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A MOOC Design Mapping Framework (MDMF): Evaluation of academics' and learning technologists' experiences

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MOOC Design Planning Framework (MDMF)

Why?

- Increasing number of MOOCs at UofG
- Devolved teams, with multiple stakeholders
- Need for consistency and quality control
- Sharing of existing MOOC designs to save time / inspire staff
- Visual representation triggers ‘big picture’ thinking & communications (Osterwalder & Pigneur, 2010)
- Builds upon existing approaches to online course development; i.e. ABC learning design (Young & Perović, 2016) and FutureLearn (2018) activities

On the importance of learning design...

“... teaching in higher education needs to find ways of investing more heavily in the planning phase ... planning needs to take on more of the qualities of *design for learning*.” (Goodyear, 2015, p.28)

“... crystallising good pedagogy into designed artefacts, such as courses, assessment tasks, videos, online tools and learning spaces, is also a way of turning recurrent expenditure (of time, effort, and cash) into durable assets.” (ibid., p.28)

MOOC Design Map

Linear Structure Overview

Activity order Time per activity

Topic 1	Topic 2	Topic 3		

Total time =

	Pre course	Week no.
Articles		
Videos		
Forums/ Study Group		
Quizzes/ tests		
Other activities		
Weekly emails		

Learning Types

	Examples
Discussion	<p>Discussion</p> <p>Reflective</p> <ul style="list-style-type: none"> Forum Webinar Group Discussions Social Networking
Production	<p>Production</p> <p>Assess/Construct/Perform</p> <ul style="list-style-type: none"> Peer Review Reflection Personal Blog Wiki Assessment Create MP4/MP3
Investigation	<p>Investigation</p> <p>Browsing/Inquiry-driven</p> <ul style="list-style-type: none"> Web Search Desk Research
Acquisition	<p>Acquisition</p> <p>Deliver</p> <ul style="list-style-type: none"> Readings Podcasts Videos MCQs Live Webinar
Collaborative Building	<p>Collaborative Building</p> <p>Collaborative/Networked</p> <ul style="list-style-type: none"> Wiki Crowd Sourcing Google Doc Digital Artefact
Practice	<p>Practice</p> <p>Simulation/Games-based</p> <ul style="list-style-type: none"> MCQs Reflective Tasks

P = primary type
S = secondary type



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Learning Types Adapted from the UCL Connected Curriculum Learning Types Model



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Linear Structure Overview

	Activity order	Time per activity
Topic 1		
Topic 2		
Topic 3		
		Total time =

MOOC Design Map

Week no.

Pre course

Articles

Videos

Forums/
Study Group

Quizzes/
tests

Other activities

Weekly
emails

Learning Types

Examples

Discussion	Discussion
	Reflective Forum Webinar Group Discussions Social Networking
Production	Production
	Assess/Construct/Perform Peer Review Reflection Personal Blog Wiki Assessment Create MP4/MP3
Investigation	Investigation
	Browsing/Inquiry-driven Web Search Desk Research
Acquisition	Acquisition
	Deliver Readings Podcasts Videos MCQs Live Webinar
Collaborative Building	Collaborative Building
	Collaborative/Networked Wiki Crowd Sourcing Google Doc Digital Artefact
Practice	Practice
	Simulation/Games-based MCQs Reflective Tasks

