ONLINE CL@SSROOM

IDEAS FOR EFFECTIVE ONLINE INSTRUCTION

Improve Learning with Student Interviews

By John Orlando

Interviews are a powerful yet underutilized learning device in higher education. There are thousands of experts available who would be more than willing to add interesting material to your courses. While it is not very practical to fly those people in to speak in a face-to-face course, video recording systems make it easy to add interviews to an online course.

If arranging the interviews sounds like too much work, have your students do them as an assignment. Interviews improve student engagement with the material. A high school teacher told me about one of his classes that was reading *Death of a Salesman* and became curious about certain parts of the book. So the students wrote the author with their questions. The author provided a lengthy reply that not only answered the students' questions, but also included information about the story that was not well-known, such as the meaning of some of the characters' names. The students were flattered that a famous author would take their questions seriously and even provide them with "insider information" about the book. The experience heightened the students' interest in literature in general.

Any subject lends itself to interviews. Students in a business course could interview the CEO of a large nonprofit about the unique challenges of nonprofit organizations. Students in an education course could interview a famous

> **"Interviews improve student engagement with the material."**

school reformer, while those in an environmental course could interview the head of an environmental agency about the agency's priorities and plans.

A good method is to put students into small groups so that they can plan together and divide duties. They will need to choose a topic that interests them, find a suitable interviewee, arrange the interview, create questions to ask the interviewee, record the interview, and provide the recording to others. They should also invite the rest of the class to participate as an

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Tips for Effective Video Instruction

By Stephanie Parisi and Dina Thornton

Videos are the ideal way to deliver content in an online course because the web is a fundamentally audiovisual medium. But while many faculty assume that videos require high-level technical skills to produce, they are actually not beyond the means of the ordinary instructor. They just require understanding of a few basic production principles. This check list will get you started with effective video instruction.

Plan

Always start by outlining or writing a script. Break your script or outline into sections that will become separate but related video segments—this is called "chunking." Instead of delivering a 50-minute lecture to a camera, record shorter segments of less than 10 minutes each. Each segment should focus on a specific topic, and learners can go back to reference each video instead of scanning through a longer 50-minute recording to

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Best Systems for Student Collaboration

By John Orlando

I am often asked what software I would suggest for student collaboration on files, such as group projects. Not surprisingly, my go-to systems are Google Drive and Dropbox. Google Drive is ideal for shared document editing, while Dropbox is ideal for transferring files between people. But the distinction between file editing and transfer systems is quickly collapsing as those designed for one purpose are continually incorporating the functionality of the other.

> **"An instructor can pick a file and drag it to everyone's computer, or students in a group can drag files to each other's computers."**

Google invented shared document editing with Drive, which for the first time allowed multiple people to edit the same document in real time. This solved the version-control problem that comes with sending documents around by email attachment. But while most people still think of Drive solely in terms of editing text documents, Google has been broadening the range of file types that Drive can support to include spreadsheets, presentation slides, images, and videos. Now nearly any group document can be hosted on Drive, and it is a good option for hosting videos that you do not want to post to YouTube.

Drive recently added the ability to put a backup folder on your desktop that will automatically save a copy of any document in your account on your machine. This allows you to work on the file on your own computer with your favorite software system, such as Word, while having it automatically backed up to the shared location on Drive. Plus, your file will also be synced with any Drive folder that you have on other computers that you use.

Does this sound familiar? It should, because it mimics Dropbox. Dropbox backs up your files to the cloud as soon as you save or change them on your own computer. This is also a great way to sync your machines, since the file will get copies both to the cloud and any Dropbox folder that you have on other machine that you use. I sync my laptop, desktop, and some of my iPad and cell phone documents this way. I normally work with my laptop and desktop computers running next to one another to give me multiple screens and because some of my software I use is available on one computer but not the other. I can edit videos with Camtasia Studio on my desktop and have the outcomes automatically saved to my laptop as well. I can even watch documents pop between the two computers in real time. This has saved me many headaches when I have needed a file that I made on one computer while using another computer, such as when I travel. The productivity benefits of this system are huge.

Dropbox is also good for transferring documents to others by giving them a link to the cloud-based version of the document or folder. I transfer files and folders that are larger than a gigabyte quite easily using Dropbox.

But now Dropbox has moved even closer to Drive, allowing users to coedit documents in real time

via integration with Microsoft Office Online. The layout and function-ality of the shared editing system is strikingly similar to Google Drive, so Drive users will find it easy to master. The editing system also allows for shared commenting using an interface that is also nearly identical to Drive's.

