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Increasing Retention and Motivation: Making a Case for Conscious Long-Term Repetition and Leveraging Peer Learning

BRIAN EDWARD JARVIS AND JOHN PETERSON

In this article we share two strategies to address issues of retention and motivation in an inter-university, co-taught Form and Analysis course: (1) a cyclic quizzing strategy that fosters long-term retention and gradual accumulation of skill in a manner similar to how musicians learn new repertoire, and (2) a final project that leverages peer learning to maintain student motivation and participation throughout the semester. For their final projects, students became teachers by creating a video analysis of a piece. These videos were evaluated by students from a different institution's Form and Analysis course which was taught using materials co-designed by the instructors of both courses. This peer-evaluation model motivated the students to master course content so they could positively represent themselves and their institutions. Quizzes deployed through our Learning Management Systems helped students continually practice key concepts. These quizzes allowed us to scaffold and repeat content, both aural and written, without consuming precious class time.

Introduction

In our classes, we regularly encounter variations of the scenarios listed in Example 1.[1] The challenge in Scenario 1 is retention. Students are typically busy with other classes, ensembles, lessons, extra-curricular activities, and often outside jobs and family responsibilities. Beyond completing course assignments, they often lack the time or motivation to review past concepts and may not encounter them before they reappear, for instance, on the final exam. Scenario 2 suggests that students value peer learning highly, but this scenario may also result from students wanting to be respectful of the instructor's time. Scenario 3 illustrates a problem of motivation. Students quickly lose the incentive to engage with the class beyond earning a passing grade to satisfy their curricular requirement. In this article, we share two strategies we employed to address these issues in an inter-university, co-taught, Form and Analysis course: (1) a cyclic assessment strategy that fosters long-term retention and gradual accumulation of skill in a manner similar to how musicians learn new

1 Throughout the article first-person plural pronouns such as "our," "we," and "us" refer to the authors only.

repertoire, and (2) an inter-university final project that leverages peer learning to maintain student motivation and participation throughout the semester. After a survey of studies that discuss motivation, retention, and engagement, we detail our assessment strategy, outline the final project, and conclude by suggesting ways in which these strategies may be employed beyond the Form and Analysis course for which they were originally designed.

Scenario 1. Students will forget well-established concepts from earlier topics when revisited later in the semester.

Scenario 2. Students turn to their peers first, not the instructor, for help outside of class.

Scenario 3. Most students initially participate in class, but only a handful continue to do so voluntarily by mid-semester.

Example 1
Sample classroom scenarios.

Survey of Studies Concerning Motivation, Retention, and Engagement

In a study examining the practice techniques of musicians at various levels of experience, Lisa Maynard defines "practice" as "the act of repeating a motor skill with the intention that repetition of the skill will lead to increased accuracy, fluency, velocity, consistency, automaticity, and flexibility in performing the skill."[2] Maynard finds that the musicians she studies all typically follow several steps in the practice room. They first select a passage from their target work, divide it into small fragments, repeat those fragments several times, and finally place them back into context by performing the larger passage.[3] Music education scholars, like Maynard, regularly discuss the importance of repetition in student learning, and music theorists have likewise begun to discuss pedagogical strategies that rely on repetition. Paula Telesco, for instance, argues that "unquestionably, learning is an iterative process."[4] Telesco's comment stands out as uncharacteristically direct when compared to other music-theory-pedagogy scholarship where repetition is part of the suggested activity

2 Maynard (2006, 61).

3 Ibid., 69.

4 Telesco (2013, 223).

but is not itself championed by the writer. Andrew Aziz, for example, uses a form of varied repetition in his "Sonata Theory Learning Laboratory" when his students compare recomposed portions of sonata expositions with the original to facilitate discussion and, in so doing, they are invited to re-hear portions of the sonata through new lenses.[5] Similarly, Mark Richards indicates he "*builds up* to it [sonata form] over a number of classes."[6] This "building" notion suggests that topics are revisited, perhaps with new information added upon repetition. The strategy is similar to the "spiral learning" model employed by Jane Piper Clendinning and Elizabeth West Marvin in *The Musician's Guide to Theory and Analysis*, which aims to increase student familiarity and comfort with different concepts by continually revisiting repertoire.[7]

While not aimed at pedagogy specifically, the music cognition community has been more explicitly engaged with studies of repetition as recent work by David Huron and Elizabeth Margulis demonstrates.[8] Margulis even appears to suggest that repetition may assuage Brian Moseley's understandable lament that as students listen to larger spans of music, they typically do not attend to more local events.[9] To this end, Margulis suggests repetition can solve issues of this sort by allowing listeners to attend to multiple levels of music simultaneously. She notes that repetition "enables us to 'look' at a passage as a whole, even while it's progressing moment by moment."[10] Repetition is also an intrinsic aspect of teaching music theory. As teachers, we train ourselves to hear and internalize the concepts we teach through the yearly process of grading and lesson preparation.

Despite tacit acknowledgement that repetition is essential to learning, music theory pedagogy articles rarely explicitly describe repetitive teaching strategies that span an entire course. Below, we describe how we employed a style of repetition inspired by the practice strategies Maynard finds that musicians employ: break a concept down into fragments, repeat those fragments, and put them into a larger context. Our strategy not only leverages repetition to increase content retention, but it also reinforces good practice habits, supporting a transfer between the practice room and the classroom.

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5 Aziz (2015).

6 Richards (2012, 220).

7 Clendinning and Marvin (2016, xxi).

8 See Huron (2006) and Margulis (2014).

9 Moseley (2014, 1–4).

10 Margulis (2014, 7).

In addition to increasing retention, our Form and Analysis course also addressed student motivation, which other pedagogues have likewise explored through a variety of means. For instance, Anna Ferenc uses exercises that model the professional activities of music theorists (e.g., conference presentations), Philip Duker uses problem-based learning to link course content to real-world scenarios, Vicky Johnson engages with gamification in the context of a proficiency-based learning model, and Peter Schubert describes how he uses in-class performance to keep students engaged.[11] Outside the realm of music pedagogy, John Keller identifies four components to motivation in a model he calls ARCS: **A**ttention, **R**elevance, **C**onfidence, and **S**atisfaction.[12] His descriptions of those components are reproduced in Example 2. The scholars we cite above all address various components of Keller's ARCS model. For instance, by asking students to respond—using analysis—to a hypothetical comment made by a fictitious friend at a party, Duker addresses how Attention and Relevance play a critical role in generating motivation.[13] Johnson, on the other hand, engages the Satisfaction component by allowing students who have achieved proficiency for a topic to also earn

Major Categories & Definitions		Major Process Questions
Attention	Capturing the interest of learners; stimulating the curiosity to learn	*"How is this learning valuable and stimulating to my students?"*
Relevance	Meeting the personal needs/goals of the learner to effect a positive attitude	
Confidence	Helping the learners believe/feel that they will succeed and control their success	*"How can I (via instruction) help students succeed and allow them to control their outcomes?"*
Satisfaction	Reinforcing accomplishment with rewards (internal and external)	

Example 2
Components of the ARCS Model (John Keller).

11 See Ferenc (2015), Duker (2014), Johnson (2015), and Schubert (2013).

12 Keller (1987, 1–2).

13 Duker (2014).

attendance credit for any remaining classes on that topic.[14] Students are rewarded, then, by earning time off for working hard up front. In our Form and Analysis course, we addressed attention and relevance via our final project, and confidence and satisfaction using the cyclic assessment strategy to which we now turn.

Using Cyclic Assessments to Foster Long-Term Retention

We consistently hear our students perform challenging works beautifully on their instruments—works that clearly require substantial commitment and effort to learn. We are often dismayed when these same students lack mastery of core musical concepts (aurally identifying a cadence, for example), skills that we believe require disproportionately less work than mastering, for example, Hindemith's Sonata for Tuba. On the one hand, we recognize that students typically approach these endeavors with disproportionate levels of motivation, but on the other, their successful performances demonstrate that they have the potential to achieve mastery of challenging material.

