**Flipping the Flip: Responsive Video in the Music Classroom**

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Educational videos are usually designed to be watched before a class meeting (as in the “[flipped classroom](http://flipcamp.org/engagingstudents/shafferpt1.html)” model), or in place of the meeting itself (as in online courses). In this essay, I show how instructional videos can be useful when produced and viewed *after* a given class meeting as well. I call these videos “responsive,” because they’re produced in reaction to the events of a class meeting, or to an individual student’s work. Responsive videos are not intrinsically a way of flipping the classroom (though they could be used in concert with such videos), or of moving in-person instructional time online. Rather, they supplement instructional time, creating more frequent and personal connections with students. In a sense, they *flip* the flipped classroom itself: while flipped lectures and [“Just-in-Time Teaching”](http://flipcamp.org/engagingstudents/hughes.html) prepare students to make the most of that day’s class, responsive videos *prolong* instructional time, summarizing and extending a lesson or discussion beyond the closing bell.

Responsive videos are more than technological, however; they embody a particular pedagogical philosophy, a student-centered praxis similar to the one [described by Chris Friend](http://www.hybridpedagogy.com/journal/learning-let-go-listening-students-discussion/), who writes:

A class discussion where the teacher pre-determines the outcome is just a lecture in disguise, dressed up to feel student-centered while still being instructor-directed ... we owe it to our students to *not* know what’s going to happen, lest we start dictating what we want them to think. To truly engage another in a conversation, we respond to the ideas that develop organically.

Obviously, non-interactive videos are not truly analogous to freewheeling discussions, but they are philosophically aligned with Friend’s vision of student-centered learning. Producing videos after the fact allows an instructor to productively defer the impulse to jump in near the end of a class discussion to tie the disparate threads together. Responsive videos extend Friend’s notion of the teacher-as-stenographer, allowing additional time for reflection and clarification. And while they are imperfect solutions, active video comment sections or [collaborative annotations](http://www.annotations.harvard.edu/icb/icb.do?keyword=k80243&pageid=icb.page466612) can allow students to continue to ask questions or voice their opinions even after class has ended.

The other tenet of responsive video is *rapid production*. Producing quality lectures for a flipped class or online course adds many hours of rehearsals, recording sessions, and post-production to the existing work of lesson planning. By embracing a rapid production timeline -- sit, teach, minimally edit, and upload -- responsive videos aim to remove two of the hurdles that plague other forms of pedagogical video production. First, they operate like a kind of pedagogical “free writing” exercise: the conceptual heavy lifting should already have been done in class, so the instructor is free to begin teaching immediately, through examples that address issues or questions already raised. Responsive videos should be almost improvisatory, as they aim to extend and clarify concepts to which students have already been introduced. By embracing the less formal model of on-camera office hours (sometimes almost literally, as in the case of the “Muddiest Point,” below) rather than pre-planned lecture delivery, the instructor is free to teach in a less structured, more organic way.

Responsive videos also rely on a decidedly lo-fi aesthetic, embracing the immediacy and the rough edges of quick production. [As Jan Miyake writes of her own “mini-flip” podcasts,](http://flipcamp.org/engagingstudents2/essays/miyake1.html)

The low production value of this approach has two hidden advantages. Owing to the small amount of time investment, the podcast comes across as less formal … as such, it builds on and contributes to the rapport an instructor has with a class. Also, since it is easily redone each semester, one can use cultural references and adjust for semester-by-semester differences in rapport.

The same is true of responsive videos. Unlike a polished and rehearsed production with seamless transitions and graphics, responsive videos should capture the way you would interact with a small group of your own students.

The ideal responsive video practice balances the [technological affordances [see Figure 3, p. 12]](http://poseidon01.ssrn.com/delivery.php?ID=586024090004104065094096030123119105036053067045062087091089089119013066085097089104033016012031048048013080081030098082126022009094094009064089094018113093120095127055062048111112126090101121070000092089030087067021069001008121085006027003108026098&EXT=pdf&TYPE=2) of using video to teach music—sound, the ability to demonstrate with real instruments, and to provide short, re-watchable examples of the many procedural activities that we ask music theory students to master—with the very salient limitations on multimedia teaching materials, [which have been persuasively analyzed by Kris Shaffer](http://www.hybridpedagogy.com/journal/homework-is-a-social-justice-issue/). Rather than displacing hours of essential course content to a medium potentially hamstrung by campus bandwidth limitations or cell phone data rates, responsive videos should be short and supplemental. In this way, responsive videos replace or enliven the genre of the (often desperately rambling) post-class clarification email, or provide asynchronous office hours. And responsive videos need not address the entire class all the time: you might pitch a video towards students who want to dive deeper into a given concept, or provide a review video for students who need more practice.