So what are the advantages of one system over the other? Both give you a nearly identical amount of storage space for free, and charge the same amount for further storage—$99 per year per terabyte. But there are still some differences to consider when choosing a system for a particular purpose.

While Drive has expanded its range of supported files to include all of the common file types, there are still some esoteric formats that that cannot be used on Drive. Nearly all audio and video development and editing software saves files in a program-specific format before exporting the final version in a universal format, and the program-specific files cannot be loaded into Drive. Plus, documents uploaded to Drive from Word or other software can lose some special formatting. So if students are doing group work with somewhat esoteric file types or very specific formatting, creating a shared Dropbox folder is your best option.

Similarly, though the integration of Dropbox with Office Online makes it an option for shared editing, Drive has hundreds of extensions available to a teacher for things like grading and citations. These are very helpful for monitoring and managing group work. Plus, it is easy for a teacher to create a template for students to use and then share with students in Drive. Being the owner of that file, the

teacher will still have complete access to it to monitor content. Finally, Drive integrates with all of Google's other products, which makes it easy to manage groups doing work on various file types.

> **"...if students are doing group work with somewhat esoteric file types or very specific formatting, creating a shared Dropbox folder is your best option."**

Drive and Dropbox still have some features that make one better than the other for specific purposes, but if your needs are simple, it is now possible to use either Dropbox or Drive as your all-purpose system for managing documents with students. There are also some other systems that you might consider for different uses:

Infinit *(http://infinit.io)* is a document transfer system similar to Dropbox, but where it excels is in its simple drag-and-drop interface and integration with your email system. When you want to send someone a file, just drag it from its location on your desktop to the Infinit icon, which will open up a list of contacts from your email account. Click a contact, and your email applica-tion will open automatically. Then type and send the email, which will contain a link for them to click to receive the file.

Infinit uses a peer-to-peer transfer method, meaning that files are not uploaded to the cloud first as they are with Drive and Dropbox. They go directly from your computer

to the other person's computer, which Infinit claims makes it much faster than other systems. You can also password protect the transfer and set an expiration date on it, which provides more security. This means that Infinit might be a good system if you are sending individual students different, large files from your computer.

Sharedrop *(www.sharedrop. io)* is an interesting system that allows you to transfer files between machines on the same wireless network. You can move files between your desktop, laptop, iPad, or cell phone on your home network or between students on your institu-tion's wireless network. This is a big help if you want to send a file to all of the students in your class at once during a face-to-face session, and it should work for a live online session if all of the students are using the school's network. Just have everyone download the Sharedrop extension to their browser at the beginning of the course, and when they start their computers in class, all of the students in the course will

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Next Month's Topics

Lessons Learned from the World's Best MOOC

Role-Playing for Improved Online Discussion

What Gamification Features Best Engage Students?

How to Avoid Automating Your Online Teaching

Feeling vs. Fact and What It Tells Us About Flipped Learning

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audience so that other students can ask questions. The recording can be added to the course to provide more resources for future students.

Besides the assignment instructions, the instructor should provide technical advice by suggesting recording software to use so that students do not run into embarrassing problems during the interview. Below are some good systems for hosting interviews.

Interviewing systems

If you want students to do an audio-only interview, then BlogTalkRadio is a good choice. BlogTalkRadio records conversations between up to five people at once. The interview can be streamed online to an unlimited number of participants and saved for future reference. The only catch is that interviews cannot be longer than 30 minutes without paying for the premium version. The benefit of using this system is that interviews can be grouped together into a channel so that people can browse and listen to them at their leisure.

If you instead want to include the video, then a good free option is Google's Hangouts on Air, which is part of Google+. Google Hangouts is a video meeting system that is similar to GoToMeeting, but it has the advantage that it can broadcast a full-screen webcam video of the speaker. The speaker is shown in a center window that takes up most of the page, while the other participants are shown in smaller windows across the bottom of the screen. The system can be set to automatically fill the large window with whoever is speaking, or it can be fixed on the same person for the whole time.

If you want to broadcast the interview live or record it, then you need to use Hangouts on Air. Hangouts On Air is nearly identical to Hangouts except that it broadcasts on your YouTube channel. This allows for an unlimited number of live viewers. Plus, the session is automatically recorded to your YouTube account, and it can be left there for later viewing or downloaded as a video file to be uploaded onto another hosting site.

Finally, Telestream's Wirecast is a feature-rich system for hosting interviews between two people. The screen is split in half to show both participants at once, which has a cozy and inviting effect, like two people talking to one another in a café. While there is a one-time purchase fee, the software comes with a fairly powerful editing system. This comes in handy if you want to add a standard introduction to all of the interviews or a title.