Our belief that many students possess the necessary skills to learn complex musical works motivated us to mimic the practice-room strategy Maynard observed in her study: select a passage, reduce it to small fragments, repeatedly focus on those fragments, then gradually rebuild the passage by placing the fragments back into context.[15] Using a layered and repetitive approach to assessments, we asked students to engage with material in the theory classroom using a similar mindset. As we will show below, when we introduced a topic or concept we asked students to practice its component parts in isolation in written and aural formats, and then we contextualized the concept and its component parts by asking students to complete analysis on homework assignments. Our approach draws on the process of interleaving (rather than blocking) topics: the topics overlapped with each other such that while students were completing a cycle of assessments on "Topic A," they were also beginning a cycle of assessments on "Topic B," and every previous topic had the potential to be reviewed at the end of a cycle of assessments in our review quizzes.[16]

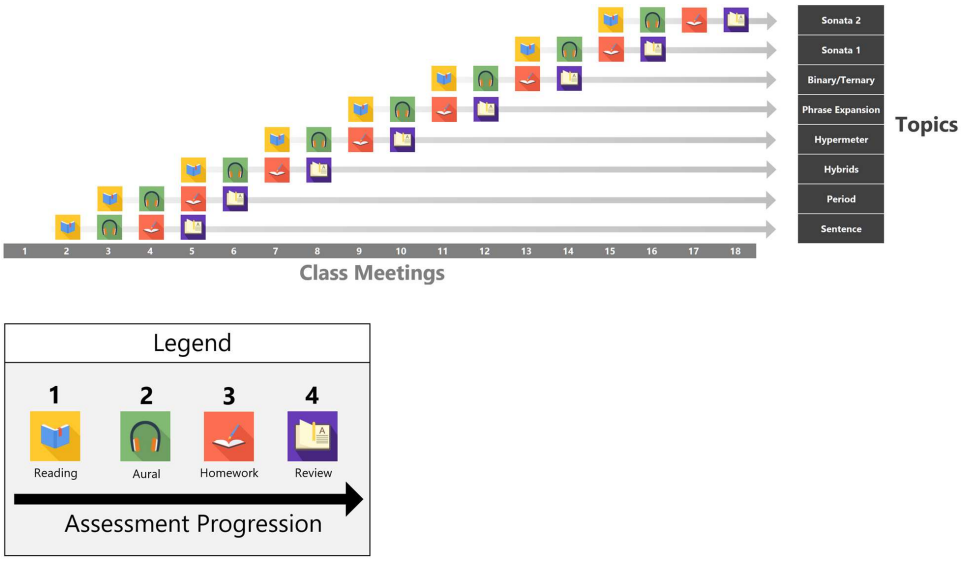
Example 3 demonstrates the cyclic manner in which we repeated topics using varied tasks during the first eighteen days of the course, culminating in the midterm exam. Each topic was initiated through a four-assessment progression: reading, aural,

14 Johnson (2015, 7).

15 Maynard (2006, 69).

16 We are grateful to an anonymous reviewer who pointed us toward the concept of interleaving. See, for example, Rohrer (2012, 357).

written homework, and review. Once introduced, retention was addressed by regularly repeating topics by recycling online listening and review assessments—indicated in Example 3 by the horizontal arrow following the initial block of assessment icons. The example also illustrates how we attempted to steadily build and reinforce knowledge while exposing the challenge of balancing attention between review and solidifying increasingly difficult, newer topics like phrase expansion and sonata form.



Example 3
Scaffolded assessment strategy.

Reading and Review Quizzes

Bookending students' interactions with a given topic are reading quizzes and review quizzes. Students are first exposed to a topic by completing a reading and an associated reading quiz through our institutions' learning management system (LMS).[17] While we took most of the readings from William Caplin's *Analyzing Classical Form*, we also assigned selected readings from other sources such as James Mathes's *The Analysis of Musical Form* (concerto), Steven G. Laitz's *The Complete Musician*, 3rd edition (Binary and Ternary), James Hepokoski and Warren Darcy's *Elements of*

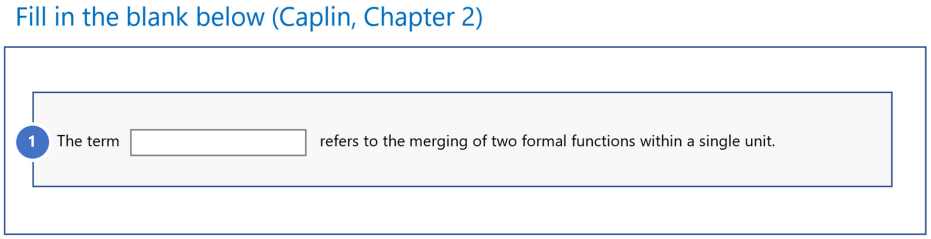
17 The learning-management systems we used were Blackboard and Canvas.

Sonata Theory (Sonata), Bryn Hughes and Kris Shaffer's OpenMusicTheory.com (Popular music), and video lectures we created ourselves (hypermeter and phrase expansion).[18] As other instructors often lament, in past iterations of the course we were troubled by how little information students retained from readings, or by the way students focused on less significant information rather than the components we valued the most. We had previously attempted such techniques as in-class reading quizzes and detailed outlines of readings, but the online reading quizzes we designed in Fall 2016 have been so successful that we have since employed the same technique in many of our other courses. As students are reading, they are encouraged to fill out a "reading guide" we designed to focus their attention on the reading's essential components. A sample "Optional Reading Guide" is given in Appendix 1. To provide incentive, we often took questions from the reading guide and copied them verbatim into the reading quiz.

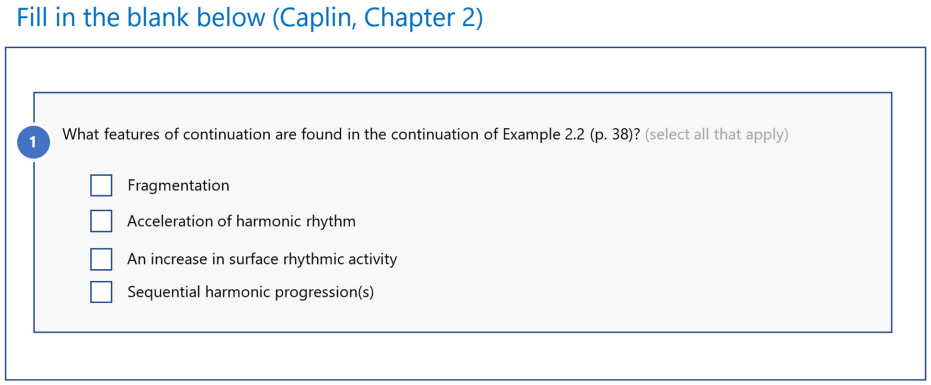
Reading quizzes include two categories of questions: vocabulary and analytical practice. Example 4 illustrates our typical approach to vocabulary. Often we introduce terms using fill-in-the-blank questions that take a sentence directly from the reading, leaving a blank for a key word. These questions simply require students to find the same sentence in the reading and fill in the missing word, an approach that does little to evaluate their understanding. To address understanding, we designed analytical practice questions that require them to apply their knowledge, often in multiple-answer format such as that concerning the features of a sentence in Example 5. The content was often taken from Caplin's "Let's Practice" and "Reviewing the Theory" questions in a given chapter. These quizzes could be repeated up to three times, and our LMSs retained the highest grade from the student's set of attempts. Students could view which questions they had answered incorrectly, but we prevented the quiz from displaying the correct answers after submission. We limited the number of repetitions to three to encourage students to take their repeated attempts more seriously: we worried that if students had unlimited attempts, they might simply take the quizzes multiple times until they began to recognize past questions and their associated correct answers by trial and error without doing any reading.

