ONLINE CL@SSROOM

IDEAS FOR EFFECTIVE ONLINE INSTRUCTION

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Interclass Collaboration Online

By Lee Orlando

Faculty are increasingly looking for ways for students to collaborate, not only to improve learning, but to teach collaboration skills. Teachers generally do this with in-class collaborations, but the Internet opens up a wider world of collaboration possibilities between classes. Kristin Novotny, a core division professor at Champlain College, and I recently used interclass collaboration online to explore "The Hero's Journey" monomyth.

The hero's journey is a fundamental story form that appears in literature, movies, and elsewhere. It is taught in a sophomore-level course *Heroines and Heroes*. We wanted to get students to understand the genre on a deeper level by having them apply the journey's stages to stories of their own making. To help generate ideas and discussion of the stories, we connected students in the course with those from a middle school class. While using students of different grade levels is not necessary for the activity—it could just as well involve two college courses—using a middle school class provided the benefit of allowing the college students to become mentors and teachers to the middle schoolers, which heightened their motivation and learning.

First, both groups of students read, discussed, and wrote about the book *Charlie and the Chocolate Factory,* as this story illustrates the monomyth well. We then paired up each college student with a middle school student and asked them to discuss questions such as: What makes a hero? What are the elements of the monomyth? What do ordinary people have in common with literary heroes?

We had students create their own hero's journey using software of their choosing.

We decided to use Todays-Meet to facilitate the real-time, twice-weekly discussion. We set up a dedicated chat room for each pair, and because the two classes' schedules overlapped by 20 minutes,

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TIPS FROM THE PROS

Transforming the Online Syllabus

By John Orlando

As online instructors, we have finally figured out that the web is a visual medium and have been replacing the long text documents that constituted our original lectures with engaging presentations that make use of images, video, and sound. But despite the shift, most of us still use the traditional text-based syllabus.

Michelle Pacansky-Brock, author of *Best Practices for Teaching with Emerging Technologies,* calls for an "extreme syllabus makeover" to a richer format. She points out that textbooks have migrated from nearly all text to a more visual style that ties text to illustrations. This is in accord with the pedagogical principle that "providing multiple means of representation" better allows students to make connections between concepts. She suggests that the same principle can be used with online syllabi by adding images, video, sound, etc., to amplify the message.

A visual syllabus is also more attractive, and a more attractive syllabus is more likely to be read. Today's student has grown up in a world where informa-

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IDEAS FOR EFFECTIVE ONLINE INSTRUCTION

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Tests as Teaching Devices

By John Orlando

Consider the following two ways to introduce an online lesson:

1. In this module we will learn how gender differences are expressed in the traits of birds.
2. Here are two photos of a robin, one male and one female. Tell me which you think is male, and why.

The first method puts the student into the passive, "getting lectured to" state of mind, while the second method forces the student to formulate a hypothesis about the subject. The student might guess that the male is the larger one because human males are generally larger than human females, and perhaps the same applies to other animals. The student might instead guess that the one with the darker coloring is female because she would be better camouflaged when nesting.

Frequent tests, along with immediate feedback, lead students to reflect on their learning.

The student in the second case is applying their prior knowledge to the material. This is significant because we learn on the periphery of what we already know by connecting new information to prior knowledge. By formulating a hypothesis, the eventual answer gets connected to prior knowledge when the hypothesis is either confirmed or disconfirmed, thus building the student's overall knowledge base.

Opening with a question also piques the student's interest in the material. The student is now invested in the answer and will pay more attention to the material to see whether his or her guess was correct. This again improves retention.

A team of professors and instructional designers at the Cornell University Ornithology Lab used this opening for a biology class. Called "All About Fancy Males," the test presented students with a sequence of photos of male and female members of a bird species. Students were asked to pick out the male in each of the photos, and after submitting their guess learned whether it was right or wrong, and why. You can find it at: *http://biology.allaboutbirds.org/features/fancymales/fancy-males.*

Students started seeing general patterns in the correct answer over the course of the module, such as that the male was usually the one with the more elaborate coloring because that coloring is used to attract females. In that way they are learning fundamental biology principles through the test itself. The explanations would often include auxiliary facts, such as that the brighter coloring makes the male more visible to predators, thus increasing the importance of male health for survival. Some cases went against the general patterns, providing an opportunity to teach why evolution produces counter-examples. In one case the "fancy" trait was a behavior, such as a dance, which was demonstrated by a video.

Faculty generally think of tests solely as a means to assess learning after the fact. But tests can be used as learning devices themselves.

