

## The Online Learning Year in Review

By John Orlando

The online learning field is constantly changing, with new ideas appearing all the time. Here we look at the major trends in online education over the past year.

### Appification of online teaching

The very first online courses were hosted on email. With no real collaboration between students, they were little more than rehashed versions of the old correspondence courses.

The first real LMS was WebCT, set up by Murray Goldberg, a computer science professor at the University of British Columbia. He wanted to give faculty a way of putting their courses online without having to learn html. The system also introduced discussion boards and thus brought community to online education.

The licensing cost of WebCT in the early days was almost comical—somewhere in the neighborhood of 50 cents per student per semester. The development team was almost apologizing for having to charge anything, pleading that their institution required that they cover their own costs, and so they had to charge something.

Of course, the LMS market has become a for-profit field, with large

players mixing it with open source systems and start-ups. As a result, one major trend is moving away from the LMS in favor of apps for hosting online content and interaction. This is partly due to cost, as many apps are either free or nearly free. But it is also in response to the “one size fits all” feeling than many faculty and administrators have gotten with systems that are designed to serve hundreds of institutions.

An “appified” online education system allows users to choose exactly the functions that they want for their courses, which is especially helpful in blended environments. If the instructor only wants an online discussion board, then TodayMeet or ViewChat might do the trick. Maybe the instructor just wants to host content, in which case systems such as Versal or Edmodo are fine for that purpose. If the instructor just wants to allow students to collaborate on online projects, then a wiki-like system such as Padlet could be the answer.

If you want to have your functions integrated, then Google is your best bet. While companies such as Facebook and Amazon organize their offerings around a

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## Using Air Sketch in Hybrid and Online Courses

By Jason Price

The flipped classroom reverses the traditional teaching formula by putting the “lecture” online and using class time for engagement with the material. But many faculty trip up when trying to find activities for the face-to-face component of the class, and often end up reverting to lecturing.

I solved this problem in my math classes by using an iPad and the Air Sketch app. Air Sketch allows you to pull up a PDF on an iPad and annotate it with your finger or stylus, while sharing what you are doing in real time with others. You simply give your students a unique URL assigned to the session by the app, and they pull up what you are doing on their own machines. Students do not need to use an iPad to see it. They can view it on any device with a monitor, such as a laptop. The only requirement is that everyone be on the same wireless network.

I use Air Sketch to have students solve problems in class. I put them into groups, give them a problem, and let them work on the solution. Once all the groups have a solution, I hand the iPad to

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## Create Student Engagement with your Videos

By John Orlando

The traditional online course structure violates a fundamental principle of learning by separating the process of getting information from the process of engaging it. The student is asked to go through some sort of resource in its entirety—be it a video, website, or reading—and then reflect on it later with an essay or discussion post.

The problem is that our working memory only holds a limited amount of information, and so we need to periodically pause what we are doing

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### The ideal learning environment requires students to engage the content while they are receiving it.

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to reflect on it in order to move the information to our long-term memory. Without that engagement, much of what the student reads or views is forgotten by the time he or she gets to the assignment or discussion. The ideal learning environment requires students to engage the content while they are receiving it.

One good way to reunite content and reflection is by adding tags to videos that pause them for the student to do something related to the content. If the video is on the structural dynamics of bridges, the instructor can add a tag that takes the student to a YouTube clip of the Tacoma bridge collapse. Not only does this new content reinforce and amplify the information in the original video, but the mere fact that

the student has to act during the video helps keep his or her attention on the content, thus helping to impress the content into memory. These breaks take viewers out of the passive recipient role to become more active participants in their learning.

ThinkLink is one of my favorite sites for adding content to videos because it provides for easy upload and an intuitive tagging system. Watch this tutorial to learn how to upload and tag your own videos: <https://youtu.be/ys83cF67ihM>.

As an example, I created a video biography about my life that I use to introduce myself to students. I put the video on ThinkLink and added tags at various points that take the student to more information about the topics I bring up. Take a look at it here: <http://bit.ly/1FIIsow>.