The success of these reading quizzes in comparison to past iterations of the course was immediately apparent to us. Not only did we have feedback about the degree to which students had understood the readings by reviewing both their responses and their number of attempts before class, but the quizzes also gave students immediate

18 See Caplin (2013), Mathes (2007), Laitz (2011), Hepokoski and Darcy (2006), and Hughes and Shaffer (2014).



Example 4
Basic vocabulary question on a reading quiz.



Example 5
Analytical practice question on a reading quiz.

feedback on what they had learned. As a result, students consistently entered the classroom on the first day of a topic ready to delve into more complex details. On the first day we taught hybrid phrase-level forms, for example, we came prepared to review the basic terminology and characteristics of each hybrid using particularly clear examples. It quickly became obvious, however, that students did not need this review, gaining us precious class time to work on more nuanced examples.

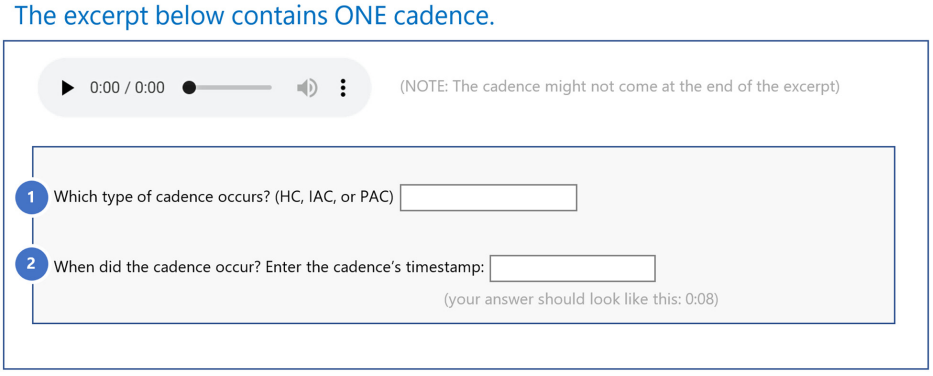
At the end of each topic, students completed a review quiz. Review quizzes recycled nearly all questions from the reading quiz students had completed at their introduction to the topic. Occasionally, we omitted questions that required too much reproduction of exact textbook wording. In addition to reviewing the reading quiz from a given topic, review quizzes also included questions from all previous topics. To maintain focus on recent topics, we instructed our LMSs to draw a larger selection of questions from the most recent topic's reading quiz, and fewer questions from earlier

topics. Compared with our previous approaches, this manner of repetition resulted in students being noticeably more fluent with a topic's general principles and details throughout the entire semester.

Aural Quizzes

Like the reading and review quizzes, students could take their aural quizzes multiple times and our LMSs retained the highest score. Anecdotal feedback from students throughout the semester suggested that these aural quizzes were among the most challenging tasks in the course, but also the most rewarding because they began to readily hear the concepts from the quizzes in the music they heard and performed. Examples 6 through 9 represent our approach to aural quizzes.

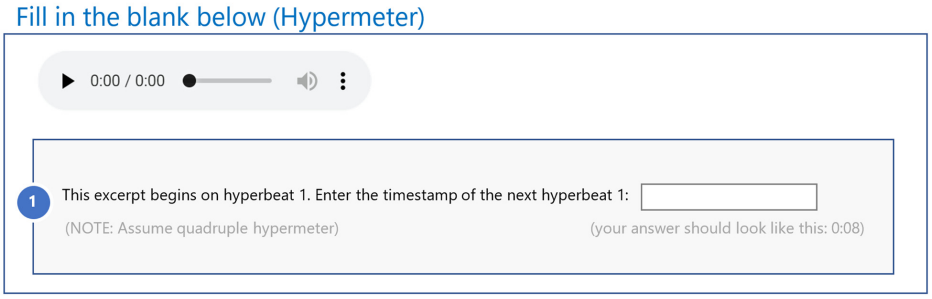
The question in Example 6 is taken from a quiz on cadences. Though students learned about cadences in previous courses, we felt that regular practice with aurally identifying cadences was essential for internalizing the experience of formal analysis. As Seth Monahan notes, the first prerequisite to formal analysis is the ability to "identify and track cadential processes."[19] In this quiz students located the moment of cadence by entering its timestamp and its type. All questions contained only one cadence, and each excerpt ended a variable amount of time after the cadence had occurred to prevent students from targeting the recording's end. We also find that encouraging students to listen for a sense of a new beginning or a restatement is effective in helping them to target potential cadences. We usually allowed for a three-



Example 6
Aural quiz on the identification of cadence types and hearing the moment of cadence.

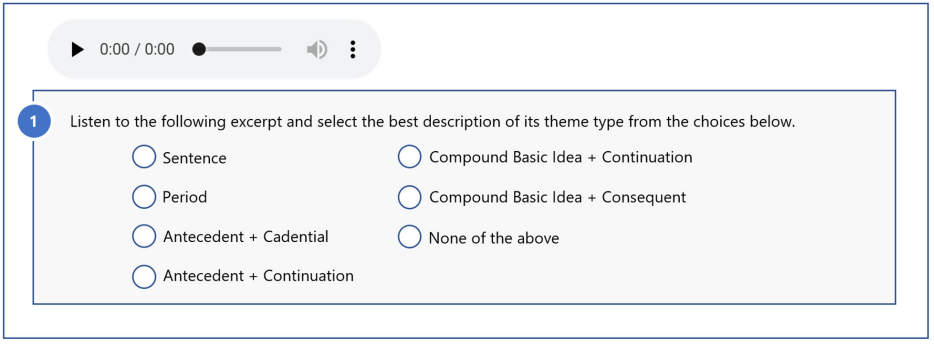
19 Monahan (2011, 81).

second range of correct answers (one second before and one second after our ideal location) to account for timing variations related to technological differences.[20] We adapted our timestamp strategy for more advanced topics including hypermeter and larger forms. In our hypermeter quiz (Example 7), we specified that each recording began on hyperbeat 1 and we asked students to identify, for example, the next instance of hyperbeat 1, or the second occurrence of hyperbeat 4.



Example 7
Aural quiz on perceiving the location of hypermetric counts.

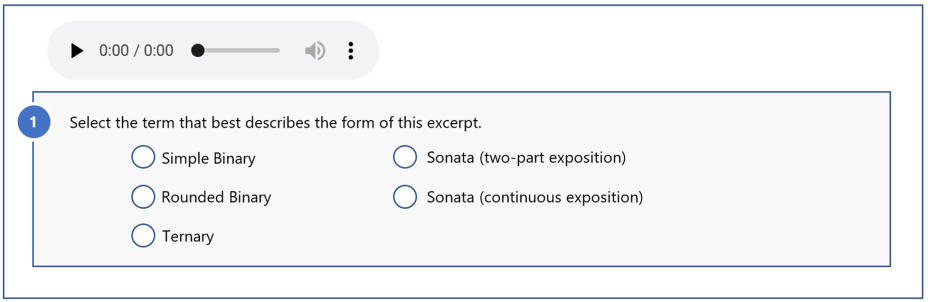
Another strategy we employed is represented in Example 8. In this quiz, students listened to an excerpt and indicated which Caplinian theme type they heard. An important feature of these phrase-level aural quizzes was the "None of the above" option. While most excerpts were unambiguously one of Caplin's theme types, several were unique forms to remind students of that framework's limitations. We used similar



Example 8
Aural quiz on identifying Caplin's theme types.

20 In excerpts with particularly slow *tempi*, we tended to allow a greater range of time variability.

multiple-choice questions for larger forms. The last aural quiz students completed before the midterm, for example, requested that students identify the excerpt's overall formal type (Example 9). These kinds of quizzes have much potential; we could envision using them to ask students to do things such as identifying the location of a sonata form's EEC, the beginning of a song's post-chorus, or the first occurrence of a film score's "loss" gesture.[21]



Example 9
Aural quiz on identifying formal type.

