ViDeX

https://videx.ece.ubc.ca

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How is video used in education

A plethora of instructional videos across many topics can be found on streaming video sites like YouTube. Recently, video has been making its way into classrooms, and with the development of online self-learning frameworks such as edX and Coursera, commonly referred to as MOOCs (Massively Open Online Courses) learning from video is becoming more prevalent. With the success of video in online education settings, instructors are beginning to experiment with teaching with video in the classroom, some going as far as using video to replace lectures, in the case of the *flipped classroom*. **ViDeX** is an active project at the University of British Columbia that aims to provide students with the affordances for organizing and managing their educational video. By introducing features that allow students to annotate, sort, and organize their course videos, we aim to make studying from video a more active experience. We are currently investigating the use of textual ***tags*** as a way for students to organize their thoughts, as well as how students utilize ***notes*** to study from video. We are also beginning to investigate the use of video analytics for instructors that will allow them to understand how video is being used in their classrooms.

ViDeX currently has two flavours: a desktop web version and a mobile version. Each presents its own challenges in design.

Web Version

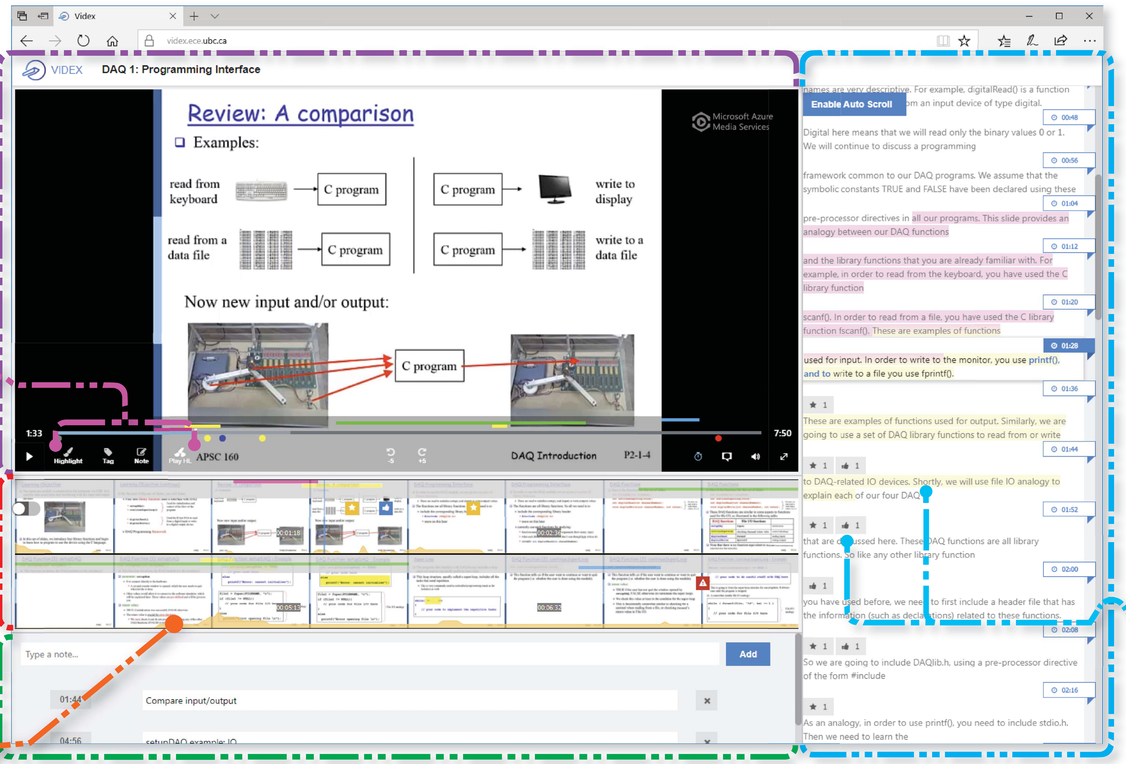
The web version of **ViDeX** is the more feature rich and cutting edge version. It features streaming video, and allows students the ability to annotate video in three different ways, including *highlighting* video and/or text in different colours, creating quick access textual *tags*, as well as making longer *notes*, all timed to specific parts of the video. It is here that students get to organize their notes and thoughts directly onto the course videos that they are watching. Annotations and selections are reflected in the **Player** just above the timeline, in the **Filmstrip**, and in the **Transcript**.