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Student Engagement in Online Courses

By Maryellen Weimer

"When we teach online, technology is a mediator between us and the students. Because of this intervention, the way in which we understand and experience the phenomenon of student engagement changes." (p. 211) Claire Howell Major makes that observation in her new book, *Teaching Online: A Guide to Theory, Research, and Practice.*

She then proceeds to outline what makes engagement more difficult when students aren't physically present. When we teach in a classroom, students are more or less a "captive" audience. That physical proximity makes the class a group that comes together for a specified time to exchange information and ideas. That all changes significantly in an online environment.

"In many ways, some of the control and authority of engagement shifts from teachers to students in online courses." (p. 212) Students decide when they'll be in class and whether they'll attend to course material or let any number of possible distractions sidetrack their attentiveness. Moreover, seeing whether students are engaged is also more difficult when students aren't visible to the teacher. Without eye contact, facial expressions, body postures, or any physical presence, it's difficult to tell if they're engaged or doing something else. For all the teacher knows, they could be folding clothes or vacuuming. Student engagement is enhanced by connections with the teacher—a friendly smile or a greeting when the student arrives in class, for example. It's much more challenging for teachers and students to form a bond and to experience each other's presence in online courses.

To overcome the difficulties, Major offers six strategies that online teachers can use to cultivate student engagement.

1. **Use student-led pedagogies** "In student-led pedagogies, faculty are less central and have less authority and control over students. Students, in turn, take up opportunities to be active agents in their own learning." (p. 214) If the teacher isn't there to answer questions in lecture and students are responsible for exploring the material via small-group, online discussions, there are reasons for them to exchange ideas and information with each other, and that makes engagement much more likely.

Students become more engaged when working on assignments that lead to meaningful products having value beyond the course.

2. **Use pedagogies that involve students in the learning process** Typically, teachers make all the decisions about what and how students should learn. But that doesn't have to be the case. Students can be involved in a variety of ways, from making selections from a collection of possible readings to suggesting assignment details to establishing due dates and penalties. Obviously this can happen in any course, but it's an especially effective way to get students involved in online learning situations. Besides engaging them, making decisions that affect their learning develops greater awareness of their learning.

3. **Use pedagogies that enable students to connect their personal interests to course content** This is about the ever-present need to make course content relevant. Teachers know that it's relevant, but students often don't see why they're being asked to learn what they're learning. All students bring experience and knowledge to their courses; adults especially come with a large repertoire. Teachers can tell students how and why the content is relevant, but it's much more powerful when students make the connections between what they know and what's being taught. In an online course, assignments that get students to make these connections are more engaging and bring greater, longer-lasting benefits. Once they see how the content relates to them, the need to learn it becomes more apparent.

4. **Use pedagogies that simulate reality** If an activity feels real and authentic, it's more likely to engage students. So rather than telling students the result of a classic experiment, share the hypotheses and have them predict the results. Challenge them to use what they've learned about the content to make those predictions. Or students can read a case study and then offer suggestions about resolving the problem or difficulty. If what students are doing feels like the kind of work done in the discipline, that can

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we were able to use this time for the students to chat about their projects. This app also maintained a transcript of conversations, allowing for student accountability and teacher monitoring and evaluation.

We then created a Google Site for each pair to facilitate asynchronous planning and discussion. Google Sites was ideal for the purpose because the free tool allows for shared editing in which students could make additions to the content on their own time. Here is a link to a brief tutorial for teachers on how to set up a Google Sites page: *http://youtu.be/wpw_F33BEt0.*

The Sites page was used by students to create a digital log of their thoughts as they read through *Charlie and the Chocolate Factory.* This log was scaffolded with teacher-generated prompts. We also had them record answers to questions that emerged during their chats.

In order to differentiate between a college and middle school student's entry, we had students write in a different-colored font. Not only could we determine who made each entry for assessment purposes, but we found that the college students' entries served as models for the younger students, and thus we could see how they were reacting to one another.

Finally, we had students create their own hero's journey using software of their choosing. Because the classes were only a few miles from one another, we decided to have them present their stories to each other in a live meeting. But there are a variety of good options for making online presentations to classes in different cities or countries. Digital storytelling apps such as *Storybird* and *VoiceThread* are excellent for combining images with narration to tell a story. Animation and cartoon apps such as *Sock Puppet, PixiClip, Storyboard That,* and *PowToons* make it easy to tell a story in creative formats. We found that students pick up these systems very quickly, and use them in imaginative ways.