Homework Assignments

In addition to the online quizzes described above, students also completed weekly paper assignments. As the assessment strategy in Example 3 shows, these assignments represented the students' third encounter with a topic. A sample assignment is provided in Appendix 2. Assignments on phrase-level forms typically asked students to provide harmonic analysis, show multiple levels of formal function by annotating the score, and create phrase diagrams using symbols discussed in class. In longer assignments (e.g., sonata form and concerto), we only asked for selected passages of harmonic analysis and we limited phrase-level analysis to targeted areas. Though students did not provide complete phrase-level analyses on all assignments, the review-quiz element of our cyclic assessment strategy ensured they maintained proficiency with phrase-level forms throughout the course. Moreover, because students encountered regular review and practice online, we felt comfortable using shorter paper assignments than in the past.

21 Murphy (2014, 298).

Reflecting on our Approach

In previous versions of the course, the final-project quality (discussed below) was generally lower, and students demonstrated more difficulty retaining and applying information throughout the semester. We attribute much of the success in this new version of the course to our online, cyclic assessment strategy. Although our experience with the approach was overwhelmingly positive, and we would encourage readers to explore creating repeatable pools of questions within their own LMSs, we also encountered several challenges.

The technological limitations of our LMSs forced us to compromise in several ways. For instance, most LMSs do not feature an easy way for users to input special fonts, so symbols such as scale-degree carats, figured bass, and accidentals require alternatives when students are expected to enter them as text. More elaborate tasks such as creating phrase diagrams or providing detailed harmonic analyses require imaginative quiz questions, and rather than investing too much time into making such questions, we recommend pursuing questions that function as stepping stones toward paper assignments. For instance, rather than looking for a way to get students to draw a phrase diagram in an online quiz, ask instead about the components of the diagram, provide error-detection questions in which students identify a well-formed diagram from among several options, or ask students to apply the correct terminology to an example. After mastering those sorts of questions, students are better prepared to complete and submit phrase diagrams on paper.

Beyond the technological limitations, repeatedly practicing any skill online can quickly become sterile. This issue can become compounded for weaker students who may need more attempts to complete quizzes to reach adequate mastery of a concept. We attempted to combat some of this sterility by including real recordings and score excerpts in addition to questions that were solely text based. While this issue may be emphasized in an online environment, it may also appear to a lesser degree in any course that follows a pattern of events in which assignments are due on consistent days of the week throughout the semester. However, we feel the benefits gained from the online quizzes far outweigh the drawback of sterility.

Perhaps our biggest challenge was the considerable time commitment required to create satisfactory materials. Creating large pools of high-level questions was quite difficult. We recommend starting modestly with small pools and adding additional questions in future years. To justify the time required to create quality pools, consider ways the pool can be used for multiple quizzes and multiple courses to ensure a high

yield from your investment. For instance, we used the pool for the aural cadence quiz, discussed above, eight times throughout the semester. Because aurally identifying cadence locations and types is vital to many tasks in the undergraduate curriculum—to say nothing of its immense practical value—we now utilize that same pool in multiple courses covering phrase, form, and cadence. The online quizzes we made were self-grading and replaced traditional paper-and-pencil quizzes. This allowed us to assign the quizzes an appropriate amount of times to ensure proper internalization without having to worry if it would create an undue grading hardship. Additionally, because students were well prepared, we encountered better paper assignments, thus reducing grading time.

We transferred successful practice-room techniques to the theory classroom by dividing a topic into its component parts using online quizzes, recontextualizing those parts within a homework assignment, and then asking students to review them in online quizzes. In so doing, we helped our students make greater and more sustained progress toward mastery than in previous iterations of our Form and Analysis course. Not only were our students better prepared, but we were able to cover more topics because we removed the need for time-consuming, in-class drilling which we felt undervalued precious class time. We now turn to the final project to demonstrate its long-term structure and the specifics of its implementation.

The Inter-University Final Project

To address the issue of motivation, we took advantage of our collaboration by asking students from our respective institutions to work together. We designed a final project in which each student would be responsible for recording a detailed video analysis of a piece they chose that would be evaluated and critiqued by students from the other instructor's institution. In addition to demonstrating their ability to use the course content, we had three objectives for employing this inter-university approach: (1) to motivate the students to communicate advanced information clearly and effectively with educated strangers, (2) to enable the students to create and share instructional videos online, and (3) to introduce them to common teaching challenges. Not only does the project's peer-learning component create a type of motivation instructors alone cannot replicate, but representing one's institution with quality work stimulated an attitude of occupational pride that is desirable in professional environments.

The project spanned half the semester and included a total of thirteen steps. The

timeline in Example 10 shows a summary of these steps. Throughout the project, students assumed two roles: "teacher" and "evaluator." As the teacher, they created an analytical video presentation and accompanying assignment. They attempted to assess the effectiveness of their video communication by grading that assignment. We paired each teacher with two evaluators from the other university and they corresponded through email. As evaluator, they initially served as students by watching the video presentations and completing the accompanying assignments. Then, they provided direct feedback to the student teacher regarding those materials. Below, we explain the tasks involved with each role in more detail following the steps outlined in Example 10.

Date	Step #	Description	Student Role
Week 9	1	Choose a piece in consultation with instuctor	Teacher
	2	Analyze piece - create draft analysis	
Week 11	3	Bring in draft analysis, share results in class	
	4	Meet with instructor about draft 2	
	5	Make a video lecture using Power Point	
	6	Make assignment and grading key	
Week 14	7	**Send video lecture & assignment to evaluators**	
	8	Watch 2 video lectures, complete assignments	Evaluator
	9	Complete evaluation for each teacher	
Week 15	10	Return all materials to each teacher	
	11	Grade assignments	Teacher
	12	Read & respond to evaluations	
Finals Week	13	Turn in all materials on Blackboard	

Example 10
Final project timeline.

Student as Teacher

The teacher begins by submitting a score and recording of a piece or movement they would like to analyze for the project. We recommended that teachers choose pieces of modest length such that they would be able to discuss the whole work in a video lasting between five and thirty minutes. Though the course content centered around Classic-era instrumental music, we encouraged the students to seek music outside that realm, resulting in the inclusion of other genres including popular song,

musical theater, film music, band music, sacred music, and earlier and later classical music.

Once approved, teachers began analyzing their selections. Their analyses had to address four items: form, harmony, motive, theme, and any surprising or unexpected features. Teachers completed an analytical draft including three items: (1) a multi-level form diagram showing the work's complete phrase-level and large-scale form; (2) a notated catalogue of important motives and themes in the work; and (3) an annotated score including cadences, important key areas, points of hypermetrical interest, and indications of surprising or unexpected features. In class, teachers shared their draft materials with others in small discussion groups for feedback and guidance. Then, we scheduled required meetings with each teacher to set a firm deadline for completing the analysis and to help resolve challenges with any aspect of the project including technological issues. Although time consuming, this step was essential for keeping them on schedule and for restoring their confidence regarding successful project completion.[22]

When teachers were satisfied with the quality of their analyses, they began to create their video lectures. We anticipated that this portion of the project would provide a significant learning opportunity for those who had not been exposed to creating video content. To limit the variety of technology-related issues, we required students to create their video lectures in PowerPoint. PowerPoint allows the presenter to record their voice through the computer's microphone while they progress through the slides. To further help lower the barrier of access for technologically inexperienced students, we created a sample video with solutions to challenges we encountered from completing the project ourselves, including a discussion of issues regarding quality and audio-video synchronization.