In this brief essay, I’ll explore three general kinds of “responsive videos,” and discuss how I’ve used them in class.

**Setting Up**

*Your studio doesn’t need to be elaborate. Ours had humble beginnings.*



Just as the production of “flipped” content may be scaled up or down based on one’s technical capabilities, resources, and preparation time, so too may the production values of responsive videos. [Stephen Gosden’s](http://flipcamp.org/engagingstudents/gosden.html) account of the “technology tools” session at FlipCamp 2013 gives a useful overview of some of the hardware and software options available to instructors. The video below describes the simple studio setup I’ve used in my work with the [Derek Bok Center for Teaching and Learning](http://bokcenter.harvard.edu/), and in my own teaching; additional tutorials on the finer points of video editing, [such as this one](https://www.youtube.com/watch?v=tGF0EpjZNz8), are readily available online. In my usual setup, the instructor sits at a small table and speaks into one camera, while a second camera, suspended above the table, captures notes, documents, or demonstrations. This basic setup can be reduced or expanded as necessary. For example, In many of my own teaching videos and especially in my multimedia evaluations, I’ve added a keyboard and a computer. At the Bok Center, we typically use a pair of [mid-level (“pro-sumer”) DSLR cameras](http://www.usa.canon.com/cusa/consumer/products/cameras/slr_cameras/eos_70d), but I’ve also produced effective videos at home or in my office using my built-in computer camera and simple tablet capture (using an app such as “[Explain Everything](http://explaineverything.com/)”). And as the photo above demonstrates, some resourcefulness and a smartphone can go a long way.

[**[EMBED Introduction to Overhead Camera Teaching]**](https://vimeo.com/130475241)

**Clarification, Extension, Enrichment**

The first category of responsive videos, which give the technique its name, can take many forms. An instructor might create a short video in order to neatly round off the discussion of an important concept, to supplement a lesson for which a single class period wasn’t *quite* enough time, or to explore an idea only tangentially related to the curriculum.

In my own classroom, I’ve used video in order to better serve the different constituencies among my students. For example, I was Head Teaching Fellow for “Music Theory for Non-Majors” this past fall, and while most of my students were lifelong performers who could easily major in music, the lectures were designed for the far larger population of students who had little musical background. The video embedded below is one attempt, created after one of the weekly lectures, to tie the activities of the course into the more advanced studies in counterpoint undertaken by my students. [1]

[**[Embed video: Counterpoint lesson]**](https://vimeo.com/130360423)

Responsive videos are also ideal for fielding the interesting but off-topic (or at least out-of-sequence) questions which arise frequently in music theory. For example, this past semester I used the opening phrase of Beethoven’s Fifth Symphony (*below*) as part of a lesson on musical sentences. One perceptive student immediately zeroed in on measure 20. “What’s that?” she asked, pointing to the augmented sixth chord. Giving a quick answer at the time, but then producing a video after class, allowed me to give her (and other interested students) a satisfying answer, without having to stray too far from our fragmentations and continuations.

*Beethoven’s Symphony No. 5, mm. 1-27.* [*Piano transcription by Franz Liszt*](http://petrucci.mus.auth.gr/imglnks/usimg/9/99/IMSLP01056-Beethoven-Liszt_Symphony-5.pdf)*.*



In much the same way, presenting post-class “enrichment” videos can help class content to branch out rhizomatically, connecting musical examples and discussion topics that arise in class with additional examples from other genres or repertoires. This helps interested students to connect course concepts with the music that they find most relevant, and can expand the generally restricted repertoire of the music theory classroom according to the interests of individual students, groups of students, or teaching assistants.

Finally, responsive videos can augment existing classroom assessment techniques. One such technique, “The Muddiest Point” (described [here](http://flipcamp.org/engagingstudents2/essays/bourne.html) by Janet Bourne, and endorsed by [many](http://www.washington.edu/teaching/2015/02/02/reflecting/) [university](http://cft.vanderbilt.edu/guides-sub-pages/cats/) [teaching](http://www.unl.edu/gradstudies/current/teaching/muddy) [centers](https://www.cmu.edu/teaching/assessment/assesslearning/CATs.html)), asks students to write down the most difficult—”muddiest”—aspect each class session. These microsurveys yield valuable information about the progress of the class, individually and as a whole. But with a simple studio setup, you can quickly *answer* the questions soon after they’re posed as well, clarifying the muddy points while the lesson is still fresh in students’ minds, and turning an assessment into a learning opportunity. If you repeat the process weekly, across several semesters, you’ll quickly accumulate a stock of “Frequently Asked Questions” videos to use in your future teaching.

