

TRANSFORMING YOUTUBE VIDEOS INTO INTERACTIVE TEACHING TOOLS USING EDPUZZLE

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TOOL HIGHLIGHTS:

EDpuzzle is an online tool that enhances the implementation of a flipped learning approach or as a part of a blended learning environment. Both the flipped learning approach and/or blended learning can be applied to any branch of the curriculum at any level. It can be used in place of a traditional lesson, or unit, or evolved into an entire strategy for teaching a course.

EDpuzzle allows teachers to take already existing videos - either their own or made by others - on any course topic on any public platform (typically YouTube) and personalize them through quizzing, annotations using text and voiceovers, and recording student data (views, duration, completion of quizzes, etc.) on the use of these videos.

1. AN INTRODUCTION TO FLIPPED/MASTERY LEARNING

Blended learning is a general reference to the combination of technology within a traditional classroom. At one end of the spectrum, there are those that use little or no technology in the classroom, while at the other, there are classes exclusively conducted online with no pen or paper. “Flipped Learning (https://flippedlearning.org/wp-content/uploads/2016/07/FLIP_handout_FNL_Web.pdf)” is a subset of blended learning in which students watch content on their own time, or during a prescribed or set time in class, while the rest of the class is used for practice and application of those concepts. The hope is that rather than spending the majority of the class lecturing (i.e. “the sage at the stage”), the teacher is leading activities that reinforce the concepts presented in the video(s) or is helping students individually or in small groups understand these concepts. The goal is to have students take on more responsibility in the learning process, and develop a deeper understanding of the concepts through increased peer interaction and one-to-one or small group instruction from the teacher. Presenting these concepts through the use of videos rather than traditional in class teaching is a necessity to allow for each learner to progress at their own pace.

2. THE TOOL: EDPUZZLE

One of the major perceived roadblocks to implementing this approach is that it takes a long time, and a significant technical “know how” to make good videos. However, this resource will not focus on the making of videos, when there are so many effective, well-made videos readily available online right now, and many more being added on a regular basis. Most teachers already have a solid bank of “go-to” videos for many, if not all, of their subject matter. This resource will delve into how to further personalize these videos for the students and the concepts at hand.

Another perceived roadblock could be deemed the most challenging: How do we know that the students are watching the videos (Because if they are not, then what’s the point?) and how do we know that they are effectively processing the material? With the monitoring and quizzing features within EDpuzzle, the teacher now has the ability to see who has watched the videos, for how long, and how they are performing on the quizzing components of each video.

A. DESCRIPTION

EDpuzzle allows one to use any video in the public domain (e.g. on YouTube, TeacherTube, etc.), and annotate these videos with voice or text, shorten or “clip” certain concepts in the video, restrict or allow skipping section of the videos, insert quiz questions, keep track of who has been watching the videos, for how long, and their performance on the quizzes. In short,

EDpuzzle allows you to create interactive videos and online quizzing, and also tracks the usage of these videos by the students as well as their performance on the integrated questions. The application even works with the Google Suite of applications and allows you to integrate your Google Classroom of students into the platform.

B. PRIOR SKILL SET

EDpuzzle is a relatively user-friendly web-based application that should provide few roadblocks to anyone who has some level of comfort with web-based quizzing applications. The severity of the learning curve will further be reduced if the individual has used video or image editing software in the past, and/or is familiar with the Google Suite of applications.

C. TECHNOLOGY REQUIREMENTS

All that is required for the use of EDpuzzle is a browser and an internet connection. Unfortunately at this time there is no download or offline capabilities for EDpuzzle for either the teacher or students.

D. AS A TOOL FOR INQUIRY-BASED SCIENCE

While an experiment or movie can generate whole class discussions, and lead to various inquiry pathways, these discussions are typically lead by the teacher and a few motivated or outgoing students. Should more individualized inquiry be desired, EDpuzzle can be used as a catalyst to present a concept and then further engage each student through integrated questions or links to external sources and additional research that will allow them to generate their own thoughts and ideas to present further research. For example, a video showing a particular experimental procedure (either successful or failed) or a video on a controversial or thought provoking concept and appropriately placed questions may allow students to generate their own ideas to research or experimental procedures to design. Rather than a few students providing input, each student can view the catalyst and generate their own path of inquiry to follow.

Further to this, the use of EDpuzzle and its use within the blended learning or flipped-mastery model provides the teacher more time to act as a facilitator in the classroom to help foster or further an inquiry-driven classroom, as EDpuzzle can be used as a tool to present required course content and perform ongoing formative assessment via the videos and quizzing features.