Example 11 shows how we required teachers to organize their videos to ensure they addressed the analytical points we wished to see. Part 1 of the video acted as an orientation and introduction to the work in which they discussed its form, along with important motives and themes. In Part 2, we asked students to begin with phrase-level form by choosing one essentially normative Caplin theme type and one essentially non-normative Caplin theme type to discuss. For the normal theme type, we asked them to describe how its constituent parts aligned with the idealized norm discussed and elaborated upon during the course. For the non-normative theme type, we asked

22 For many students, this was their first attempt at a substantial large-scale analysis. This meant many of them lacked confidence about the quality of their results and they were often unsure about when they were "finished" with the analytical process.

them to consider which phrase-level formal functions it most closely resembled and to address ways in which it deviated from expected norms. Next, teachers described how the composer manipulated and deployed the important motives and themes throughout the work. Finally, we asked teachers to discuss at least one remarkable, unusual, or surprising harmonic event in the work.

At the end of their video, we asked students to include a critical discussion of their work. The purpose of this portion was to encourage them to engage with the work by drawing on their analyses to answer any two of the four questions listed under "Part

Make a video lecture using PowerPoint

I. Your lecture video must:
   a. Use PowerPoint
   b. Include legible annotated score excerpts
   c. Include legible form diagrams
   d. Include audio examples
      i. You may play as many excerpts as necessary
      ii. The entire recording may only be played once
   e. Involve you narrating (with your voice) as you display your slides
   f. Be more than five minutes and less than thirty, not including playing the entire recording of your piece once through
   g. Be published to YouTube

II. The video lecture should be organized according to the following format:
   Part 1: Overview of the piece
      i. Large-scale form
      ii. Phrase-level form of each section
      iii. Overview of the main motives in the piece
      iv. Overall harmonic motion of each section
   Part 2: Detailed analysis
      i. Phrase-level form:
         1. Choose an essentially normative example of a Caplin theme type and explain how each of its constituent parts aligns with Caplin's model
         2. Choose an essentially non-normative example of a Caplin theme type, explain how it doesn't align with Caplin' s model, and discuss possible interpretations
      ii. Themes and Motives
         1. Describe how the important themes and motives are deployed and manipulated throughout the piece
      iii. Harmony
         1. Discuss at least one remarkable, unusual, or surprising harmonic event
   Part 3: Critical assessment
      i. Engage with at least two of the following:
         1. What performance recommendations would you make after concluding your analysis?
         2. What did you like or dislike about this piece? Why?
         3. What was the most striking feature of this piece? Why?
         4. Compare at least two recordings in relation to your analysis

III. A sample video lecture is available on Blackboard. (see "Final Project Materials ")

Example 11
Required video organization.

3: Critical Assessment" in Example 11. We view Part 3 as a crucial element in helping students connect theory to practice, so we emphasized that these were essential questions to deter the tendency to neglect the critical-thinking aspect of the project.

Before submission, teachers created an accompanying assignment and grading key relating to the video's content. These assignments had three main goals: (1) to encourage the teacher to reflect upon whether or not their content was presented effectively, (2) to provide the teacher with a tangible measure of what the evaluator understood, and (3) to expose them to the multitude of decisions required of making assignments and how to weigh the value of the questions they created.[23]

Student as Evaluator

When their videos and assignments were completed, students uploaded the videos to YouTube and sent their evaluators and professors hyperlinks to the videos and copies of their assignments. Each teacher now became an evaluator. Evaluators were responsible for watching two videos, completing the associated assignments, and completing an evaluation form (Appendix 3) for each video. Once complete, they returned the assignments and evaluations to their teachers.

Student as Teacher Once More

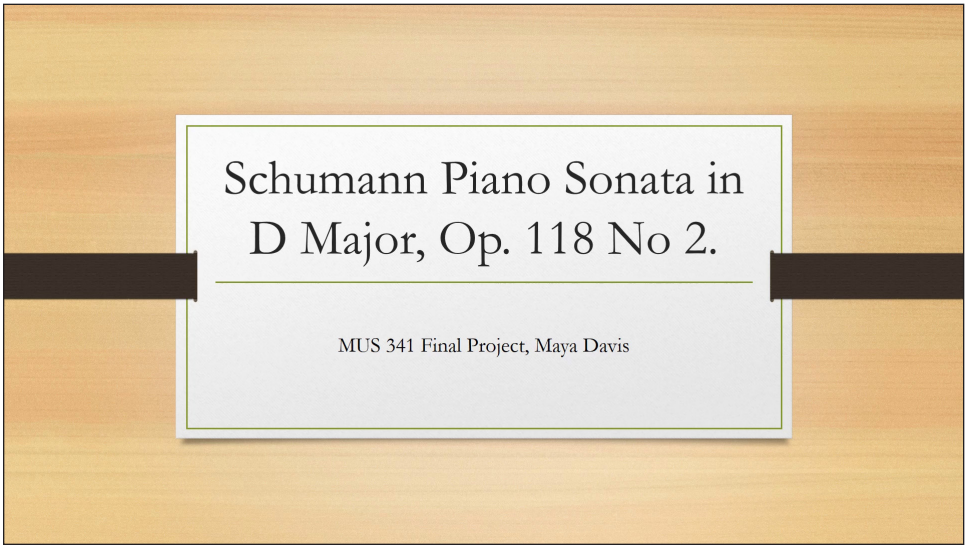
The final, and possibly most valuable, steps involved the teachers grading the assignments and responding to their evaluators' feedback. In a 1–2 page essay, teachers reflected upon their successes and deficiencies by considering their evaluators' comments, suggesting paths for future improvement, commenting on triumphs, and considering the relationship between their intended communication and what the graded assignments and peer evaluations indicated. To complete the project, teachers submitted all materials to the instructor for evaluation.

Sample Student Videos

Two teachers' videos are given in Examples 12 and 13. Maya Davis (Example 12)—a junior Vocal Performance major in Fall 2016 at James Madison University—chose Robert Schumann's Piano Sonata in D Major, Op. 118, No. 2 for her final project. Her video, though more detailed and lengthier than most others in our courses, exemplifies the kinds of analytical insights and engagement with terminology displayed by the

23 Maya's sample assignment and key that accompany her video appear in Appendix 4.

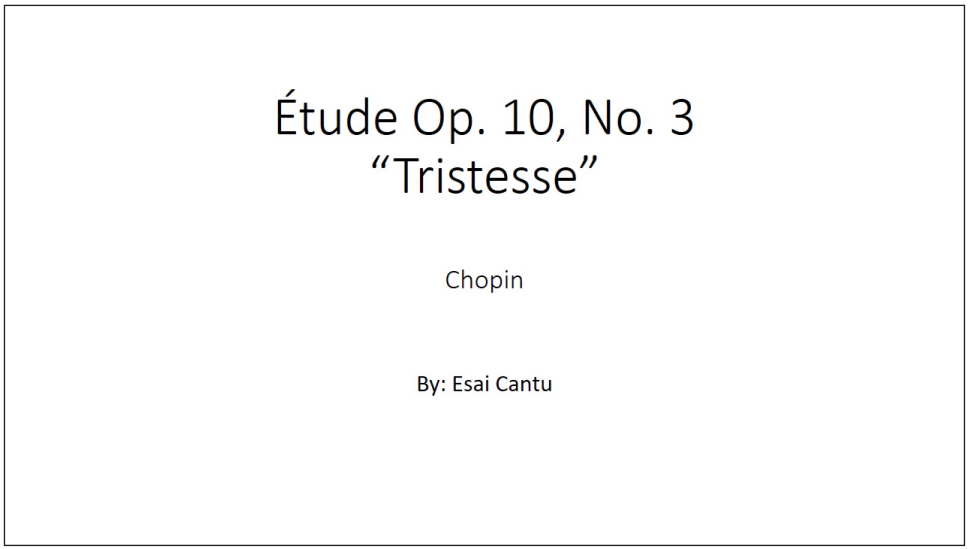
majority of students. At the beginning of her talk (5:32), for instance, she identifies Schumann's primary theme as a sentence, but notes its continuation is longer than expected given the four-measure model established by the presentation. She identifies the technique Schumann employs to expand the continuation as "stretching," a term we use to describe units that are internally lengthened by a variety of procedures. After playing a recording of the primary theme (6:47), she describes her cadential expectations noting that the phrase ends with an IAC, which is perhaps a less-common option than a PAC—a bias resulting from Caplin's text focusing solely on earlier, Classic-era music. Finally, Maya's critical engagement with the piece is evident when she discusses performance recommendations for the pianist (27:53). For instance, she identifies an interpretational challenge in the secondary theme: it features a prevalent sixteenth-note motive associated with the primary theme, which makes it challenging to distinguish between the two themes. To help, she suggests de-emphasizing the primary-theme's motive so the new, legato melody will be perceived as prominent.