**Music Theory vs. the Forces of Nature**

This past winter, Boston received more than 110 inches of snow, [shattering the previous record](http://www.weather.com/news/news/new-england-boston-record-snow-tracker). Many of the snowiest days were Mondays, which combined with the Presidents’ Day holiday to deprive the students in “Music Theory for Non-Majors” of several weeks’ worth of section time. Because the lectures were already filled to the brim with content, and section meetings extremely difficult to reschedule, Professor Osnat Netzer and I produced a series of videos that would strive to [replace the time that students would have had to work on course content in small groups, with their section leaders](http://bokcenter.harvard.edu/blog/making-snow-days-experiment-responsive-video). While these videos ended up taking a form not unlike traditional online lectures, they weren’t planned that way. The rapid techniques of responsive video allowed us to spend only a few hours to deliver a series of moderately polished videos, which supplemented the course’s existing readings, lectures, and homework assignments, and perhaps most crucially, kept level the playing field for our least experienced students, for whom missing hours of early-semester instructional time on the rudiments of triads and scales would have otherwise proven disastrous.

The “Snowstorm Sessions” can be viewed in their entirety [here](https://vimeo.com/channels/877293).

**Multimedia Evaluations**

Delivering feedback in multimedia form is perhaps the most novel, and the most specifically *musical*, application of responsive video. I learned this technique from my mentor at the Bok Center, Marlon Kuzmick. Marlon uses videos to give dynamic feedback to students in his video production courses. Since musicologists and theorists so love to insist that “music is a temporal art,” it seems especially appropriate to give feedback on composition assignments live on camera. I can easily envision studio music teachers, chamber music coaches, or ensemble directors delivering comments using the same techniques.

The following “highlight reel” shows anonymized excerpts from a few multimedia evaluations I’ve done for my students.

[**[EMBED: Sample Multimedia Feedback]**](https://vimeo.com/130791578)

I’ve found multimedia evaluations extremely effective. They allow students, first and foremost, to *watch* your engagement with their assignments. [As Kris Shaffer has noted](http://kris.shaffermusic.com/2012/04/video-grading-for-transcription-arranging-projects/), screencasting evaluations demystifies the grading process for students. Using a live camera or a keyboard makes these videos even more personal and engaging, allows students to hear their music being performed, and lets the instructor demonstrate the moments that work especially well (and *why*), or suggest alternatives for passages that need attention.

These examples are just some of the possibilities for using a rapid, after-the-fact model of video production to quickly incorporate multimedia communication into your courses. While responsive videos can certainly act as a stepping stone to a full-fledged, video-based flip, the responsive approach to video also has much to offer on its own, as a way of extending your curriculum, providing your students with additional examples and opportunities for extra practice as the need arises, and providing dynamic, multimodal feedback on musical assignments and compositions. With a willingness to learn the basics of video editing, and a quiet room or an empty corner for a simple studio setup—whether it’s made up of DSLRs, your laptop camera, screencasts, smartphones, or Khan Academy-style tablet capture—you can easily add responsive videos to your teaching repertoire. [2]

**Notes**

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[1] The timecode visible in this video is another remnant of the rapid production process. When trying to produce a video quickly, I’ve found it helpful to keep a running list of the timings -- by either the time of day, or a stopwatch starting from 0:00 -- at which notable events, transitions, or good takes occurred. For example: 3:47pm/0:00 - hit record; 3:58 commented on Jane’s work; 4:10 commented on John’s work, etc. Including a timecode in your multicam or compound clip and using it to skip directly to these positions helps to speed up the editing process. Leaving the timecode in the final product is partly an aesthetic choice, but could also facilitate student questions, discussions, and annotations.

[2] While any technical setup works for producing educational videos, a growing body of evidence ([Iloudi et al 2013](http://ceur-ws.org/Vol-983/paper5.pdf); [Guo, et al 2014](http://www.pgbovine.net/publications/edX-MOOC-video-production-and-engagement_LAS-2014.pdf)) suggests that videos of instructors speaking into camera are both more enjoyable and more effective than “Khan-style” tablet capture alone. [Cross et al (2013)](http://research.microsoft.com/en-us/um/people/thies/TypeRighting-CHI2013.pdf) also demonstrate that handwriting in educational videos is more effective than computer-generated text. They attribute this effect primarily to the way that handwritten words appear gradually, and they propose their “TypeRighting” method in order to give computer text this quality.

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