E. FURTHER APPLICATIONS

Aside from the perhaps obvious application to use EDpuzzle as a means to increase interaction with video content as well as increase student accountability for these videos as a part of a broader approach to “flipped” or “blended” learning of a particular concept, unit or course. Naturally, EDpuzzle could also be used in a more traditional classroom to expand upon or reinforce concepts presented in class. EDpuzzle has provided multiple videos on the possible uses of their application, linked accordingly in the table below:

1. Student Accountability (https://www.youtube.com/watch?v=GcD8dLxawwM)	2. Student Differentiation (https://www.youtube.com/watch?v=7j9B3UuBnal)	3. Classroom Management (https://www.youtube.com/watch?v=6F1qitQMV2U)
4. Student Absenteeism (https://www.youtube.com/watch?v=LhOsw5UChOk)	5. Parent Involvement (https://www.youtube.com/watch?v=C9kRWXC2jYY)	6. Curriculum Building (https://www.youtube.com/watch?v=epzcosCMvOw)

In terms of use within a flipped or blended approach, the first three or four are most applicable, with Student Accountability and Student Differentiation being the two most significant rewards of utilizing this application within a flipped or blended environment.

F. USE/GETTING STARTED

i. Account Creation

The first requirement is making an account at [www.EDpuzzle.com](http://www.edpuzzle.com) (<http://www.edpuzzle.com/>). The user has an option of either creating an account using an email and password, or linking directly to an existing Google or Edmodo account.

Once access to the site has been granted, content can be added, classes and assignments can be created, and student progress and achievement can be monitored.

ii. Creating Assignments: Adding Content

In addition to allowing users to add their own content (<https://www.youtube.com/watch?v=ToSWSg8yEOE&list=PLKl8fZYdu71Gteu8fvnWefQUR0TpzLUMq>) from their computer, EDpuzzle allows the user to create lessons (https://www.youtube.com/watch?v=mOjZ21CzzAk&list=PLKl8fZYdu71He_wajrVrxHT6xL94nbN3X) from multiple online video sources. In addition to directly copying and pasting a link (<https://www.youtube.com/watch?v=GXVMHOEPs-w&list=PLKl8fZYdu71Gteu8fvnWefQUR0TpzLUMq&index=3>) into the application, an extension or add-on for Google Chrome (<https://www.youtube.com/watch?v=AKvkjgOcFs0&list=PLKl8fZYdu71Gteu8fvnWefQUR0TpzLUMq>) has been developed that allows YouTube users to create an EDpuzzle resource directly from the video on YouTube.

iii. Creating Assignments: Personalizing Content

EDpuzzle has created a YouTube playlist (https://www.youtube.com/playlist?list=PLKl8fZYdu71G_0arwZfsZlcXlfZ73Ums3) that outlines how to edit length, personalize videos by adding text or voice annotations, embedding quizzing or comment features, or include links to external sites. The ability to perform all of these functions on a particular video illustrates the real strength of the EDpuzzle platform in terms of modifying videos for use in a flipped or blended learning capacity - and ensuring that the students are in fact watching the video. Included are features that prevent students from skipping through the video.

iv. Adding Students and Classes/Organization

This playlist (https://www.youtube.com/playlist?list=PLKl8fZYdu71G_0arwZfsZlcXlfZ73Ums3) outlines how to add students and/or classes, link to Google Classroom (further detailed in its own playlist (<https://www.youtube.com/playlist?list=PLKl8fZYdu71EiJXuoPYisH2DqgImImp1s>)), manage classes and students, and assign and edit content, while this playlist (<https://www.youtube.com/playlist?list=PLKl8fZYdu71GkZtRGb24mTzsLvXygOmmf>) outlines how to organize and manage folders within EDpuzzle.

v. Monitoring Progress

Where the flipped classroom can fail is when students are not held accountable for their responsibility to cover the content, in this case view the videos, on a regular basis. Again, EDpuzzle has created a playlist (<https://www.youtube.com/playlist?list=PLKl8fZYdu71EqJm7obEAzrNMMONPovLv0>) that explains how to use the application to monitor, record, and export this data.

G. SAFETY

i. Online Safety

As with any online source, it is strongly recommended that the teacher preview the videos in their entirety, prior to using in any lesson, and be aware of the suggested videos that are often included by YouTube and other video applications at the end.

ii. Privacy

Should your school or board be concerned with student information and storage on external servers, be sure to send home an administration approved parental information/consent form listing any and all applications (including EDpuzzle) to ensure that all parties have been informed and consent to the use of any application on the web. EDpuzzle has already put together a letter that can be modified for use at the bottom of their “Getting Started” (<https://www.edpuzzle-resources.com/teachers-getting-started>) page. Should parents not consent, an alternative may be to construct a “secret” identity of the student(s) for their use. You can also direct parents to EDpuzzle’s Privacy Policy (<https://edpuzzle.com/privacy>), and should familiarize yourself with it as well.

iii. Copyright and Intellectual Property

As these videos are being used solely for educational purposes from public domain and not downloaded, stored, or rebranded, EDpuzzle has ensured that they have complied with YouTube’s requirements. Further reading can be found on EDpuzzle’s FAQ page (<https://support.edpuzzle.com/hc/en-us/articles/206100421-Copyright-issues->).