Ultimately, both older and younger students demonstrated a solid understanding of the monomyth and were able to grow their understanding of both literary and real-life heroes. Both groups developed their written and oral communication skills, and benefited from each other's thinking. Engagement grew as student partners got to know one another and developed their collaborative relationships. An added, and not insignificant, benefit for the middle schoolers, many of whom are new Americans or are from families in poverty, was getting to know a college student personally and visiting a campus for the first time. When asked in a post-activity survey if the experience helped them envision themselves as college students, 97% of the middle schoolers answered "yes."

We found that the college students' entries served as models for the younger students, and thus we could see how they were reacting to one another.

TodaysMeet proves an easy-to-set-up and easy-to-use application for facilitating collaboration between classes. It is especially helpful when the students are not in the same school, and so not on the same LMS, although it can be embedded in an LMS as well as in websites. We also had students embed another Padlet into their Google Sites to allow for video sharing. Students used Padlet to put up a short video introducing themselves to their partner.

Google Sites worked well for collaborative editing and hosting, but we learned an important lesson when setting up the sites. To save students time and ensure that we could monitor their work, we set up the Google Sites ourselves for each student pair, and then gave them editing access. This is easily done using their emails, but we discovered that the emails needed to be for Google accounts (Gmail accounts). When we tried using school email accounts, many students found themselves without the necessary editing access. Thus, we would recommend first setting up, or having the students set up, Google accounts, and then collecting their Gmail addresses so that you can associate that account with their Sites page.

While we used students from different courses and different grade levels, the same collaboration could be done within a course, or between two sections of the same course. Schools are starting to run institution-wide seminars to provide for common experiences, which presents ample opportunities for collaboration on projects.

Consider how you presently engage your students in partnerships, then take that one step further to imagine how technology such as TodaysMeet and Google Sites can be used to expand those partnerships beyond the four walls of your classroom.

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They are especially powerful when used to provide immediate feedback. James Pennebaker and Samuel Gosling, professors at the University of Texas at Austin, experimented with adding daily online quizzes to their psychology class. Instead of having to wait until the end of the test to learn how they did, students were immediately told whether their answer was correct upon submitting it.

The results were striking. The students given the quizzes scored half a grade higher in the class than a group not given the tests. Even more interesting was that the quizzes produced a 50 percent reduction in the achievement gap among students of different socio-economic groups.

The reason for these results was most likely that frequent tests, along with immediate feedback, lead students to reflect on their learning, which has been shown to be a key to learning. Reflecting upon our learning improves not only our understanding of the immediate concepts, but our learning skills as well. This process is critical to self-regulating our learning. Unfortunately, we do little to teach students how to self-regulate their learning. Tests with immediate feedback can help serve this need.

Another method of turning tests into teaching devices is to add a "wrapper" around them (Paul, 2015). The wrapper is a series of questions that students answer after the test about issues that might have influenced their performance. For instance, a test wrapper can ask students to list the amount of time they spent on different test-preparation activities, such as rereading class notes or working on sample problems. Students who do poorly on a test might see how different study strategies influence their performance, and thus adjust their methods accordingly.

Faculty can turn tests into learning devices by adding a "wrapper" around them.

The test wrappers can include questions about whether the student studies with music on, where the student studies, and the amount of time the student spends studying. This can lead students to think about how these other factors influence their performance.

Test wrappers can ask the student to reflect on why he or she missed certain answers on the test. The student provides an estimate as to the degree to which their problem is due to different factors, such as not understanding a concept, not being careful, and not being able to formulate an approach to a problem. This clues the teacher to the student's problems, providing a starting point for addressing them. By looking at class-wide patterns, the teacher can also identify common problems that require adjusting the course material.

Finally, the test wrapper can ask the student what he or she will do differently to better prepare for the next test. Students rarely reflect on how they will prepare for a test in the future. Asking a student to think about it and write down the answer can make a significant difference in their performance in current and future courses.

Learning management systems make it easy to add low-stakes tests to online courses. Consider how you might use them as learning devices before, during, and after students encounter the course content.

Reference

Paul, A. (2015). A New Vision for Testing, *Scientific American*, v. 313, n. 11, 54-61. @

Next Month's Topics

- Capturing global perspectives during study abroad
- A method for improving students' reading skills
- Facilitating small group activities with Google Drive
- Five captivating assignments for the online classroom

Tips from the Pros
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tion is presented visually and so has an eye attuned to visual media. The student will better understand information that is presented by visual means over purely text-based means. This has been confirmed by her students' responses to the new format. She found far more students contacting her after reading the syllabus, with one saying that it demonstrated more concern for teaching on her part.