Consider interviews as an easy way to both increase student engagement with material and enrich course content for future generations of participants. @

show up on each other's screen, almost like a radar image. You can send a file to everyone at once, or students can send files to each other's computers.

Annotation Studio *(www. annotationstudio.org)* allows groups of students to comment on the same document. While Drive also provides shared commenting, Annotation Studio allows for images and videos. A teacher in an English class can post a passage from Shakespeare and have the students analyze it by posting comments on specific passages and by illustrating concepts with images or videos. This could expand students' thinking about a passage by helping them see connections with other ideas.

Primarypad *(primarypad.com)* is a shared editing system that supports live group collaboration. Groups of people are given a "pad," which is essentially a website space on which they can post content. Each person's contribution is highlighted in a different color to make it easy to identify, which is helpful if a teacher wants to make sure that everyone is contributing. The system's simplicity and quick setup could make it preferable to Drive for in class or live online brainstorming activities.

Take advantage of these options to add group collaboration to your courses. @

Scaffolding Learning

By John Orlando

I recently took a canoe paddle-making course with my son from an instructor who guaranteed that all participants would come away with a result that they could be proud of. One of the ways he ensured this was by giving us various "scaffolds" at different points in the process that helped us channel our work in the proper direction. Instead of starting with unformed wood, we were given pieces that already had the broad cuts made in them. This allowed us to concentrate on the detailing that forms the real heart of paddle-making. At each step we were provided with the proper tools and clear instructions needed to complete the job. As advertised, we all walked away with a result we were proud of and a deep understanding the paddle-making process.

Good teaching often involves scaffolding learning. Unfortunately, teachers often forget this. As an undergraduate I was generally given assignments with no more direction than to write a paper of X length on Y topic. This leads many students to head off in entirely the wrong direction from the get-go. Failing miserably like this does nothing to teach and only produces discouragement. Faculty sometimes think that scaffolding is "doing the assignment for the student," but it is not. It is providing the student with the tools needed to succeed.

Scaffolding comes in two forms. Conceptual scaffolds provide the learner with help knowing "what to consider," such as what to look for in a reading (Hannafin, Land, and Oliver 1999), whereas strategic scaffolds help learners complete specific tasks, such as writing a paper. Let's take a closer look at each.

Conceptual Scaffolds

Students often do not know what they should be getting out of a reading. Faculty can help direct students to the correct content by providing a list of questions that students should consider as they do their readings. For instance, the questions can track the argument turns in the work so that the students are able to follow the writer's thinking, as well as learn that the argument structure is what they should be reading for. The scaffolding also helps students learn how to take notes on their own.

> **"It is interesting how often I discover that students are getting something different out of my material than I expected."**

While the questions can be added to the assignment directions, students often forget those questions once they get into the weeds of the reading. A more effective method is to provide some sort of response system that requires students to answer the questions during or after the reading.

One option I use is to provide assignments as PDFs with fillable forms. I include not only the directions, but questions for students to answer right on the form while doing the reading. A PDF works better than a Word document because entering information into a Word document will shift the rest of the text. To make a fillable PDF, write out the assignment as a Word document and draw in text boxes after each question. Then convert the document to a PDF using Adobe Acrobat or another PDF conversion tool. Make sure to indicate that you are saving it at a PDF with "text enabled fields," and the system will convert the boxes to fillable forms.

The questions need not be graded, though students can be told that they will lose points for not answering them. The goal is just to get students thinking during their reading, which will help with student understanding and knowledge retention. Plus, the instructor can use the responses to identify where students are struggling and may need additional help.

Faculty can also provide some general context and information about the argument in a work as a head start to the student's reading. Many faculty expect students to do a reading before class and come prepared to discuss it. But in a sense this is backwards, because students will get more out of a reading if they are given some information about it first that will help them understand it. Faculty should first discuss the arguments in a reading during class, and then provide students with questions that they can answer while doing the reading to help them know what to get for out of it. Now students have a scaffold that will ensure that they understand the material and learn what the instructor intended them to.

Online faculty can also scaffold student understanding of course content. I use short videos to deliver content that I create for my online course. I scaffold student viewing of my videos by putting the videos into Google Forms, with

find what they want to review. A typed one-page, double-spaced, 12-point font script equals roughly two minutes of video, so plan your content accordingly.