You can also upload images to ThinkLink for tagging. An art history professor might upload an image of a painting and add tags that elaborate on different elements within the painting. A tag on a building might explain its importance, history, or the style that it represents. Tagging allows the student to explore the content at his or her own pace and interest, which makes the learning self-directed rather than instructor-directed. Students' inquiries are directed by the question, "What is this?" when they click the tag, and so they are already invested in the answer. Take a look at this simple example to get an idea of how it works: <http://bit.ly/1O8hJAe>.

Another way to create engagement is with periodic questions. These should come every 5-10 minutes, which is about the point when our minds start to wander.

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## Using Instagram in the Online Classroom

By Richard L. Newton and  
Jon Haney

In today's selfie world, photo and video sites such as Instagram have become one of the most popular ways for young people to communicate. This makes Instagram an ideal platform for increasing student understanding and engagement in online courses by having students share what they know with one another.

We decided to test Instagram's educational possibilities in an upper division sociology course. We divided the students into two groups. The first participated in a standard discussion forum (i.e., posting answers to the instructor's questions, receiving feedback from the instructor and their fellow classmates), while those in the second group instead recorded short 15-second videos, using Instagram, in which they explained course concepts and processes. We hoped that the brevity of the videos would force students to learn the concepts and processes well enough that they could offer concise definitions. The students in the Instagram group were given a training module on how to use Instagram, and asked to create an account that would be dedicated to the class, rather than use their own if they had one.

Further, students in the Instagram section were required to anonymously rate each Instagram posted by their fellow classmates on a scale of one to five using the available rating system for postings built into Desire 2 Learn. In addition to a grade for their own Instagram, they were given a grade based on how accurately they rated other students' postings, using the instructor's ratings as a baseline. Because students in the

Instagram section knew they would be evaluated on their postings, and additionally on the accuracy of their ratings of fellow classmates' postings, we believed they would be more motivated to learn the concepts and processes at a deeper level.

Students in the Instagram section were instructed to thoroughly study the concept assigned to them and then to deliver a concise explanation of the assigned concept in the 15 seconds allowed for an Instagram video. In

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**Students in the  
Instagram section  
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postings.**

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the first round of postings, it was clear that many students decided to ad lib, but this resulted in poor quality postings in which significant elements of the assigned concept were omitted. Addressing this, the instructor encouraged students to write their own scripts on 3 x 5 note cards—forcing them to limit the amount of information that could be covered and helping them focus on the more important elements of the concept. The quality of the postings did improve after the aforementioned suggestion seemed to be adopted by the students. One student likened it to using 3 x 5 note cards to cheat for an exam—you have to know what's important enough from the course material to write on the cards in order to use

them effectively to cheat, but by the time you reduce that material to what can fit on a 3 x 5 note card, you've learned the material and no longer need the note card.

### Results

Our intuitions about the benefits of the Instagram assignment were confirmed by students in the Instagram group scoring significantly higher on the 13 exams than did students in the control section. Additionally, students in the Instagram section often provided in-depth analyses to support their ratings of other students' postings even when not required to do so. For example, one student responding to a post on Marx's concept of workplace alienation explained in a written response that while the poster mentioned the first component of Marx's theory, alienation from the work itself, he had omitted three other crucial theoretical elements—alienation of the worker from working, alienation from him- or herself as a producer, and alienation from other workers. By the end of the 16-week course, about half of enrolled students voluntarily provided similar detailed critiques of various Instagram postings on a variety of topics. And while these critiques were generally thorough, none were judged to be unnecessarily harsh or critical of the original poster.

Due to problems with anonymity when attempting to use D2L for purposes of rating postings, a survey instrument was used to collect rating data and thus individual ratings were not made available to posters. A suggestion for future use would be to calculate an average rating for each

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central website, Google has shown that you don't need a mothership as long as you have a constellation of integrated apps. With a free Google account you have email, video hosting on YouTube, shared document editing with Drive, blogs on Blogger, websites on Google Sites, etc., all of which can be connected together to allow sharing of content between groups.