Pacansky-Brock transformed her art history syllabus by adding images of the works that the students will study. She also added video messages to students, as well as covered topics not normally discussed in a syllabus, such as her teaching philosophy. The format is now more like a publication, one that is meant to excite the reader rather than just list basic course information.

The "made over" syllabus can also include a video bio about the instructor. This is especially important in an online course, where students do not meet the instructor face-to-face. It humanizes the instructor to the student and helps kick off the learning relationship. (See the December 2013 issue of *Online Classroom* newsletter for information on how to make a video bio or welcome.)

Pacansky-Brock suggests putting the syllabus outside the closed confines of the LMS on a public site. We err by waiting until students show up in class to share the syllabus with them. They should be able to see it before registration so that they know whether the course is right for them. After all, we do not wait until after someone buys a car to give information about the engine, so why must students be kept in the dark about their course until they enter the class?

This syllabus can also serve as a means for students to speak to one another across classes. Former students can be given a section to post advice to current students. They might make suggestions such as "Get your final project group together within the first few weeks, because it will take a while to get organized." It can take students a few weeks or assignments to get familiar with the structure of a course. Instead of learning the hard way, students are given advice before they get themselves into trouble. Information like this coming from a former student will carry more weight than the same message coming from an instructor.

Michelle Pacansky-Brock calls for an "extreme syllabus makeover."

There are a number of good platforms for creating a richer syllabus. Pacansky-Brock put her photography syllabus on Populr.me, but recommends other micropublishing systems as well, such as Smore and Tackk. The syllabus contains photos that help set the tone for the course. One can easily imagine how something similar can be done with any other course. A civil engineering syllabus could include images of bridges or other structures the students will study, while a physics syllabus could include images of particle collisions, and an English syllabus could include bios of the authors or stories in the class.

We have also seen the emergence of excellent online publishing platforms over the past few years that make it easy to produce attractive and professional-looking content. Lucid Press is one example. These platforms offer a wide choice of templates that make publishing as simple as plugging in content. Plus, the result can be viewed online, or downloaded as a PDF to be viewed offline on mobile devices.

Take a look at the syllabus example below put up on Populr.me—a system that offers free pro accounts to teachers at *https://populr.me/coupons/poppin-teacher*—and consider how you can transform your own syllabus into a rich document that speaks to students and better prepares them for the course ahead.

The History of Still Photography: *page.teachingwithoutwalls.com/humanized-syllabus-example*

Reference

Pacansky-Brock, M. (2014). The Liquid Syllabus: Are You Ready? Found at *http://www.teachingwithoutwalls.com/2014/08/the-liquid-syllabus-are-you-ready.html* @

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do much to promote their engagement.

5. **Use pedagogies that have students creating authentic products** "These are activities that are contextualized in real life, rather than decontextualized to the classroom." (p. 219) They are activities that feel like they have real-world relevance. If students are asking each other potential job interview questions and then offering feedback on each other's answers, that feels valuable. It's preparing them for what they'll likely have to do. "In short, students become more engaged when working on assignments that lead to meaningful products having value beyond the course." (p. 223) And here the online environment offers rich creative possibilities.

6. **Use multiple and varied pedagogies that require documented student action** "Pedagogies that demand breaking up the traditional long lecture session with brief, active learning assignments, sometimes referred to as punctuated lectures, have a solid base of evidence to support their efficacy at improving student engagement, and ultimately learning outcomes." (p. 223) Student engagement remains higher if students regularly have to take action. Listening and reading can be very passive activities, especially as many students practice them.

Cultivating engagement in online courses is not difficult; it only requires focus on making the students active participants in their learning.

Reference

Major, C. H. Teaching Online: A Guide to Theory, Research, and Practice, Baltimore: Johns Hopkins University Press, 2015.

Maryellen Weimer is the editor of The Teaching Professor. @

Digital Supplement

This month's newsletter contains a number of links to supplemental resources that illustrate and expand on the topics covered in the articles. Make sure to take a look at these links to learn how to apply the processes discussed to your own classes.

