Differences and Commonalities – A comparative report of video styles and course descriptions on edX, Coursera, Futurelearn and Iversity

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Jeanine Reutemann
University of Applied Sciences and Arts Northwestern Switzerland
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Differences and Commonalities – A comparative report of video styles and course descriptions on edX, Coursera, Futurelearn and Iversity

Jeanine REUTEMANN

University of Applied Sciences and Arts Northwestern Switzerland, Institute Aesthetic Practice and Theory, jeanine.reutemann@fhnw.ch

Abstract

This paper reports a comparative overview of MOOC courses from edX, Coursera, Futurelearn and Iversity. The sample covers courses published between September 2014 and January 2015 and the comparison focuses on different video styles as well as course descriptions on the platforms.
Based upon this data set of MOOCs (N=449) this study shows noteworthy facts about the state of MOOC production. *Talking head* is the most common video style overall on all four MOOC platforms (87%), followed by or in combination with *Presentation slides* (38%).
The courses on the European platforms Futurelearn and Iversity show a highly significant difference in the amount of work effort per week description compare to the US platforms edX and Coursera. In addition, Futurelearn has the shortest course week duration compare to the other platforms. A number of further points are reported below.

Keywords

Video style, talking head, MOOC platforms, edX, Coursera, Iversity, Futurelearn

1 Introduction

edX, Coursera, Futurelearn and Iversity are four of todays leading platforms for MOOC courses. Whereas edX and Coursera are US based, Futurelearn and Iversity are located in Europe. Each platform has its strengths and weaknesses but all of them display various university courses from all over the world. Almost every course on these platforms uses video as a form of knowledge communication. Video as a *time based media* offers unique ways for online teaching (LOVISCACH, 2013). Previous research suggested, that using short videos as a media for knowledge communication offers comparable learning results with traditional lectures (PROBER & HEALTH, 2012; GLANCE, FORESEY & RILEY, 2013). But students also seem to interact differently with course video material, depending on the video style (KIM et al., 2014). Previous studies already highlighted different typologies of video styles (GUO, KIM & RUBIN, 2014) or video interactions (KIM et al., 2014). HANSCH et al. 2015 provide a guideline of the pro and contras of different video styles (HANSCH, MCCONACHIE, SCHMIDT, HILLERS, NEWMAN & SCHILDHAUER, 2015). Whereas these studies give a good overview of different video styles with the pro and contra, a more detailed analysis from the perspective of average use of certain video styles over several MOOC platforms are still missing. Therefore, this research article asks the following research questions: Is there a significant difference of video styles and course descriptions between edX, Coursera, Futurelearn or Iversity? What are the overall most common video styles on these platforms? As far as known, no previous work has compared MOOC course videos from different MOOC platforms regarding to video styles and course description.

2 Method

Between September 2014–January 2015, all open accessible video courses on the platforms Coursera, edX, Iversity and Futurelearn with an intro and lecture video have been collected. For all courses, the intro video and one example of a regular lecture have been analysed. 60 courses were excluded, as they had either no intro video or third week video. A total of 448 MOOC courses from all scientific disciplines have been coded on criterions based on media specific characteristics such as video style (more details see below). The intro and the first content lecture video of the third week (excluding *introduction to the week* videos) were coded for the evaluation. The third week was chosen as a representative week for the content-focused part of the MOOC, as at this point the introduction is typically over and the closing talk has not yet started. The report in this paper focuses on a cross-platform comparison.

Each video was manually evaluated for binary core variables. The core variables are based on previous research studies with video style definitions (e.g. GUO et al., 2014; HANSCH et al., 2015). The elements were coded using 1 if the video contains an element and 0 if the element is absent. Only variables which can readily be captured as yes or no were considered in the evaluation. After the first round, 25 courses were randomly selected and re-evaluated, verifying the robustness of the evaluation method. A simple descriptive statistic of the sample is presented using averages, resp. percentages of the courses scoring a one on a binary variable. For the non-binary variables (duration, number of educators and announced effort per week), the averages are listed. Additionally, the number of different universities, countries and disciplines are counted. To further make qualitative sense of the dataset, a series of interviews with experts from MOOC platforms was conducted.

3 Data Sample & Results

3.1 MOOC course description on platforms

Table 1: Comparison of course descriptions on different platforms

Course Description Intro Page	All 448	edX	Coursera	Futurelearn	Iversity
1a) Nr. of MOOC courses	448	136	222	68	22
1b) Nr. of Different Universities	160	41	73	26	20
1c) Nr. of Different Countries	35	15	24	6	6
1d) Avg. Course Weeks	7.95	9.1	7.92	5.21	9.95
1e) Avg. weekly effort	5.1	6.1	5.2	3.2	3.2
1f) Avg. Intro Video (min/sec)	2.25	2.21	2.29	2.11	2.40

For the full data set and variables explanation from Table 1 & 2 please see this link: http://www.audiovisualresearch.org/moocs/differences-commonalities/.