Prepare

Now that you have completed your materials, it's time for you to prepare for filming. This means reading through your script or materials several times before delivering it to the camera. We recommend running through a practice recording and watching it to target your strengths as well as areas you'd like to improve upon. Ask yourself the following questions as you prepare:

- Do you know where you'll be filming? Become familiar with the environment and prepare with it in mind. If you are filming outdoors, you may wish to consider the weather or ambient noise, including wildlife, traffic, or nearby conversations. If you are filming indoors, determine the background and dress accordingly. For example, if using a green screen, you should avoid wearing green. This makes it difficult for the editors to separate you from the background.
- Will you be working with a film crew or will you be on your own? Working with a film crew can be intimidating, but it can allow for the creation of high-quality videos, because you are working with experts. Get to know who you'll be working with and don't be shy to ask questions ahead of time. If you're working on your own, be sure to do test runs with your equipment.
- Will you need props? Props can allow you to demonstrate concepts easily without the need for on-screen graphics. For example, if you're discussing a piece of equipment a student will encounter in their field or demonstrating how to perform a specific activity, bring it on camera. Props also break up the "talking-head" effect and keep the viewer's interest.

"Instead of delivering a 50-minute lecture to a camera, record shorter segments of less than 10 minutes each."

Also keep these considerations in mind before filming:
- Don't forget a bottle of water. Filming will likely take longer than you think, and lights can get hot.
- Select your outfit. Avoid all black or white, as well as intense, loud patterns. Think about what you would expect an instructor to wear. Be sure your clothes are clean, pressed, and lint free.
- Get a good night's sleep the night before. If you are sleepy, you will look sleepy on camera.

Perform

Your first time teaching to the camera can be intimidating, but once you have an understanding of the process, it's much easier to be comfortable. Let's quickly get to know some of the equipment that may be present on your video shoot.

Lighting

The DSLR cameras of today require less light to capture high-quality video than older cameras, but some lighting is still necessary to create an ideal composition and give you the most flattering look. If you're working with a film crew, expect several lights to be on set. The location will determine how and where the lights will be placed.

Contrary to popular belief, bright sunlight is actually the enemy when filming outside because it produces shadows and tends to wash out colors. It is better to shoot on a cloudy day, as this allows for more balanced lighting and less contrast between shadows and highlights.

If you are shooting indoors and you don't have professional lighting equipment, a lamp with a shade or a soft light bulb will work. Avoid placing the light directly in front of you or to you side. Rather, it is best to place the light at an angle. For example, placing the lights at the 10 o'clock or 2 o'clock position in relation to the speaker allows the rays to cross and create even lighting. Additionally, lights are better when placed in a higher position relative to you rather than in a low position, which can create unflattering shadows.

Microphone

Microphone choice is critical, as nothing will drive your viewer away faster than poor audio. There are several kinds of microphones used by video and audio professionals, but for video shoots, the lavalier microphone is a common choice because they are discrete and wireless. "Lav mics," as they are called, are small and can be clipped onto your lapel or inside your collar to get good close-range sound.

Teleprompter

You can try to speak from memory without notes, but this can be hard to do when you are in front of a camera, and you may find yourself constantly having to restart because of errors. Thus, if you can get your hands on one, a

each video followed by a question that the student must answer. Student answers get compiled into a spreadsheet that is automatically created in Drive. Then I can view the answers for each student or the entire class at once. This ensures that students watch the videos and engage with the material and also alerts me to common problems that they are having with the concepts. As teachers we often do not get direct feedback on how students are understanding a particular work, and these sorts of exercises can help us revise content to improve student comprehension. It is interesting how often I discover that students are getting something different out of my material than I expected.

Strategic Scaffolds

Students can also benefit from strategic scaffolds that guide them in completing an activity. Instead of just asking for a paper of a specific length, the instructor can specify the structure of the paper with instructions such as "Provide an introduction that covers. . . . [or] Provide a summary of the author's two main points on. . . . " (Ifenthaler 2012). These questions help track the students' thinking through a process.

Another option is to provide a step-by-step guide to a process. For instance, when given a physics problem, students can be told: "First determine which of the conservation of energy principles applies to the problem. Then . . . " In this case, students are starting at the right place and using the correct process to work through the problem, just as we were given the correct process to make our canoe paddles.

This exercise also helps make student thinking visible. Often faculty only see the product of student work, and thus cannot locate the error in the process that led to that product. For instance, a chemistry instructor might find that a student's problem is in identifying the correct principle to apply to the situation rather than in doing the math wrong on a formula. With this knowledge, the instructor knows what to work on with the student. Strategic scaffolding also cultivates students' metacognition about their own thinking process, and self-awareness of one's own thinking process has been identified as one of the most important drivers of learning.