Google sites

Lee Orlando discusses how to facilitate collaboration between classes using various technologies in Interclass Collaboration Online. Watch this tutorial to learn how to create a Google Site for your students that will allow them to share their stories with one another: *http://youtu.be/wpw_F33BEt0.*

The extreme syllabus

In Transforming the Online Syllabus, Michelle Pacansky-Brock calls for a richer, and more interactive "Extreme Syllabus" that combines imagery, video, and interactivity to better prepare students for class. Take a look at the example she provides at: *http://page.teachingwithoutwalls.com/humanized-syllabus-example.*

If you want to use the same Populr.me system for your syllabus, make sure to get the free pro version at: *https://populr.me/coupons/poppinteacher.*

If you want to put a video welcome into your syllabus, then take a look at the sample at: *http://bit.ly/1QwOip3*. Watch the tutorial on how to use WeVideo to make your own bio at: *http://bit.ly/1KyXXHS.*

Fancy Males online test

Tests are not just for assessing prior learning. In Tests as Teaching Devices you will learn how to craft tests that teach new concepts. See how the Cornell University Ornithology Lab uses its "Fancy Males" test to teach about evolutionary traits at: *http://biology.allaboutbirds.org/features/fancymales/fancy-males.*

Students teaching students

In Improve Student Comprehension through Summarizing Assignments you will learn how to use small group discussion to help students better understand reading material. Discover how Harvard Physics professor Eric Mazer uses small group discussion in his classes to produce more learning in less time at: *http://americanradioworks.publicradio.org/features/tomorrows-college/lectures/rethinking-teaching.html.* @

Improve Student Comprehension through Summarizing Assignments

By John Orlando

If you can't explain it simply, you don't understand it well enough.
—Albert Einstein

One of the fundamental causes of poor student performance is not knowing how to read academic work. They read for facts rather than underlying themes. It has been proven that the best note-taking method is one that forces active reading by having readers summarize positions and "argument turns" in their own words. This is how faculty themselves take notes when reading articles. But students do not know they should be doing that. Not only does summarizing capture more pertinent information, it also gives them practice with synthesizing ideas, which is a central skill in critical thinking.

Guideswende Rouamba, instructional design technology specialist at the University of Nebraska-Lincoln, works with faculty on an assignment that helps teach how to summarize positions. Students are first given a text to read, and then told to write the author's position and argument in their own words. An instructor can also force students to bore down into more detail by requiring them to paraphrase certain particularly difficult passages.

After coming up with their own summaries, the students are put in groups and told to post their versions to a common site for all group members to see. Then they are told to discuss the different versions and come to a consensus on a group version that they will hand in. It can be helpful for the instructor, or group, to appoint a leader who will put pen to paper to write out at least a draft of the common version based on the discussion. Students can then edit it as much as they would like during the discussion. To avoid freeloading, instructors can require all students to make comments on the different versions. Plus, each student's original version is preserved to make sure that they at least submitted something at the beginning.

This group discussion format has been used successfully by Harvard physics professor Eric Mazur. After explaining a concept to the class, he has his students explain it to one another in groups of two. He found that often only half the students understood the concept originally, but after discussing it with a neighbor, most understood it. "The 50 percent who had the right answer effectively convinced the other 50 percent," he says.

Professor Mazer believes that students can often explain a concept to a fellow student better than he can because of "the expert's blind spot"—the inability of experts to understand the trouble of novices. Students explain the concept in terms that a novice can understand because both are novices.

In the courses at Nebraska, once the group reaches agreement on the summary, they post it for review. The instructor then provides feedback on that version. The instructor can also look at the individual students' versions to see where they are having trouble. It can be interesting to see the variety of original versions. By taking a peek at a student's original understanding of a text prior to the completion of an assignment, the instructor sees the thinking of the student and where that thinking goes wrong. The exercise helps an instructor identify standard mistakes that students make in reading and understanding work, and from that create course content for students that discuss these mistakes and how to avoid them. In this way the instructor is heading off problems at the pass, rather than just seeing their outcomes in students' final work.

The ideal way to facilitate the group work is through a shared editing system. Perhaps the best such system is Google Drive. Each group can create an account and provide the instructor with access. Students then contribute their original version, as well as edit the final version, while the instructor monitors progress and uses the comment feature to provide feedback.

Another option is to use a wiki-like platform. Many learning management systems now come with a wiki feature that allows for student editing. There are also a variety of good, free wiki systems. PBWorks is an easy way to use wiki, while Padlet provides a visually appealing way to present information, and Blendspace offers a premium version free to teachers that includes a host of functions, including collaboration between teachers and classes.

Synthesizing and paraphrasing assignments can be a powerful way to increase learning and improve study skills. Consider adding it to your teaching repertoire.

Reference

Hanford, E. (2013). Rethinking the way college students are taught. American Public Media, retrieved from *http://americanradioworks.publicradio.org/features/tomorrows-college/lectures/rethinking-teaching.html.* @