P = primary type
S = secondary type

Discussion

Reflective

Forum
Webinar
Group Discussions
Social Networking

Production

Assess/Construct/Perform

Peer Review
Reflection
Personal Blog
Wiki
Assessment
Create MP4/MP3

Investigation

Browsing/Inquiry-driven

Web Search
Desk Research

Acquisition

Deliver

Readings
Podcasts
Videos
MCQs
Live Webinar

Collaborative Building

Collaborative/Networked

Wiki
Crowd Sourcing
Google Doc
Digital Artefact

Practice

Simulation/Games-based

MCQs
Reflective Tasks

Linear Structure Overview

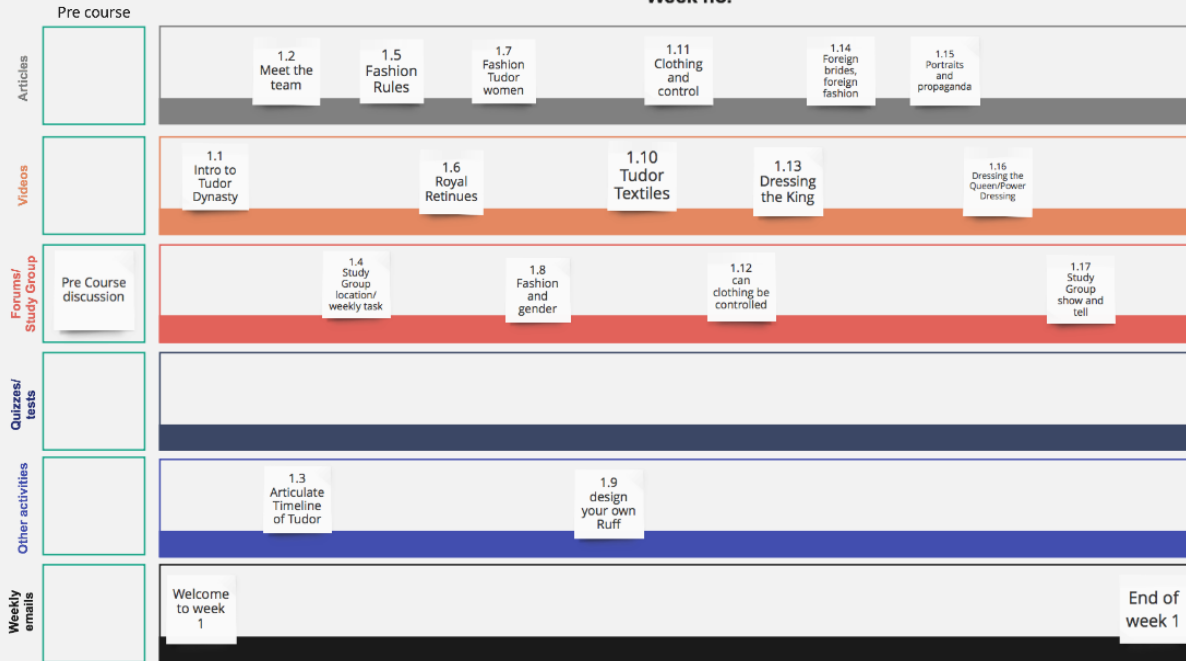
Activity order Time per activity

Activity order	Time per activity
1.1 Tudor dynasty	10
1.2 Meet the team	15
1.3 Timeline	20
1.4 Study Groups	15
<hr/>	
1.5 Fashion Rules	15
1.6 Royal Retinues	10
1.7 Tudor women	15
1.8 Fashion/gender	15
1.9 Design a Ruff	20
<hr/>	
1.10 Textiles	5
1.11 Control	15
1.12 Can clothing be controlled	15
1.13 Dress the King	5
1.14 Foreign brides	15
1.15 Portraits	20
1.16 The Queen	10
1.17 Show and tell	20

Total time = 4hrs

MOOC Design Map

Week no.



Learning Types

Learning Type	Examples
Discussion	<p>1.4</p> <p>1.8</p> <p>1.12</p> <p>1.17 S</p>
Production	<p>1.9 P</p>
Investigation	<p>1.5 S</p> <p>1.9 S</p>
Acquisition	<p>1.1 1.2 1.5P</p> <p>1.6 1.7 1.10</p> <p>1.11 1.13</p> <p>1.14 1.15</p> <p>1.16</p>
Collaborative Building	<p>1.4</p> <p>1.17 P</p>
Practice	
Reflective	<p>Forum Webinar Group Discussions Social Networking</p>
Production	<p>Assess/Construct/Perform</p> <p>Peer Review Reflection Personal Blog Wiki Assessment Create MP4/MP3</p>
Investigation	<p>Browsing/Inquiry-driven</p> <p>Web Search Desk Research</p>
Acquisition	<p>Deliver</p> <p>Readings Podcasts Videos MCQs Live Webinar</p>
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P = primary type
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Evaluation approach

Main aims were to discover:

- How the MDMF was used and supported
- Perceived benefits
- Perceived limitations
- Suggested enhancements

Semi- structured interviews

Academics (n= 9)

Learning technologists (n=3)

We hypothesised that:

- The MDMF would foster a learner-centred approach to content design
- It would save time on design and development
- That all stakeholders considered that MOOCs should be developed using the MDMF

