

Engaging millennials with online content delivery through a discourse community understanding of learning

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Short videos are now a standard feature of online content delivery and a wealth of literature has emerged regarding best practice in designing for student engagement. In this concise paper we argue that lessons from research on engaging with ‘millennial’ students in general can also be applied constructively to video design. In particular this generation of students has been shown to desire a personal connection with their teachers, they expect educators to be ‘passionate’ or ‘enthusiastic’ about the topic, and they demand a line-of-sight connection between the immediate learning activity and the end-goal. Furthermore, we argue that an understanding of transition to university studies which conceives of disciplines as discourse communities provides an integrative understanding of student engagement that further informs the design of effective video vignettes. We describe a set of videos, in which teaching academics describe their research to students in a core first-year Bachelor of Science subject, which have been produced according to the principles derived from the above research and approach, with the aim of attaining a high level of student engagement. These videos have recently been trialled and are soon to be evaluated.

Keywords: video, online learning, engagement, millennial, discourse community

Introduction

Short videos are a standard feature of online content delivery in the higher education context. Research continues to determine the parameters under which student engagement with such videos is optimized, with length and interactivity among the factors shown to be significant. In parallel, other studies have been carried out in recent years to determine how best to engage the most recent generation of school leavers, sometimes known as the ‘millennials’, in university education. This paper argues that a discourse community approach to understanding the transition to higher education also provides insight into how to create video content that is potentially more engaging to students, in particular the millennial generation.

By discourse community approach is meant an understanding of learning in the higher education context as a process of joining an academic discourse community. According to this approach, disciplinary knowledge is understood as being ‘constituted in the flow of meaning produced between knowledgeable people when they communicate together’ (Northedge, 2003, p. 17). In a broad sense, an academic discipline can be conceived of as a community, of which the subject taken by undergraduate students is a particular instantiation in time and space. Furthermore, ‘[e]ach subject has its own discourse’ and ‘transition to the new culture is reconceptualised as one of gaining familiarity, and ultimately mastery, of these discourses and literacies’ (Lawrence, 2005, pp. 246-247). Finally, this approach considers social and affective dimensions of learning, by accepting that it involves becoming acquainted with ‘social practices’ of the community, and acquiring a ‘sense of identity’ with it (Hutchings, 2006, p. 248).

Thus, the totality of the content, the use of subject specific-concepts and their interrelationships, the writing and assessment genres, referencing conventions, but also the accepted practices for interrelating with staff, peers, and university authorities are thought of as a discourse space, and learning in the subject as a process of joining and gaining acceptance as novice members of the discourse community. This conceptualization foregrounds the social dimension of the learning process, which extends beyond interaction with peers and staff members to encompass the socially constructed nature of knowledge, recognizing that the rules governing what is ‘right’ or ‘wrong’, logical or illogical, appropriate or inappropriate in the discourse is governed by socially agreed rules and conventions. In particular the discourse community approach makes clear that the process of learning is also related to an evolving identification with the target community.

The discourse community approach provides a context for integrating otherwise ad hoc findings on improving student engagement. In the current context we are particularly interested in engaging millennial students, and



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the design of engaging videos in online content delivery.

Background

At a Victorian university, a new first-year science subject, which is core for all Bachelor of Science students regardless of major, was developed to introduce students to scientific concepts and literacies through a study of 'big ideas in science'. The subject is intended to be cross-disciplinary, covering topics ranging from the big bang to the DNA double helix. Key aims were to develop an understanding of the scientific process, and improve scientific writing skills. Subsidiary aims of the subject were to raise awareness among students of the scientific research being carried out at the university, to motivate them in their study of science, and to assist undecided students in their choice of major.

To this end, a series of short videos was created featuring research academics at the university, who also teach into the Bachelor of Science, in which they each identify a 'big idea in science' under which their research area can be categorized, and then go on to describe their research, and its scientific or social significance. The videos were usually filmed with the featured academic in the laboratory or in the field, and often also contained segments in which research students contributed to the explanation, or demonstrated laboratory processes. The videos also frequently made use of 3D animations to support the scientific narrative provided by the academic in question. The videos featured research academics and their graduate students from as many as possible of the majors and minors offered within the Bachelor of Science, which range from pure mathematics and statistics via nanophysics, chemistry and biomedicine to botany, zoology and neuroscience. These videos were first embedded in the subject's LMS in the first semester of 2018; ethics approval has been received for a process of evaluation, which is about to commence.

Student engagement

In addition to the discourse community conceptualization, the design of these videos was informed by two fields of research. The first is the state of the art of what constitutes engaging video production; the second is the research on engaging with the most recent, or 'millennial' generation of school-leaving students.

From the literature on video design, three important characteristics emerged. The first is that videos need to be short. A large study of the video viewing habits of MOOC students, for example, demonstrated that engagement fell away if videos were longer than about 6 minutes (Guo, Kim & Rubin, 2014). This criterion was taken as a guideline for the production of our videos. The second is the need for videos to be interactive, that is, to be presented in a format with pause, rewind, fast-forward and speed selection functions, so that students can control the pace of information flow, replay sections they find difficult to follow, etc. (Merkt et al., 2011). Thirdly, studies show that videos need to have a personal touch. Talking heads have been shown to be more engaging than voice-over-images; and presenters addressing the viewer directly, for example speaking straight into the camera from their office desk, are more engaging than those addressing a lecture theatre full of students, perhaps from behind a podium, when the viewer of the video is relegated to the role of a passive onlooker (Guo, Kim & Rubin, 2014). This research demonstrates that not all videos are equal, and that there are clear steps that can be taken to make viewers feel more engaged.