The **Player** is the focus of the interface. The ***timeline*** at the bottom shows ***highlights*** and ***tags***.

Users can quickly make ***highlights***, ***tags***, and ***notes*** from the **Player**.

The **Filmstrip** shows thumbnail previews of the video, giving the video a ***visual representation***.

The **Filmstrip** shows users ***what*** they watched and ***how much*** they've watched.



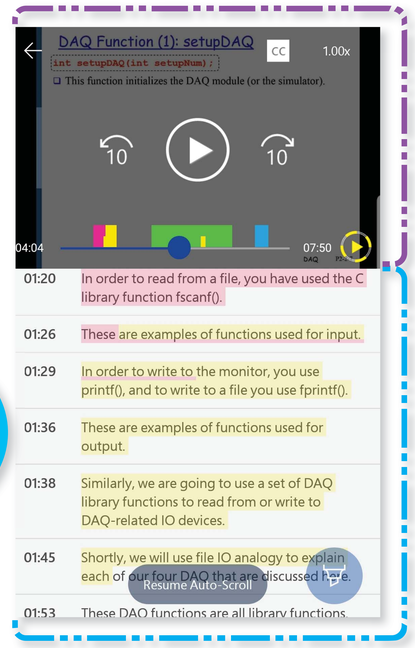
The **Notes** allows students to create timestamped ***text snippets*** to emphasize parts of video.

The **Transcript** shows the speech of the video, giving the video a ***textual representation***.

The **Transcript** shows ***tags*** and ***highlights*** that were made in the video.

Mobile Version

In the **mobile** version of **ViDeX**, students can view their course videos on-the-go by streaming them over wifi, their data plan, or by pre-downloading videos to their mobile device ahead of time. They can view the *highlights* they've previously made in the web version, and make additional highlights.



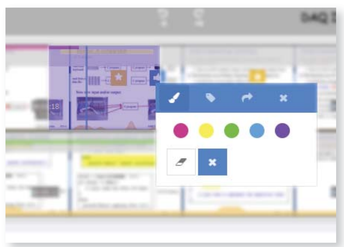
The **Player** shows the playing video. The ***timeline*** shows ***highlights*** made in the video.

The **Transcript** shows the timing of speech in the video as well as ***highlights***.

Highlighting

Creating a ***highlight*** in **ViDeX** is accomplished much like creating a highlight in text-based digital mediums like PDF documents.

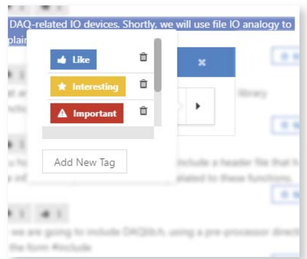
1. Click and drag across the **Filmstrip** or the **Transcript** to create an interval selection.
2. A *popup* will appear featuring *five* different **colours**.
3. Select a colour to apply the ***highlight***.



Tagging

Creating a ***tag*** in **ViDeX** is very similar to creating a *highlight*.

1. Click and drag across the **Filmstrip** or the **Transcript** to create an interval selection.
2. In the *popup* select the ***tag*** icon on the top navigation bar.
3. Select a ***tag***, or add your own customized tag.



Deployment

Since 2015, **ViDeX** has been deployed at both the University of British Columbia and the British Columbia Institute of Technology in various forms in 10 different courses with over 1000 students. If you are interested in using ViDeX in your class, please **email** us at videx@ece.ubc.ca or visit us online at https://videx.ece.ubc.ca.

Recently deployed courses (2017 Winter Term 1 and 2017 Winter Term 2) are in **bold**.

APSC160 - *Introduction to Computation in Engineering Design*
CPEN441 - *Human Computer Interfaces in Engineering Design*
ELEC201 - *Circuit Analysis I*
ELEC202 - *Circuit Analysis II*
ELEC211 - *Engineering Electromagnetics*
FNH325/326 - *Food Science Laboratory I/II*
PHIL102 - *Introduction to Philosophy II*

CHEM0011 - *Introductory Applied Chemistry*
CHEM0012 - *Introductory Applied Chemistry 2*
CHEM1121 - *General Chemistry for Chemical and Environmental Technology*

a place of mind

THE UNIVERSITY OF BRITISH COLUMBIA

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