participants were invited to submit posts of examples to separate discussion threads focusing identified learning types (eg. discussion, collaboration, production). This helped to refine the task so that the discussion was focused around a specific issue. This proved to be a successful strategy.

**In Begin Programming build your first mobile game FutureLearn MOOC the second run had about 38k participants registering. In this run some of the participants who joined the course were professional programmers with lot of experience. After obtaining the game framework provided in the course they were able to customise the game to very high standards. The course encourages sharing of code and once these code were shared other participants that is beginners for whom the course was intended felt intimidated. They complained that the experienced programmers 'hijacked' the course. Had we introduced two threads of discussions one for experienced programmers and another for beginners this could have been avoided. In the third run of the course we have introduced an additional discussion space 'Experts' corner' hoping to eliminate this problem reoccuring.

Checkpoints

Problem

In a social, non-linear MOOC (e.g. a cMOOC or a project-based MOOC) interaction between participants is essential to the success of the MOOC. However, participants approach activities in a different pace, and sometimes even a different order, making it hard to synchronise their experiences.

Some participants diverge into independent explorations branching out of the MOOC activities. Sharing these could enhance the social learning experience, but at the same time it makes synchronisation even harder.

Context

cMOOCs or other MOOCs which have a strong social element and flexibility in the activity flow.

Solution

Create regular "checkpoints", which offer participants oportunities to synchronise with the course flow and pace, catch up on the social vibe and notice the recent highlights.

Such checkpoints could be synchronous events, recorded for those who cannot attend at the time - such as FishBowl sessions or webcasts. They can also be asynchronous events, such as forum posts or mails.

Checkpoints are:

- Scheduled at regular times throughout the MOOC.
- Produced in real time by the MOOC facilitators, reviewing and commenting on recent activity.
- A summary of recent MOOC activity and a preview of upcoming activity
- A showcase of student contributions
- A candid account of issues, dificulties and unexpected developments in the MOOC

Examples

The OLDS MOOC used several such checkpoints:

- A facilitators' blog
- Daily and weekly summary emails
- Live convergence sessions using google hangouts and twitter.

Related patterns

- Showcase Learning
- FishBowl

Data and References

Robertson, J. (2014). Pattern: Showcase Learning. In Y. Mor, H. Mellar, S. Warburton & N. Winters (ed.), Practical Design Patterns for Teaching and Learning with Technology (pp. 67-71). Sense Publishers