Of course, the degree of scaffolding depends upon the level of student competence. Any assignment assumes some prior knowledge on the part of the student. The goal is to set the scaffolding just above this baseline to move the student up to the next level.

The instructor could also start the course with quite a bit of scaffolding, or scaffold at a fairly low conceptual level, and then gradually diminish the scaffolding or put it at a higher level so that it is always just above the students' current understanding. In this way the instructor gradually draws the students up in skill level. In this way scaffolding can be one of the most effective tools in an instructor's teaching toolbox.

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teleprompter is a very useful piece of equipment. If not, you can use cue cards, but try not to look as if you are reading from them.

Perfect

Of course, even with a teleprompter, your delivery may not be perfect. You may stumble on a word or lose your place in the script. In this case you can either start from the beginning, which can cause the shooting time to explode, or restart from a logical break in the action. The magic of video is that these mistakes can be edited out. To conceal a cut, the segments can be separated with an image. Another option is to shoot with two cameras simultaneously and then just switch to the other camera when inserting a cut. Regardless of how it's done, any hiccups that occurred during recording will be nonexistent after editing.

The length of shoots varies for everyone, but it can take hours to film minutes of video instruction.

Prepare yourself both mentally and physically for this kind of schedule. Drink lots of water before and during the shoot, and take breaks between segments to relax and refocus yourself.

If you prepare properly for your shoot, you will produce exciting and engaging videos that will make the effort all worthwhile.

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The Benefits of Peer Review

By John Orlando

Cultivating student creativity is more and more being touted as a fundamental objective of education. We are also hearing more and more about the benefits of peer review activities for student learning. Yet, some have claimed that peer review of student work dampens creativity (Hurlburt, 2008). They argue that student anxiety about how they will appear to others tends to cause them to produce less risky work.

Can peer review coexist with creativity? Yes. Liu (2016) and fellow researchers recently found that peer review actually improves student creativity when done correctly. They set up a digital storytelling activity that required one group of students to provide feedback on each other's work and another group to create the stories without receiving feedback from others. The researchers found that the group receiving feedback outperformed the other group on a variety of measures, including overall quality, accuracy, and creativity of their work. Moreover, those who provided feedback also improved their own work.

Another benefit of peer review found in the study was that it helped students better understand their own creativity. Students were asked a series of questions after the activity to measure their creative self-efficacy (their knowledge of their own creativity). Their scores were then compared to the actual creativity demonstrated in their works. The group without peer feedback showed no correlation between the two, while the students in the peer review group showed a match between their self-perception of their creativity and their actual creativity. This coheres with other studies that have found that creative self-efficacy is heavily influenced by social interactions—we learn about our own creativity from others.

But the most important aspect of the study was that the group providing peer feedback was given a rubric to guide their commentary. This, it appears, is critical to channeling peer feedback in a positive direction. Unfortunately, the researchers did not provide more information about why this is the case, but we might speculate that a rubric helped keep the feedback on task and helpful to the student. The rubric might prevent the feedback from drifting into commentary that could be taken poorly by the student and thus cause him or her to withdraw.

This study suggests that faculty members using peer review can benefit by providing students with some instruction on how to provide feedback to their fellow students. Too often I see faculty simply tell students to provide commentary on each other's work, or just give word count parameters, without any direction on the form of that commentary. It is easy to forget that students are not used to providing peer commentary. Some might even become too timid in fear of hurting another student's feelings.

One option is to have students apply the same rubric that you use to evaluate student work. You can make a short screencast of yourself applying feedback to a sample student work. Draw up the rubric on the screen and talk through how you interpret each category and also demonstrate how it is applied to an assignment and what you would say to a student. This gives the students a sense of direction and confidence to guide their own feedback.

Students can be given the rubric as a Word document with tables. Students pick the box in each category that they think applies to other students' work, shades it in, and then provides commentary on what they saw within the work that led them to the judgement. The intermediary of the rubric puts needed personal distance between the students, which can remove some of the anxiety suffered by reviewer and receiver alike.

Students can even make screencasts of themselves applying the rubric using software such as Jing. The student pulls up both the rubric and the other student's assignment on the screen, talks about which box they put the work in for each category and why, and goes back into the assignment to show where they found particular elements that led them to their choices. The student uploads the result to Jing's free hosting site and sends the other student the link. This makes the feedback more like a conversation than a grading activity.

Including a rubric and instructions on how to apply it will ensure that the peer feedback is used by students to support, rather than judge, one another. Faculty should explain that good feedback is given with an eye towards helping the other person see how they can improve. Students should be told to not just find problems but also to suggest solutions, and they will go out of their way to help one another.

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