Example 12
Final project submitted by Maya Davis, a junior vocal performance major at James Madison University in Fall 2016 (click the image above to view video).

Esai Cantú (Example 13), a junior Music Composition major in Fall 2016 at the University of Texas at El Paso, chose Chopin's Etude in E Major, Op. 10, No. 3 for his project. He demonstrates fluency with vocabulary and stylistic convention

by describing the opening eight-measure theme as a "non-normative antecedent + continuation" due to its division into two unequal parts (five and three measures) instead of the more normative equal division (two four-measure parts) (9:20). Like Maya, Esai also decided to provide performance recommendations for the critical-assessment portion of the video. He encourages the performer to consider that the only cadence in the B section is the one that elides with the return of A. He recommends a subtle emphasis on this elision to highlight the long-awaited cadential resolution, but he warns that it should not overshadow the clear return of A material (15:46). He concludes by juxtaposing the A section's calming affect with that of its entirely irregular phrase structure (16:33).



Example 13
Final project submitted by Esai Cantú, a music composition major at the University of Texas at El Paso in Fall 2016 (click the image above to view video).

Reflecting on the Final Project

A common strategy in upper-level undergraduate music theory courses is to assign a final project that involves a presentation, a paper, or both. Though the quality of such projects often varies—as it did with ours—we felt our approach yielded fewer poor-quality projects in general. We believe the higher quality emanated from the reiterative nature of the course and because students could rework their presentation

materials until satisfied, much as one would in a professional setting. Students also reported being nervous regarding strangers viewing their work, suggesting that their desire for the respect of their peers was a key motivator driving them to produce high-quality work. In addition to increased quality, the video format also allowed us to gain more instructional time during the semester than if we had planned for several days or even weeks of in-class final presentations. This also allowed students to control how much time they needed to present their material.

Only a few course evaluations mentioned the final project specifically. Of those that did, the most common remark was that the project and course were a lot of work. Several strategies might help address this comment. Spreading the work more consistently throughout the semester would make the project's looming deadline less daunting. Such a distribution poses its own set of challenges, however, because students tended to rely on content from later in the course to be able to complete their analyses. Another option is to create some early assignments that ask students to experiment with video creation in PowerPoint because many reported it involved a steep learning curve. We were surprised to learn that many of our students had rarely used PowerPoint in the past, if ever.[24]

In general, students spent more time on their overview of the piece (Part 1) than on their critical assessment (Part 3), though we had intended the opposite balance. While we provided an example of the idealized proportions in a sample final project created at the beginning of the semester, we did not explicitly suggest how time should be distributed. In future iterations of the course, we would suggest percentages of time for each section of the required outline (Example 11).

We found it rewarding to pair students from different institutions and we highly recommend that approach. The expectation of communicating with students under a different instructor provided a notable degree of motivation for our students, which was one of the principle goals for designing this inter-university collaborative project. It is, however, easy to modify the project's design to avoid partnering with another institution. We have run the course in that manner and found we could approximate, but not duplicate, the "stranger effect" by carefully observing existing student relationships and attempting to make new connections among the students. We also suggest expanding the project to utilize evaluators from outside the class and perhaps from another department. We believe doing so will provide a similar form

24 If PowerPoint seems too complicated for your tastes, we suggest allowing students record a relatively polished presentation using the video camera on their phone. Though, this alternative option introduces new issues like microphone quality, displaying visuals, and playing audio examples.

of motivation, and using non-musicians as evaluators could provide a worthwhile challenge for students.

Additionally, the project's design can be easily adapted for shorter mid-semester assignments. For example, instructors might ask their students to select a short passage from their lesson repertoire that poses challenges for performance or interpretation. Students could be asked to create a video analysis of the passage that includes a discussion of ways to overcome the challenge and a performance of the passage. By inviting students to post these videos on social media, an instructor might instill a similar sense of motivation like the one we cultivated in our version of the project.

Conclusion

We noted that student engagement had been relatively consistent throughout the course—instead of decreasing like we were used to—and that students demonstrated superior retention. Our successes caused us to adapt these strategies for use in all of our core theory and aural-skills courses. The result has likewise been increased preparedness and retention, coupled with reduced in-class drilling and grading demands. This strategy has proven particularly effective for tasks or topics that rely on a student's ability to use or recall multiple pieces of information. A quiz that asks students, for example, to analyze specific tendency tones in a four-part chorale and indicate the typical resolution by specifying the location, voice part, and letter names involved, helps the student to prepare for more nuanced (and often more interesting) discussions of voice-leading during class time. These discussions are now more meaningful and efficient because students can answer and build upon foundational questions with less cognitive load.

Our experience with this course design has also resulted in an increase in exploring peer learning. We now devote in-class time for students to begin certain assignments in small groups, particularly when topics are first being introduced. This has resulted in some students developing tutoring and teaching skills while other, more hesitant students, begin to ask questions within their group that they may have been reluctant to ask in front of the entire class. We have also explored peer learning between different departments in our upper-level courses. For example, students in an undergraduate seminar completed a final project with visual art majors in a fibers course where the musicians collaborated with the artists to weave fabric designs that represented details of the music-students' analyses. This allowed students to develop

communication skills about their work but required them to engage with the public music-theory practice of speaking with non-specialists about intricate topics.

Although there currently exist several pre-packaged quiz resources that can be coordinated with common LMS environments, we find their rigidity frustrating, especially for more advanced concepts.[25] Developing a body of online quiz materials enables instructors to customize learning to their specifications while allowing them to still take advantage of the online space. We suggest readers explore ways to use their LMSs to solve problems that they are particularly concerned with where paper assignments have not yielded satisfactory results. For example, instead of growing more and more frustrated with students for making voice-leading errors like unresolved leading tones, focus on designing a repeatable quiz that targets that problem in particular and prevents students from proceeding until the concept has been internalized. We also recommend that readers attempt to create high-level materials that are not commercially available to enhance learning when covering more complex topics in upper-level theory courses.

We have only begun to explore the potential benefits of inter-university collaborations in music-theory courses. In our iteration, we were most inspired by watching students think more like adult musicians when preparing their videos for unknown peers from another university. They wanted to represent themselves and their institutions well and they worked harder to achieve that goal. Increasing student motivation is an ongoing but worthy mission, one whose success leads to increased student engagement and performance.

25 One particularly well-constructed example is Norton's InQuizitive program that is available with several popular theory textbooks. We have, and we continue, to use InQuizitive in our core theory classes, but we also find it useful to supplement their materials with our own quizzes. We tend not to employ InQuizitive in upper-level music theory courses whose topics are more specialized.

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FORM AND ANALYSIS NAME_____

Optional Reading Guide: Hybrid Themes (Caplin, Chapter 4)

Instructions:

- Fill in the blanks below using the text from Chapter 4 of Caplin's book.
- **Hint:** Fill-in-the-blank questions are typically modified quotes from the text.

1. Some themes are _____ and must be treated on a completely _____ basis. Many other [themes] resemble in some ways the two fundamental theme types: these are _____ themes.

The Basics (pages 99-104):

1. What does Caplin call the theme type represented by Example 4.1?

2. Three hybrid types other than the one in Ex. 4.1 are built using combinations of _____, _____, _____, and _____ phrase functions.
   a. The initiating function of _____ is not used in hybrid themes. Instead, a new phrase function, the _____ _____ _____, finds a place at the beginning of two of the hybrid theme types.
3. List the four main types of hybrids:
   a.
   b.
   c.
   d.
4. How does Caplin differentiate between the Antecedent + Continuation hybrid and the Antecedent + Cadential hybrid?

