

## YouTube and Video Quizzes

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The Internet sensation YouTube (<http://www.youtube.com>) has become such a force online that it was estimated in 2006 to account for a full tenth of the bandwidth by the entire Internet in the United States (WebProNews, 2007), and to use as much bandwidth in 2007 as the entire Internet had done in 2000 (Carter, 2008). Like many technological tools created with entertainment or profit in mind, YouTube can now be easily and usefully adopted by instructors for educational purposes, and indeed many professors use YouTube in their classroom teaching already (Brooks, 2000). This is especially true for passive uses of YouTube; watching videos that are already online and using them in the classroom experience to support a concept and provide another mechanism for students to connect with the topics.

It is fruitful to consider Bloom's Taxonomy of Educational Objectives (Bloom & Krathwohl, 1956) when employing video or any media in the classroom to maximize the intentionality of teaching and learning. The use of video for demonstration or modeling corresponds well to Blooms levels of Knowledge, Comprehension, and Application; while case studies offer a chance to demonstrate Analysis and Synthesis, and perhaps even Evaluation, when comparing a video to information from a text book or other content.

YouTube videos can be employed to introduce a subject, such as framing the context, or simply to pique curiosity. Or, they may be shown after a principle has been taught, and now needs to be applied in a case study (a variation of this calls for analyzing what the video gets wrong). More probingly, instructors can use a video to problematize those principles which have until that point been presented as simplistic; often this takes the form of sparking debate and controversy. During the showing of any video content, professors long striven to avoid a "television response" by students, in which they enter a passive state characterized by a lack of intentional engagement with the material (Clark, 1983). To combat the tendency, instructors can require activities such as focus questions discussed before the video, worksheets that require answers during the video, intentional pauses to debrief action thus far or predict the next response, and variations in viewing method, such as intentionally muting all audio (or vice versa, listening to the audio but not the video). In addition, other instructional technology devices could be integrated, such as student response systems (clickers) to encourage attention, engagement and formative assessment. Post-viewing activities could include reflective writing (either on paper or via web log), or discussion of problems raised by the video - in class, outside of class, or in an online discussion board thread.

Beyond the passive use of YouTube, there are exciting new options to consider in a more active vein. Recording and uploading one's own YouTube videos offers the chance to capture lectures "in a can" and allow students to view the material asynchronously, at their schedule. This affords the instructor more freedom to move (at least some) "content delivery" away from the hallowed face to face classroom time, and into the realm of preparation and homework.

The flip side, creation of videos by students for uploading to YouTube, similarly offers a venue for active participation by students to avoid taking up valuable face to face class time. Student projects and oral reports could conceivably still allow for accountability but not require the dedication of time in the regular class meeting slot.

Like screencasts (screen-capture videos), YouTube videos by the instructor (for delivery) or by the student (for reporting and accountability) offer the chance to move activities normally associated with class time to an online, asynchronous schedule (Yee & Hargis, 2010).

The screen capture capability also offers instructors many options for using the 'captured' content, either real time, or asynchronously for preview, review and a wide variety of supplemental instruction. One interesting example which the authors have used is to show the screen capture during class and "team teaches" with you. This allows the instructor a unique perspective of how their students attend to their instructional style, as well as an enhanced venue for classroom management and assessment.

For these reasons of increased engagement, fully online or blended classes might especially benefit from YouTube as a means to provide a quasi face-to-face encounter between students and instructors that would otherwise be impossible, enabling a stronger creation of community that is so vital to the success of online students (Rovai & Jordan, 2004).

For smaller classes, instructors might opt to make the video private, which allows for viewing to be kept private for up to 25 individuals. The additional power of this approach allows instructors to better cater their style, content and discipline with the needs and processing of their students and the learning environment.

Online classes might also be the best candidates for video quizzes, a novel use of YouTube's built-in applications to make the experience not only active, but interactive. Viewers experience links on the screen as a "decision tree" of links to other videos, enabling instructors to use their webcams to pose questions in a verbal quiz format that will retain interest among Millennial students longer than a text-based quiz would (DeLacey & Leonard, 2002). To create such a video quiz, first plot the decision tree and record the necessary mini-videos.

Then, to each add a text box with the possible multiple choice answers (YouTube calls these "annotations"), and finally turn each annotation into a hyperlink to the relevant video. Examples of such video quizzes can be found at <http://www.youtube.com/watch?v=xyXqz9Oyovk>.

The advantages of this type of formative assessment include both increasing the stimuli and subsequent attention of the student, as well as requiring continual engagement, which produces critical information, and allows students to more fully self-regulate their own conceptual understanding, so they can move forward in their learning with an increased level of awareness of what they know and do not know.

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