Google has even gone further to serve educators with its Google Classroom. Any institution can get a free account, which provides unlimited storage and the ability to centrally manage student accounts. Google Classroom is becoming the norm in the K-12 world, and some colleges are also starting to see the benefits of using a highly flexible, powerful, reliable, and free system for hosting online activities. It might be worth asking your institution about signing up for this service.

### Open education

The high costs of textbooks have resulted in a significant percentage of students simply not buying books for their courses. In response, a number of sources have recently emerged providing free textbooks. OpenStax (formally Connexions) is a pioneer in this field, offering free digital textbooks in a wide variety of fields. They do it through an interesting licensing method that uses in-textbook ads rather than customer purchases to pay for the books.

Free course resources also extend to videos and complete online lessons. A good starting point for finding these resources is Find OER ([open4us.org](http://open4us.org)), which will link you to everything from textbooks to videos, images, podcasts, lessons, complete courses, simulations, and

animations. California Open Online Library for Education ([cool4ed.org](http://cool4ed.org)) is another great resource paid for by the California State University System.

You might also want to look at resources that target particular content niches. Forgotten Books publishes thousands of classic works in the public domain, and of course Google Books is working to put basically everything you can find in a library online (yes, there are a few copyright hitches with that one). Mobento provides a place to search for free educational videos, as does the aptly named 100 Incredibly Useful YouTube Channels for Teachers. Also consider taking a peek at Free Documentaries TV to see if any of its more than 1,700 free documentaries can contribute to your course.

### Shared course content

An interesting new development is universities collaborating to share online course content. Canvas, the increasingly popular LMS, created Canvas Commons to enable users to share course content. Anyone working at a university using Canvas can search the repository for content, and when something is found, that person can bring it into his or her own course with a few clicks.

This is an important development, because faculty often think that they must create their own course content. But as José A. Bowen, dean of the Meadows School of the Arts at Southern Methodist University, put it so well, "Having each instructor create their own course content is like having each instructor write their own textbook. If that were the case, 95% of textbooks would be terrible." As I like to say, "If someone can say it better than you, then let them."

This should draw more users to Canvas.

### Adaptive learning

"Adaptive Learning" has become a bit of a catchphrase in conference brochures as of late. The idea makes perfect sense. Instead of giving everyone the same content, give students content personalized to their learning needs.

Implementing adaptive learning requires a system for both assessing where the student stands and providing the student with content based on his or her needs. A system such as Articulate Storyline is good for this purpose. Storyline allows you to construct online content in text, video, and sound form, along with assessments and branching scenarios based on student choices and how they do on the assessments. A student who aces the rotational inertia exam can now be taken to new content, whereas the one who struggles can be taken to alternate exercises that explain the concept in different terms. The result can be integrated with your LMS, or offered as stand-alone content to be accessed online.

### Mobile learning

Mobile learning is another catchphrase that has come to dominate conference agendas. Mobile learning is being integrated into education in two ways. The first is designing online content that can be played on mobile devices. This allows students to access the content while riding the bus, eating, or walking between classes.

Most learning management systems claim to be "mobile friendly," but the degree of mobile friendliness depends on the content. Take a look at Steven

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## Improve Student Performance with Learning Logs

By John Orlando

It is easy to forget that learning is not a simple transfer of information from the head of the teacher to the head of the student. Students build knowledge in their own heads through a combination of external cues and reflection. This reflection component is critical to moving information from working memory to long-term memory. In order to retain what we learn, we have to periodically reflect on the learning itself.

Kadriye O. Lewis, professor of pediatrics at the UKMC School of Medicine, uses learning logs to facilitate student reflection in her online courses. Learning logs are short journals that the students fill out after each lesson module to record what they have learned and their thoughts on the learning. Students respond to a number of question prompts, including:

- The amount of time I spent on different activities (readings, discussion, assignments) is ...
- This week I studied ...
- This week I learned ...
- My difficulties are ...
- I would like to know more about ...

