**TechMatters: Video Flipped the Library Classroom: Using TED-Ed and Teachem to Deliver Flipped Instructional Content**

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Over the last few years, the buzz in the educational community surrounding the pedagogical concept of the “flipped” or inverted classroom has continued to build. With this model, the lecture portion of a class is delivered to students prior to the classroom session using a variety of methods including assigned readings, slide presentations, podcasts, and videos. This frees up classroom time for students to participate in active learning and problem solving tasks to illustrate and clarify lecture concepts, and for instructors to provide more individualized and targeted instruction.

In order to “flip” the classroom, instructors need a means to deliver the content they would otherwise provide during the classroom session. Obviously, learning management systems such as Blackboard, Desire2Learn, and Moodle can be used for this purpose, however all instructors do not necessarily have access to these types of tools. In this article, we’ll take a look at two free, online tools designed specifically to facilitate the development of video-based learning objects that can be used as a jumping off point for flipping the high school or college classroom.

**TED-Ed**
http://ed.ted.com/

TED-Ed, brought to you by the same organization known for the inspirational and educational “TED Talks” videos (http://www.ted.com/talks), is both a portal for “curated educational videos” and also a platform “that allows users to take any useful educational video…and easily create a customized lesson around the video” (http://support.ed.ted.com/customer/portal/articles/963941-what-is-ted-ed). Basically, the TED-Ed site supplies an intuitive and easy-to-use template for developing video-based learning objects that can serve as the out of class component for a “flipped” classroom experience.

As a content portal, the TED-Ed site provides access to original video lessons that are developed by the “TED-Ed team” through collaborations between selected educators and animators. Each lesson consists of an animated video accompanied by supplementary content designed to encourage students to “Think” (multiple choice and open-ended questions to test basic comprehension), “Dig Deeper” (description of and links to additional resources to learn more), and “Discuss” (online forums for both guided and open discussions) a topic. Similarly, lessons based on selected “TED Talk” videos have also been developed and are available on the site.

Any TED-Ed original lesson can be copied and customized for use with your own students. You must create and log into a TED account (requires only a name, email address, and password) in order to use this feature. Find lessons to flip either by browsing the “Lessons” section of the site or by using the site’s main search box. When you locate a lesson you want to modify, simply press the “Customize This Lesson” button and begin editing.

When you “customize” a lesson you can edit the text of the lesson, add and remove questions, resources, and/or discussions, and even exclude sections entirely. Your flipped lesson can either be made public (“listed”) to share with the TED-Ed community or kept private (“unlisted”). If public, you also have the option of allowing other TED-Ed users to customize your new lesson or not.

In addition to developing lessons based on TED-Ed videos, the platform also provides the option to create a lesson based on a YouTube video. To do so, simply follow the “Create a Lesson” link located on the home page. From there, use the embedded search box to “Find a Video” from YouTube to build a lesson around. You can use videos produced by you or your library provided that they have been uploaded to YouTube. Be aware this box has limited functionality for keyword searching. For some reason a max of 18 results are presented, so you may need to do a workaround, such as searching at YouTube.com to find the video you want, then returning to search within TED-Ed using the specific URL for the video you wish to use. Once you select the video you want to use, it will be embedded into a TED-Ed lesson template that you can then edit and customize (see Figure 1). One other caveat, if a YouTube video creator disallows embedding you won’t be able to use that video to create a TED-Ed lesson.

**Figure 1: Template for a TED-Ed Video Lesson Learning Object**
Currently, TED-Ed’s collection of original videos and lessons does not seem to contain any content related specifically to libraries or information literacy, so you will likely want to focus on developing learning objects based on YouTube videos if you intend to use this tool for library instruction. According to the TED-Ed FAQ, original lessons start with a “great idea from an educator or expert” and so if you want to help develop content in our field, you can nominate yourself as an educator or suggest a lesson idea via forms on the site (http://support.ed.ted.com/customer/portal/articles/967164-how-does-ted-ed-make-lessons).

**Teachem**
http://www.teachem.com

Like TED-Ed, Teachem is a free web-based tool that allows instructors to develop online classes based on YouTube videos. Registration is necessary for use, but requires only your name, email address, and a password.

Once logged in you can get started by creating either a “school” or a “class”. A “school” provides a way for you to group together related content, while a “class” is more like an individual lesson. Typically, you would create a “school” on a particular topic (e.g., information literacy), or for a particular course (e.g., LIB 100), and then populate it with a variety of “classes” relevant to that category (see Figure 2).

**Figure 2: A Sample “School” Containing Two “Classes”**

To create a new school, you simple click the link to “Create School” and then provide a name and description. Once created, you can brand your course with a logo or banner, set privacy options (i.e., public, unlisted, password protected, or restricted by email domain or address), and add additional “teachers” who can collaborate to create course materials for your school.

Once you setup a school, you can start to create and add classes. The first step in creating a new class is to identify a YouTube video you want to use as the basis for your lesson. When you select the “Add A Class” option, you will be presented with a task window where you can either enter the URL for the video you intend to use, or enter terms to search for a video on YouTube. As with TED-Ed, Teachem’s YouTube keyword search functionality is somewhat limited, although it does appear to provide more than double the results and is perhaps a bit more precise. A search with a specific YouTube URL does reliably retrieve and add the correct video to your class. Multiple videos can be added to a single “class” (see Figure 3).

In addition to video(s), Teachem allows instructors to create “flashcards” that can be used to provide supplementary instructional information and/or as an assessment tool. To create a flashcard, simply locate the point in a video that you want to highlight, and then enter a question in the box marked “Create a flashcard, type question here”. The flashcard will be associated with and tied to that marker point in the video so that when students are watching it will be highlighted for them at the appropriate time.

With your flashcards, you have the option of providing answers that students can click to see, allowing you to enhance and enforce their understanding of concepts presented in the video(s). Alternately, you can leave the answer field blank and use the flashcards as homework/assessment prompts. With this option, you can require students to answer your questions (using the “SmartNote” box in the class interface) and then send you their answers using the embedded “Email Flashcards/Notes” (see Figure 4).

Once complete, courses can be accessed via the Teachem web site, or embedded directly into library blogs and websites to provide easy access for your students.

**Conclusion**

Although there are many possible means and methods for delivering out of classroom instructional content to your students, instructional videos are one of the most frequently used options. Depending on the options available to you at your organization, you may be looking for a low-cost, easy-to-use option for sharing that content with your students. If so, consider investigating these two tools and you may find that with a very small investment in time you are able to quickly and easily implement an out-of-classroom component that will free up classroom time to experiment with activity-based learning in your flipped classroom.

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Figure 3: Teachem’s Class Creation Dashboard

Figure 4: Student View of a Teachem Class