Coursera shows the widest variety in different universities und countries. edX has the highest variety of scientific disciplines (49), although Coursera offers more courses than edX (edX 136 courses, Coursera 222). Futurelearn, with a lot less courses (68) than Coursera, offers an equal variety of disciplines (Futurelearn 24, Coursera 23). Iversity presents a vast variety of courses from different universities (20) considering that only 22 courses are offered. Courses on Futurelearn and Iversity describe significant less effort of work per week average than the ones on edX and Coursera. At the same time, Futurelearn has with 5.21 weeks the shortest average week duration while Iversity with 9.95 weeks, the longest.

3.2 Video styles in MOOCs

Table 2: Comparison of video course styles

MOOC Lecture Video	All 448	edX	Coursera	Futurelearn	Iversity
2a) Avg. Lecture (min/sec)	10.26	9.49	12.36	5.40	6.03
2b) Classroom with students	7%	12%	7%	0%	0%
2c) Classroom without students	6%	7%	4%	10%	14%
2d) Pr. Slides with speaker	33%	26%	46%	3%	36%
2e) Pr. Slides without speaker	38%	30%	48%	22%	27%
2f) Computer screen	29%	33%	32%	9%	27%
2g) Green screen	26%	35%	25%	10%	22%
2h) Talking head	74%	78%	68%	81%	91%
2i) Animation	20%	19%	21%	19%	18%
2j) Outdoor/unrelated content	10%	9%	5%	31%	5%
2k) On location/related content	20%	22%	20%	22%	9%
2l) Webcam capture	8%	7%	12%	0%	9%

The most common used video style overall the platforms is with 74% *Talking head*. The highest use of a *Talking head* can be found on Iversity with 91%, whereas Coursera has with still 68% the least. A high contrast between the video styles on edX (26%), Coursera (46%) and Iversity (36%) compared to Futurelearn (3%) also is in *Slides with a visible speaker.* Moreover, the Futurelearn platform also demonstrate a

contrast with the rare use of *Green screen and Webcam capture (0%)*. On the contrary, it has a notably higher average percentage regarding *Outdoor (unrelated content)*. Iversity shows the most use of *Classroom without students* and in contrast the least use of shots *On location (related content)* with 9%, whereas the other three platforms are all around 20%. The video style *Classroom with students* is only used by edX and Coursera. The only variable which all courses on the four platforms have almost in common is the average use of *Animation*.

4 Discussion

4.1 MOOC course description on platforms (Table 1)

edX and Coursera, both launched in early 2012, a bit earlier than Futurelearn (end of 2012) and Iversity (end of 2013). This could be one reason why the European platforms Futurelearn and Iversity offer less courses than the US platforms. But still, Futurelearn offers as much diversity of the disciplines as Coursera. One reason for the vast variety of disciplines on the Iversity platform can be that the Stifterverband Germany started 2013 an initial funding to finance ten MOOC productions (IVERSITY, 2015). MOOCs in many different universities and disciplines received this funding. This could explain the low number of courses per university on Iversity (22 courses from 20 different universities). The video implementation on Iversity is only marginally different from Coursera and EdX, which is in contrast to what Lara Ruppertz, Director of Didactics and Course Development at Iversity stated in an expert interview (2015): „We don't want to have standardized courses, where a professor is recorded in a lecture hall or in a studio and we create a video library." One striking point in the data set is that Futurelearn and Iversity have a significant difference within the weekly amounts of work compare to edX and Coursera. This point seems to differ widely between the European and the US platforms. Furthermore, the weekly amounts of effort are not replaced by longer course durations. To the contrary, the courses on Futurelearn also have the smallest weekly amounts of effort also with 5.21 the shortest time span of the course duration. Iversity, on the other hand has with 9.95 a slightly longer duration than edX and Coursera. In traditional academia, hours of effort and weekly durations of courses are counted for achievements and ECTS points. Following, if the weekly effort of the Futurelearn and Iversity courses is much lower, does this mean that the value of a certificate is worth less compare to a certificate on edX or Coursera? This point should be considered carefully for future decisions about course requirements, weekly durations, the demand of effort and possible certificate standards.