- I would like help with ...
- My learning and practicing plans are ...
- My reflection about the discussion topics is ...
- My overall reflection on this week is ...

These learning logs help the student process what he or she has learned in order to improve retention. They also improve the students' metacognitive ability to

### Learning logs help the student process what he or she has learned.

self-monitor their own learning, which has been proven to improve learning itself. Plus, they help students become more active learners by thinking about what they are getting out of the material as they go through it. Finally, they help the students become deeper thinkers as they practice reflecting on the underlying themes and meaning of class content and topics.

These learning logs also provide

the teacher with valuable insights into the students.

First, they help the teacher get to know the students. Most student/faculty interaction in an online environment is mediated by assignments. There is little interaction outside assessed requirements to help the teacher learn about the student himself or herself. The learning logs fill this gap with information about the student as a person.

Second, they express the instructor's interest in the student's learning, thus fostering rapport to improve the learning environment.

Third, they help the teacher discern what students are picking up and where they are struggling. It can be interesting to discover how students interpret the material and what they find important. Often students pick up different messages from the material than the instructor expects.

These logs allow the teacher to go back over the material in a different way, or to make revisions for the future. @

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student's weekly posting using data collected from the survey instrument. This could then be provided to students on a weekly basis and, when combined with the instructor's direct feedback for each posting, have the potential to improve posting quality even more.

As mentioned, we believed that the requirement to condense a topic into a short explanation would improve understanding, similar to a TED talk. We also think that it increased study time, especially

because the visual element more connected the content to the student than does a text-based discussion forum posting. Students may take these videos as a closer reflection of themselves, and thus put more effort into them.

This method also has the benefit of making it easier for the instructor to gauge the general level of student understanding. Instead of paraphrasing course text in a discussion forum, students are forced to put the concepts into their own terms with the Instagram videos. The format also makes

it easier for both instructor and student to provide continuous feedback on student's postings.

These short videos can be used to increase student understanding in nearly any field—psychology, biology, economics, art, design, etc. Consider using Instagram to supplement, or replace, the traditional discussion forum in your courses.

*Richard L. Newton is a professor of sociology and Jon Haney is an LMS administrator at Columbus State University. @*

## TIPS FROM THE PROS

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one of the students to demonstrate to the rest of the class how they solved it. Students can watch the solution on their own devices, or on a screen at the front of the class. Students can then ask questions or make comments. I can even hand the iPad to any other group that wants to add something to the demonstration or offer a different method. I hand the iPad to different students over the course of the class, allowing all students to not only work on problems, but also demonstrate their thinking to others.

One of the advantages of Air Sketch is that I don't have to spend time writing the problems on the board. I create a PDF of each problem before class to use for the demonstrations. This is also convenient when I want to solve problems myself because I can pull those up and solve them on the iPad.

Air Sketch is also ideal for making online content for your class. Much of mathematics instruction is demonstrating how to solve problems. I do this by making a screencast of myself walking through problems. This is not easily done on an ordinary computer, as it is hard to draw elegantly with a mouse. Air Sketch solves the problem by allowing me to draw on the iPad while recording the screencast on another computer.

In my case, I start Air Sketch on my iPad, pull up the problem on it, and then open a browser window on my other machine using the URL provided by the app. Now what appears on the

app also appears on my other machine. From here I open the screen-casting software on my other machine—you can use a system like Screencast-O-Matic—and start the recording. I talk into the computer's microphone while drawing on the iPad, and both the drawing and my voice get captured by the screen-casting software. The results are saved as a video that can be uploaded to a video hosting system like YouTube, or to an LMS.

Air Sketch also allows you to save the annotations that you make on a PDF. This can be helpful for making handwritten comments on a student's work as part of your feedback, or marking up a sample problem that you want to send to the students. Simply save the PDF when you are done with the annotations and email the file to yourself, or transfer it via a system like Dropbox.