5. How does a compound basic idea differ from an antecedent?

6. The hybrid type that most closely resembles a sentence is the:_____

OPTIONAL READING GUIDE: HYBRID THEMES 1

Appendix 1
Sample Reading Guide on Hybrid Theme Types.

FORM AND ANALYSIS NAME_____

7. The hybrid type that most closely resembles a period is the: _____
8. Which hybrid type occurs frequently in the repertory (p. 101–102)?
9. Which hybrid type occurs infrequently (p. 103)?
10. Which phrase functions belong to which temporal categories? List them in the chart below.

Initiating	
Medial	
Concluding	

11. We can see that the conventional theme types (_____, _____, _____) bring a syntactically appropriate combination of functions; that is, the logical ordering of _____ of beginning, being-in-the-middle, and ending are _____ by all of these themes.
12. Provide an example of a nonsyntactical or illogical combination of phrase functions:

Two Case Studies and Example 4.15 (p. 115):

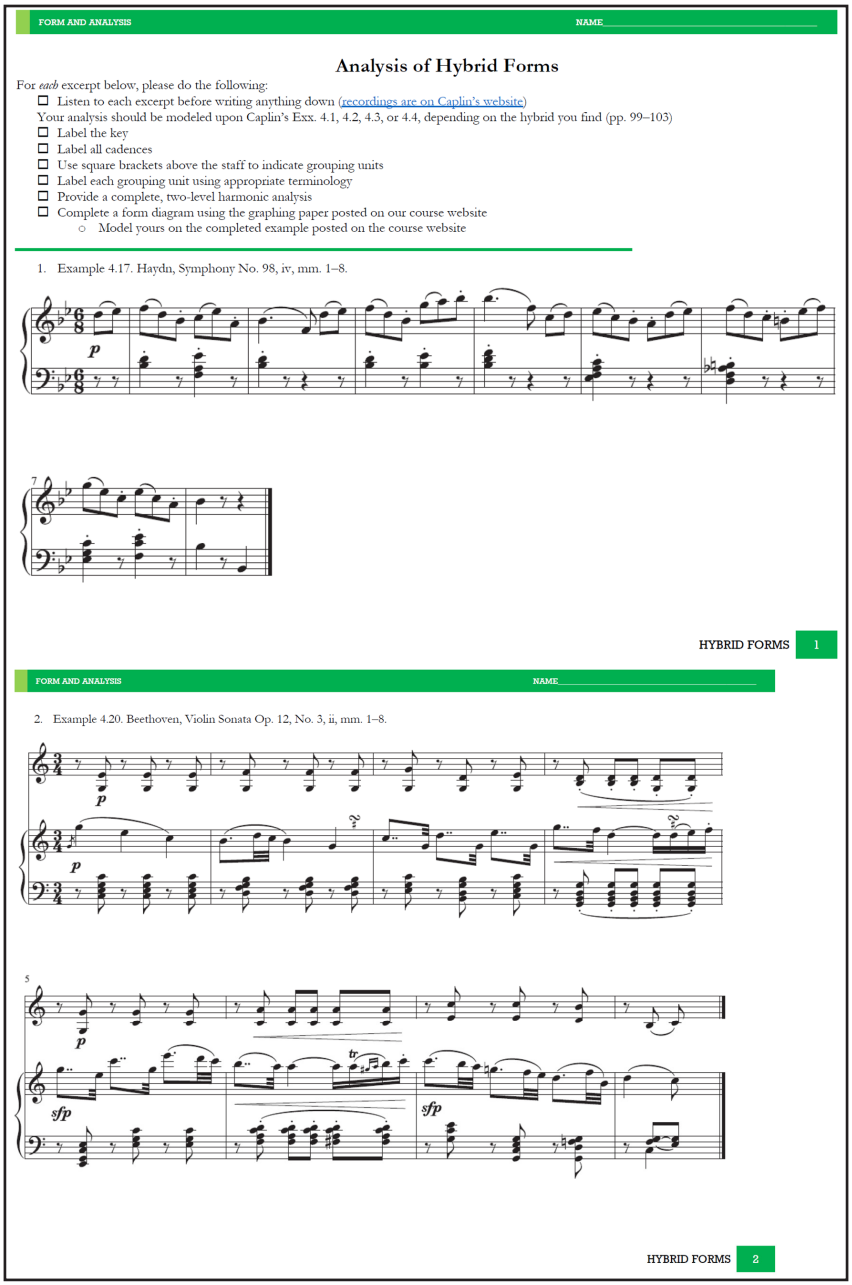
1. Do the four main hybrid types cover all possible combinations of sentence and period elements?
2. Example 4.15 seems like a standard 8-m. _____, but if one looks closer, one finds that there are characteristics of a _____ phrase in the opening four measures.
3. Does Caplin's theory force one to make a choice between the two phrase-functions presented in question 2?

Analytical complexity (p. 117):

1. What is the danger Caplin warns us about in this paragraph?

OPTIONAL READING GUIDE: HYBRID THEMES 2

Appendix 1 (cont'd)
Sample Reading Guide on Hybrid Theme Types.



FORM AND ANALYSIS NAME_____

Analysis of Hybrid Forms

For *each* excerpt below, please do the following:

- ☐ Listen to each excerpt before writing anything down (recordings are on Caplin's website)
  Your analysis should be modeled upon Caplin's Exx. 4.1, 4.2, 4.3, or 4.4, depending on the hybrid you find (pp. 99–103)
- ☐ Label the key
- ☐ Label all cadences
- ☐ Use square brackets above the staff to indicate grouping units
- ☐ Label each grouping unit using appropriate terminology
- ☐ Provide a complete, two-level harmonic analysis
- ☐ Complete a form diagram using the graphing paper posted on our course website
  - ○ Model yours on the completed example posted on the course website