H. TEACHING SUGGESTIONS AND TIPS

i. Learn the Tool

As with any new software application or package, it is highly recommended that a sample student or class be created and the teacher spend some time familiarizing themselves with both the teacher and student experience. This will require making a “test” account, but it is well worth it when trying to help students troubleshoot any issues.

ii. As a Flipped Learning Tool

As mentioned previously, EDpuzzle lends itself to use within the flipped classroom as an effective means of recording which students are watching the videos, and combined with the quizzing feature, how well the students are processing the content. In addition, EDpuzzle has an option to prevent skipping, requiring the students to watch the videos in their entirety.

iii. Students as Teachers

Since EDpuzzle allows the user to take any existing video and personalize it, students have the ability to use this application as well. Within EDpuzzle, there is a feature that allows the teacher to create an assignment where students create their own EDpuzzle video (<https://support.edpuzzle.com/hc/en-us/articles/205959342-I-want-my-students-to-create-their-own-video-lessons-in-EDpuzzle>). Having the students select, learn and voice over certain aspects of the course curriculum provides an excellent opportunity to use this tool as a means of assessment of learning or as a summative assessment. EDpuzzle allows for private feedback and sharing and saving of these videos so that the student video itself may potentially be used as a lesson for the class.

iv. Premium Version

It should also be mentioned that there is a premium version (https://www.youtube.com/playlist?list=PLKl8fZYdu71ERlljngBZIlxVXSXsl_hbd) of the software, that allows teachers to have access to the gradebook feature of EDpuzzle as well as sharing features with other teachers. This is something that could potentially be explored as part of a school or board initiative.

3. MINISTRY EXPECTATIONS

The use of EDpuzzle, and the more general use of technology as a part of blended learning or flipped learning, aligns with one of the major goals of the Science program as outlined by the ministry across all grades and levels:

To develop the skills, strategies, and habits of mind required for scientific inquiry and technological problem solving. (Ontario Curriculum, Science and Technology, All Grades, 2007)

4. ASSESSMENT STRATEGY

Assessment for learning is the primary means of evaluation using EDpuzzle, through the use of the quizzing feature. Of course, the nature of the questions will determine whether they are used as a diagnostic or formative tool.

In addition, when encouraging students to use EDpuzzle to create their own personalized videos and presentations, both assessment of learning (when evaluating the final product) and even as learning (during self and peer assessment of the quality of the video and/or questions and annotations within) are possible.

5. NEXT STEPS/EXTENSIONS/ACCOMMODATIONS/OTHER TOPICS FOR THIS TECH TOOL

A. NEXT STEPS: VIDEO SOFTWARE

While many videos are available across a range of topics, there are times when videos on certain concepts are difficult to find. In certain instances, it may be preferable for the teacher to record and construct their own videos. As a result, certain video editing or screen capture software can be used. The video can then be uploaded to EDpuzzle and used within the application. Some common applications to make personalized videos include:

APPLICATION

OVERVIEW

Explain Everything (<https://explaineverything.com/>)

Primarily for use on mobile devices, this app allows the user to record voice narration and annotations on a digital whiteboard and post as a video. Free trial.

Snagit! (<https://www.techsmith.com/screen-capture.html>)

A screen capture application that will record voice narration as well as capture what is happening on the user's computer screen. Free trial.

Camtasia (<https://www.techsmith.com/video-editor.html>)

While both packages can be used for screencasting, they also offer video-editing software packages.

Screenflow

(<https://www.telestream.net/screenflow/overview.htm>)

B: EXTENSION: FLIPPED LEARNING (FURTHER LEARNING)

EDpuzzle is designed to complement any classroom where students use videos to acquire conceptual understanding of class and course concepts, especially in a flipped learning environment. A key online resource supporting these teaching and learning processes, was developed and is maintained by Jon Bergmann (<http://www.jonbergmann.com/>), a pioneer of flipped/mastery learning. Bergmann offers great insight and expertise into how to appropriately integrate the flipped/mastery process into any modern-day classroom.

C. ACCOMMODATIONS

YouTube offers subtitles for those who are hearing impaired, while Google Read/Write offers capabilities for the visually impaired, though the teacher and student will have to experiment to see how this could integrate with the EDpuzzle platform or assigned content and quizzing.

For students who do not have reliable access to internet at home, in class time may need to be offered by the teacher or school in order to use the EDpuzzle online piece effectively and equitably.

6. ADDITIONAL RESOURCES

EDpuzzle has a YouTube channel (https://www.youtube.com/channel/UC-wRQQ_gfvSomuZJaBLRshQ/videos) complete with a whole host of videos that help outline the major features of the application.

JFRScience (<http://www.jfrscience.ca>) (currently under construction) is in the process of updating content for flipped classes and accompanying resources which will be updated in the coming months.

RESOURCES

 Using EDpuzzle ([//www.youtube.com/embed/9aMXfBEKGkQ?width=800&height=450&iframe=true](https://www.youtube.com/embed/9aMXfBEKGkQ?width=800&height=450&iframe=true))

ELEMENT

 Technology Enabled Learning (</expert-elements/technology-enabled-learning>)



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