Finally, Air Sketch is an ideal way to capture the processes that students use to solve problems. I always ask students to show me their work when solving problems. This is important not only to identify problems in the process, but also to provide partial credit.

Capturing processes is difficult to do in an online or face-to-face environment. A written assignment shows steps, but not the student's thinking in choosing the steps. Using Air Sketch, an instructor can learn about a student's thinking by having those with access to an iPad make their own screencasts demonstrating how they worked through a problem. Because the student talks through each step in the process, the instructor can identify where his

or her thinking went awry.

I have learned that incorporating interactive tools into my practice has yielded more dynamic teaching and learning. Students are more likely to engage with each other through collaborative problem-solving. They are better able to communicate their techniques and thought process, and explain creative approaches to analytical thinking. This approach has made a dramatic impact not only on my instruction, but also my students' response to that instruction.

*Jason Price is an associate professor of mathematics at Nichols College. @*

## NEXT MONTH'S TOPICS

Promoting  
Meaningful Engagement in  
Synchronous Sessions

Tips from the Pros:  
A Solution to the Free Rider  
Problem in Group Activities

On Being There For Our  
Online Students

Using VoiceThread to  
Support Close Reading  
from a Distance

Padlet as a Sharing Tool  
for Online Courses

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Crawford's "Making Your Course Mobile Friendly" in the July issue of *Online Classroom* newsletter to learn how you can ensure that your course content can be accessed from different mobile devices.

The second form of mobile involves students using their devices to create content. For instance, students in an architecture course could be required to take photos of buildings in their city and label the architectural features they embody. "Augmenting Education in the Online

Classroom" in the September issue of *Online Classroom* newsletter provides an interesting extension of this assignment using augmented reality apps and Google Maps.

### Games

Finally, we have seen more and more talk over the past year of incorporating games into education. Games are ideal learning devices due to their low cost of failure and immediate feedback. But faculty are understandably puzzled by how to "gamify" their courses without having to find \$20 million to hire profes-

sional game programmers.

The secret is to design an online course around gaming principles, rather than try to develop separate games. Robert Prince explains how he gamified his journalism course by designing it as a story related to a struggling newspaper, and the student needing to save it, in the June issue of *Online Classroom* newsletter. Kevin Bell offers a number of suggestions for gamifying a course in our November issue. Use these suggestions to incorporate gaming elements into your online courses. @

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Even a very simple multiple choice question about what the student just watched will do wonders for retention. Questions can even be humorous, including nonsense options among the possible answers, in order to keep the student's attention. They can also force students to apply what they learn. After a discussion of John Locke, a philosophy professor might provide a list of objects and ask which ones Locke would consider an example of a "secondary quality." This forces the students to think about the content, thus better cementing it into their long-term memory.

There are a variety of good systems for adding questions to videos. Blubbr.tv allows you to create quizzes around YouTube videos. You can pick a video already on YouTube, or load one that you create to your own YouTube account. The quizzes include a countdown timer to prevent lollygagging and to create anticipation. Students are told immediately whether they got the correct answer, and are given a running score as they move through the video.

EduCanon is another popular

choice for adding questions to videos. The difference from Blubbr.tv is that EduCanon allows you to organize groups of videos into lessons, and then assign the lessons to students and track their progress through them. Students need to answer each question before moving to the next question in a video, and since you are given the results, you can ensure that students do the entire lesson.

Student comments are a third way to create engagement with content. These allow students to post a thought when it occurs to them, rather than later in a discussion forum, when it is likely forgotten. By being connected directly to the place where it is relevant, the comment gains context for other students. Plus, discussion forums tend to be driven by pre-established questions from the instructor, whereas an open video forum provides students with the freedom to add thoughts on the issues that come to mind, thus widening the creativity and breadth of the discussion. The instructor can also seed the forum by adding his or her own questions at different points to spark debate.

VideoNot.es is one of the better tools for adding comments to videos.