4.2 Video styles in lecture videos (Table 2)

The *Talking head* is by far the most regularly used video style, rightly followed in combination with *Presentation slides*. Usually there is a montage between a *Talking head* and a *Presentation slide*. GUO et al. (2014) already highlighted in their study the problems of the visual changes (*visual transitions*) and the rewinding back to the presentation, when the speaker appears. Yet, in this paper this is exactly the most common used combination. The reason for this could be, that while this data set covers the period of September 14–January 15, GUO et al. (2014) published their article as the courses have already been produced. HANSCH et al. (2015) give additional attention to the point, that a *Talking head* can evoke monotony. They propose to use multiple camera angles and edit it afterwards. One problematical point can be that the image of the speaker *jumps* from one angle to the other, as the framing is to similar. This event increases when a speaker stands in front of a *monochromatic surrounding space* (e.g. white, black) as the similarity of the background evokes a stronger attention focus compare to natural background with different colour nuances. Both video styles, *Slides with speaker*, or *Slides without speaker* are as already mentioned another dominant video style. One could speculate, that the overall dominant use of video styles with *slides* is somehow a logical result, as this seems to by an analogy to the most common and equally known teaching materials of todays academic knowledge transfer.

It is striking, that some variables appear more often within a sole platform compare to the others. Futurelearn is again, as before an outlier in various ways. As an example, edX, Coursera and Iversity use the video style of *Slides with a visible speaker* quiet frequently. Coursera especially, with 46%. In contrast, only 3% of the lectures videos on Futurelearn make use of this video style. On the one hand, Futurelearn has the highest use of *Off-Screen Speaker and Outdoor (unrelated content)* – which can all be de-

scribed as rather more time consuming production styles. On the other hand, within the video style *Green screen*, which is rather time consuming to produce too, Futurelearn shows the lowest average. Interestingly, edX and Coursera are the sole platforms that make use of the video style *classroom with students*. In an expert interview with Nigel Smith (Head of Content, Futurelearn) and Lara Ruppertz (Iversity) both highlighted, that they try to closely work with the MOOC producers together to improve the way videos are created for the courses. Nigel Smith stated (2015): "When we encourage partners to produce videos, for all of the different steps that you can deliver as part of a Futurelearn course we offer quiet a lot of guidance. […] For an instant, with our partners we always ask to see sample video before the course starts. We always try to see material and we provide feedback and guidance on how it might be improved."
Clayton Hainsworth, Operations and Production Manager from the Media Team at edX stated on guidance for video production (2015): "The video production part of this is not something that we actively go out and make an assessment of, but we will often provide feedback. What we actually find is, that this feedback is often very much appreciated." Coursera is as far as known the only platform not to offer any video production advice but leaving it fully to the universities or organisations themselves. Coursera was also the only platform that was not readily available for expert interviews and Pauline Vorms from Coursera wrote in an email (2015), that they don't have dedicated personal responsible for video consulting or production advice. This could be the reason, why the MOOC videos on Coursera show the highest percentages within rather simple presentation styles e.g. *Slides without speaker (*48%), *Slides with speaker* (46%) or the use of *Webcam capture*.

5 Further Thoughts

MOOC platforms themselves are not responsible for the video production as the universities decide what and how they produce. Some platforms give advice and consult universities regarding video production. These platform consultants can influence the production and discuss and reflect with the university producers about their own style.

Further, it can be assumed that when universities decide to produce for a specific platform, they will also use the existing production styles as guidance. Or they decide for

this or another platform because they are enthusiastic about the offered course quality. An example for that is the *khan academy* with their own "khan-style". So, if more courses use *Slides* on one platform, it seems likely that other producers follow these course examples. This report shows only some insights into the frequency of video style production overall different platforms. Some variables, e.g. *Slides, Talking head*, duration of the lecture have been identified to differ significantly between platforms. Only a small number of variables have been presented to compare video styles and course descriptions on the platforms. Further steps should include a deeper analysis of video differences on platforms with further variables such as correlations of video styles and scientific disciplines. While we currently do not have sufficient data, it would be interesting to correlate the video styles with drop out rates. We would highly welcome access to such data and are happy to share our data set with interested parties. More comprehensive insights about the perception of different video styles could be an interesting and necessary perspective on the further development of MOOC courses.

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How MOOCs can be used as an instrument of scientific research

Claudia ZIMMERMANN[1], Michael KOPP[2] & Martin EBNER[3]

[1] University of Graz, Department of Sociology, claudia.zimmermann@uni-graz.at

[2] University of Graz, Academy of New Media and Knowledge Transfer, michael.kopp@uni-graz.at

[3] Graz University of Technology, Educational Technology, martin.ebner@tugraz.at

Abstract

Massive Open Online Courses (MOOCs) are an increasingly important phenomenon in the world of technology-enhanced learning. This development opens many opportunities for interdisciplinary interaction, not only for the purpose of researching MOOCs themselves, but for integrating them into various research settings. In this publication, we adress the question of how MOCCs can be used as instruments in scientific research. Our suggestions are illustrated on the example of the “Dr. Internet” project, which allowed us to gain practical experience in this area.

Keywords

Case study, experiences, Higher Education, Dr. Internet