The second body of research informing our video design concerned engagement with millennial students at a general level (not merely through the medium of video). Firstly, studies repeatedly find that among the factors identified by students as contributing to improving their engagement with learning is that the teacher possesses a characteristic that is typically described as being 'passionate' or 'enthusiastic' about the topic, or being 'inspiring' (Revell & Wainwright, 2009; Bowen et al., 2011; Roehling et al., 2010). Secondly, studies have also found that millennial students expect to be given a 'line-of-sight' connection between the immediate task at hand and the end-goal, including a clear pathway to success through their degree and beyond (Hershatter & Epstein, 2010; Benfer & Shanahan, 2013). A third element identified by the literature as contributing to engagement with the millennial generation is the expectation of a personal connection with the teacher (Bowen et al., 2011). Students expect teachers to take a personal interest in their progress and welfare.

Many of the features identified from these two fields of research make sense within a discourse community understanding of discipline learning. The construction of the student as a discipline novice negotiating entry into a discourse community is in harmony with millennial students' stated desire for personal attention from discourse initiators such as the teacher. Videos that address students directly in informal language can therefore be expected to be more engaging. The need for a line-of-sight connection with the end-goal of community acceptance is also a logical characteristic of the learning process. The search for 'enthusiastic' role models is

also consistent with the social understanding of the transition to higher education embodied in the discourse community approach.

The videos

The creation of the videos was guided by the features associated with improved engagement that have been outlined above. Videos were kept short, with the initial intention to keep them under 6 minutes. In the end only 4 of 17 were longer than 6 minutes, and only one over 7 minutes (7:11). Subjects were filmed relatively close-up and asked to speak directly to the camera and off-the-cuff. They were filmed in their natural surroundings (in their lab, in the field, or sometimes in their offices), rather than in a studio. Research students were frequently included in the videos, providing an accessible model of a more integrated member of the discourse community, which commencing students could identify with, or even aspire to. Diversity was an important consideration when selecting subjects, with 10 male and 7 staff members, and a further 2 male and 7 female research students with speaking roles, and 2 male and 2 female students depicted at work in labs but not speaking. Amongst the students there was a good cross section of ethnic backgrounds; unfortunately, of the 17 staff members there was only 1 non-Caucasian, reflecting a reality that was beyond our control. Student speakers were also on the whole less willing to speak off-the-cuff, meaning (with two noticeable exceptions) that their delivery was somewhat stilted. Significantly, in terms of role-modelling, in addition to examples of male supervisors with male and female graduate students, there was also a female supervisor with both a female and a male research student. Because a significant aim of the videos was to nurture identification with the discourse community, in particular encouraging novices to imagine themselves as 'full' members of the community, diversity is clearly an important consideration.

We also consciously included line-of-sight elements firstly in the form, as already mentioned, of graduate students representing a future possibility for novices, but secondly by ensuring that each video ended with the speaker identifying the major or minor or, in some cases, individual subjects that the student could take if he or she found the research topic interesting. In one of the videos the speaker finished by pointing out that if students chose a certain elective in third year, they would be working with graduate students and post-doctoral fellows in the very lab in which she was speaking.

We also attempted to address the student expectation of 'passionate', 'enthusiastic' or 'inspiring' teachers. While scientists are not necessarily naturally flamboyant speakers, it was hoped that the authenticity of staff members speaking about their research, a subject they are undeniably passionate about, would to at least some extent meet this expectation. To support this aim we also added a number of elements to the video production itself. Firstly, as much as was possible on a limited scale, additional video, or 'B-roll' illustrating the speakers' narrative was included; in many of the videos short 3D animations were created to illustrate scientific points; and finally, a snappy soundtrack 'sting' reminiscent of a TV science magazine was used to break-up sections or cover transitions. We note that animations have also been linked to improved student engagement (Lin & Atkinson, 2011). To the extent that 'passion', 'enthusiasm' and 'inspiration' are reasonable expectations on the part of students, we felt that we addressed them to the fullest extent practical.

A few of the videos also included fast-motion 'guided tours' of parts of the campus students may be unfamiliar with. For example, one of the videos was filmed at a joint research facility on the outskirts of the campus that many students would be unaware of: the story began with a 30-second fast motion trek from a clearly identifiable point at the centre of the campus to the doors of the research facility, to familiarize students with the location and in particular the proximity of the labs. Familiarisation with the special dimension of the discipline community was therefore also an aspect of some videos.

Finally, all the staff members featured were research academics who also teach into the Bachelor of Science. The videos therefore also served to 'introduce' students to their future teaching staff. Staff have already reported being recognized by students as a result of featuring in the videos. While this element of community-building should not be overstated, it nevertheless serves to demonstrate the social element of engagement to which video can be applied.

Conclusion

Taking a discourse community approach to designing video content for online subject delivery provides us with strategies for improving student engagement with videos and subject content in general at a more holistic level than technical aspects of video design itself, on which most research to date has focussed. We have produced videos which attempt to meet student expectations of 'passionate' or 'enthusiastic' teachers by presenting

research academics speaking on topics they are passionate about, their own research. Music, 3D animations and illustrative footage have been added to make them more appealing. The videos aim to simulate a personal connection with lecturers through framing the speakers as directly addressing the viewer, in an informal register of speech. Furthermore, they provide line-of-sight information to students in the form of advice on what major to take ‘if you are interested in this kind of research’, and role models of graduate students presented in a laboratory or research context, as discourse community initiates with whom undergraduate students are able to identify. While the resulting video productions look promising, further research will enable us to measure the extent to which we have truly been able to engage with millennial students through the medium of video.

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