How the MDMF was used and supported

Theme	Sub-theme
Process	<ul style="list-style-type: none">• Regular meetings (1:1 and teams)• Used more in early design/planning phase• Project management tool• Used to bring academics 'back to basics'
Learning design	<ul style="list-style-type: none">• Selecting and sequencing activities
Learning technologist as facilitator	<ul style="list-style-type: none">• Critical to effective use of MDMF



How the MDMF was used and supported

“We met up several times and used the online framework to plan each learning event for our MOOC. This involved numbering the learning events, setting which order they would be in, making sure we had a variety of different media-videos/podcasts/articles/quizzes/discussions. “
(P1, academic)

“...what had happened is that staff members had been trying to create MOOCs ... They tried to write out sort of from A to Z with the plan of the MOOC and what I found was that the framework became very useful when we were able to say, look, you’re already thinking too far ahead of yourself, so we were able to use the framework to step back a bit and to think about tasks and then reorder and organise these tasks.”
(P6, learning technologist)

Perceived benefits

Theme	Sub-theme
Process	<ul style="list-style-type: none">• Facilitates collaboration across the team(s)• Facilitated dialogue between academics & learning technologist• Academics more focused on end goals• Easy to use• Aided organisation• Saved time, but not quantifiable
Learning design	<ul style="list-style-type: none">• Made academics think about type, sequence and balance of activities• More learner-centred design• Encouraged academics to focus on design before development
Visualisation	<ul style="list-style-type: none">• Provides a 'big picture' overview• Colour-coding useful



Perceived benefits

“It was really useful to have a framework **to help you look at the bigger picture** to help you see where things slot together, but actually I think one of the most important things was just helping me **understand the different types of activities that you can use and how you can overuse certain ones and maybe realise that you haven't used enough of others.**”

(P4, academic)

“...with the MOOCs you have a range of different tasks that you can use with the learning and I think just the clarity that it gives when you start to see it down on paper, **you start to see the gaps and all that sort of stuff ... it creates a visual representation** and you can spot things really early.

(P6, learning technologist)



Perceived benefits

“I think it’s perhaps the whole philosophy behind the FutureLearn thing and the way John steered it as well but I think **what we’ve produced is a very learner-centred course.**”

(P8, academic)

“I’ve no idea if it [saved] a lot of time or not a lot of time but it was more a kind of feeling that it was going smoother and more that you had a kind of blueprint, if you like, that **everybody was aware of and everybody was collectively working towards.**”

(P12, learning technologist)

Perceived limitations and proposed changes

Theme	Sub-theme	Sub-theme
Process	<ul style="list-style-type: none"> Online tool did not capture all workshop discussions 	<ul style="list-style-type: none"> Tool to provide space for more detailed design notes
Learning design	<ul style="list-style-type: none"> Danger of the MDMF becoming 'too prescriptive' Some academics not understanding specific learning activities 	<ul style="list-style-type: none"> More guidelines on learning activities; simplify language used
Visualisation	<ul style="list-style-type: none"> One academic not used to thinking in 'visual way' 	
Technical	<ul style="list-style-type: none"> Lack of flexibility of the tool if updating activities (e.g. numbering) Academics' level of digital literacy 	<ul style="list-style-type: none"> Automatically update activities & link to learning types Increased training or more detailed guides



Perceived limitations and proposed changes

“I would have liked it to **capture more of the conversations**, we should have probably been running it and putting in our notes so that...and with a deeper area to capture the kind of talk that was happening and ideas that were flowing around.”

(P3, academic)

“...sometimes **it wasn't as flexible**. For example, if you're updating 1.1 you would need to take that out and then update all the other notes that were in there, all the little Post-It notes. If that was automatically done it would be brilliant.”

(P7, learning technologist)



Should the MDMF be standard?

9/12 thought it should be standard.

12/12 participants said they would use the framework again if designing a MOOC.

“...not just for MOOCs, I think even for **any form of course design**. Even just simply used as an icebreaker, it’s actually a really good exercise to do because **it does get everyone thinking about structure, layout, progression**, these kind of things.”

(P12, learning technologist)

Next steps...

- Continue to roll out MDMF for MOOC design
- Investigate its potential applicability to other online courses
- Template worksheet developed to capture more detailed workshop discussions, to be used as project management tool in conjunction with RealTimeBoard
- Investigate development roadmap for RealTimeBoard and other technology solutions e.g. Trello

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Questions?

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