Students watch the video and stop it to add a note wherever appropriate. VideoNot.es is also integrated with Google Drive, meaning that students can save their notes directly to their Drive accounts to access, edit, or submit to their instructor later. Plus, the notes are time-stamped, so the instructor knows when they were posted, and can ensure that they were posted on time.

Vialogues is another good system for hosting video discussions, as it allows you to change up the interaction by alternating comments and polling questions in the video. You can even allow students to add their own polling questions, and so you might assign students to add questions at various points along the way. This would be a fun exercise that would force students to pay attention, and the videos can be made either public or private to prevent nonstudents from messing with them. You can also embed the results into a blog or other website.

Create engagement with your learning content through video tags, comments, and questions, and see the difference it makes to student learning. @

## Synchronous Activities for an Online Class

By Lorette Pellettiere Calix and  
Patrice Torcivia Prusko

**S**ynchronous meetings can be a valuable addition to otherwise asynchronous online courses. They build community and combat a student's sense of isolation. There are a number of ways to use synchronous sessions to add value to a course.

### Guest speakers

Guest speakers can liven up a course by offering students the opportunity to interact with a different voice. You might ask a colleague at your institution or elsewhere to do a one-hour session via a meeting platform such as GoToMeeting. It is a good idea to incorporate questions every 10 minutes or so to keep students' attention and engagement. Polls are a good choice because they allow students to respond anonymously, thus overcoming the tendency to follow the crowd when answering in front of an audience. You might also ask open-ended questions that invite students to respond by voice or through the chat function—a chat box can help give shyer students a voice.

### Reactions to material

Sometimes you might want to analyze a particular piece of material, such as a Shakespearean sonnet, in real time. You can pull up the material on the screen, go through it to highlight different points, and stop every few minutes to ask questions. You can also ask students to prepare questions ahead of time to use.

Another option is to put students in pairs or small groups using the online breakout rooms to discuss sections of the material. One student should be asked to read the section

out loud to get the ball rolling, and then the students should discuss what they noticed in the material. If your meeting tool does not provide for breakout rooms, students can use outside chat systems such as Google Hangouts or Skype.

### Topic search

Another good activity is to have students research a topic and share their results. For example, one instructor had students visit the Ellis Island website and individually search for ancestors who may have entered the United States through that gateway. Another instructor had students visit a site that showed climate change. The searches only took a few minutes, but the discussions that followed filled an hour.

### Role play

Role plays, such as debates or mock trials, are tailor-made activities for live sessions. Break the students into teams and assign the topic, or provide material to research at least one week in advance. Students will need to organize themselves on their own, which provides good practice in virtual teamwork. When you meet for the virtual session, you can serve as the moderator, but the content is provided by the students. Also consider inviting a couple of guests as judges or observers to provide feedback to the students.

### Solve problems

Similar to going to the board at the front of a classroom, you can have students solve problems in real time with a shared whiteboard. For example, in a finance course, students plugged numbers into a shared Excel worksheet with formulas and discussed the differences in results. In a writing course, students shared a document on-screen to identify errors and

rewrite awkward sentences. They also shared thesis statements and suggestions for improvements. In a business class, you might ask students to list all the organizations they know of that fit a certain classification. Here you can create a matrix by drawing lines on the board to break it into sections. Then give the students 30 seconds to list organizations they think fit within each section. This gives you a snapshot of where the class, as a whole, is with understanding the concept, and gives you many data points to launch a deeper conversation. If the meeting tool you are using does not have a whiteboard function, you can achieve the same result by sharing a Google Doc on your screen and having the students write on it.

### Think-Pair-Share

The Think-Pair-Share activity has students think about a topic or read individually, discuss the topic with other students in small groups, and share the results with the entire class. Some examples of this activity include giving students an image, commercial, or advertisement to analyze; providing a controversial topic such as global warming or GMOs on which students must stake out a position; and giving students a math or science problem and solution and asking them to determine whether it was done correctly.

Live sessions can be a powerful addition to an online course. Consider ways to incorporate them into your teaching.

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