1. Example 4.17. Haydn, Symphony No. 98, iv, mm. 1–8.

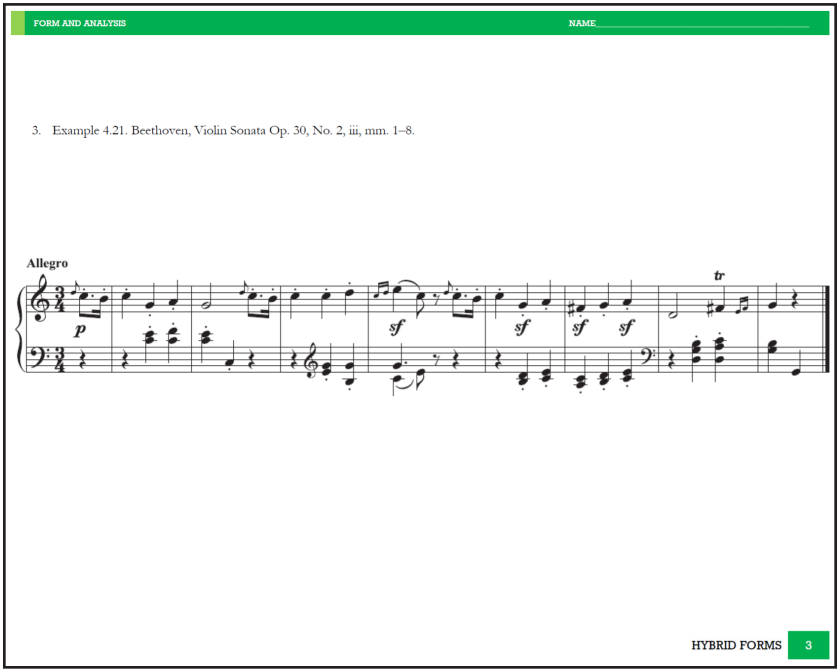
HYBRID FORMS 1

FORM AND ANALYSIS NAME_____

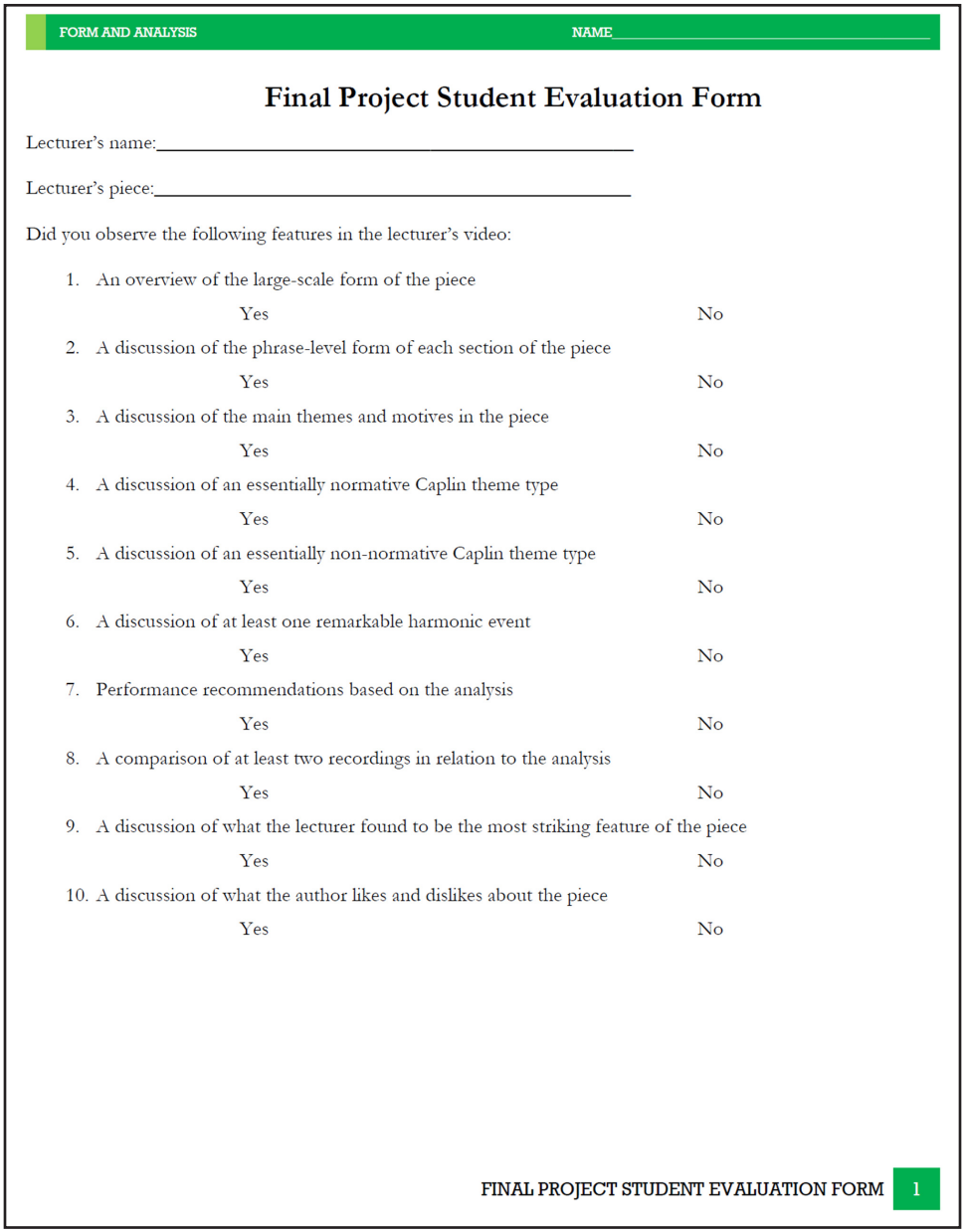
2. Example 4.20. Beethoven, Violin Sonata Op. 12, No. 3, ii, mm. 1–8.

HYBRID FORMS 2

Appendix 2
Sample Homework Assignment.



Appendix 2 (cont'd)
Sample Homework Assignment.



FORM AND ANALYSIS NAME_____

Final Project Student Evaluation Form

Lecturer's name:_____

Lecturer's piece:_____

Did you observe the following features in the lecturer's video:

1. An overview of the large-scale form of the piece
   Yes No
2. A discussion of the phrase-level form of each section of the piece
   Yes No
3. A discussion of the main themes and motives in the piece
   Yes No
4. A discussion of an essentially normative Caplin theme type
   Yes No
5. A discussion of an essentially non-normative Caplin theme type
   Yes No
6. A discussion of at least one remarkable harmonic event
   Yes No
7. Performance recommendations based on the analysis
   Yes No
8. A comparison of at least two recordings in relation to the analysis
   Yes No
9. A discussion of what the lecturer found to be the most striking feature of the piece
   Yes No
10. A discussion of what the author likes and dislikes about the piece
    Yes No

FINAL PROJECT STUDENT EVALUATION FORM 1

Appendix 3
Student Evaluation Form.

FORM AND ANALYSIS **NAME**_____

Please rate the following characteristics of the video lecture on a scale from 1–10 where 10 is excellent and 1 is poor.

1. The degree to which the lecturer integrated audio examples in the presentation

Poor				Neutral					Excellent
1	2	3	4	5	6	7	8	9	10

2. The quality of the lecturer's examples (score excerpts, diagrams, etc.)

Poor				Neutral					Excellent
1	2	3	4	5	6	7	8	9	10

3. The timing of the video lecture (consider: did it move too fast? Too slow? Just right?)

Poor				Neutral					Excellent
1	2	3	4	5	6	7	8	9	10

4. The degree to which one could clearly hear the speaker's voice

Poor				Neutral					Excellent
1	2	3	4	5	6	7	8	9	10

5. The level of detail covered during the analysis

Poor				Neutral					Excellent
1	2	3	4	5	6	7	8	9	10

6. The clarity with which the lecturer presented their insights

Poor				Neutral					Excellent
1	2	3	4	5	6	7	8	9	10

7. The quality of the lecturer's insights

Poor				Neutral					Excellent
1	2	3	4	5	6	7	8	9	10

FINAL PROJECT STUDENT EVALUATION FORM 2

Appendix 3 (cont'd)
Student Evaluation Form.

FORM AND ANALYSIS NAME_____

Please respond to the following questions or statements regarding the video lecture:

1. What did you like best about this video lecture?

2. What aspect of the video lecture could the lecturer improve if they were to produce another video?

3. Identify and discuss one thing you learned from the video lecture that you did not know before.

4. Were there any analytical points with which you disagreed or were there places where an alternative interpretation might exist? If so, please indicate in what way you disagree or what the alternative interpretation might be.

5. Were there any points you felt could have been expanded or contracted in the video? If so, please explain.

6. Do you have any additional comments/questions/suggestions for the lecturer? If so, please discuss.

FINAL PROJECT STUDENT EVALUATION FORM 3

Appendix 3 (cont'd)
Student Evaluation Form.

Form and Analysis
Final Project Assignment

Lecturer's name: _____

Lecturer's piece: _____ Total points: ___/60

1. What is the overall form of this piece? (2)

2. What theme type is used in the primary theme? (2)

3. To what key does the transition modulate? (2)

4. What two features of the medial caesura (MC) clarify that it is present? (4)

5. What two theme types are present in the secondary theme? (4)

6. What is the name of the short section that follows the EEC in the exposition? (2)

7. Does the development utilize pre-core/core technique? Why or why not? (4)

8. Which two development keys are present? (4)

9. Briefly describe each of the three main motives in this piece. (6)

10. Which two harmonies are stretched in the primary theme? (4)

Appendix 4
Sample Student Assignment and Grading Key.

Form and Analysis
Final Project Assignment

11. What is present in the first theme type of the secondary theme that makes it slightly unconventional? (4)

12. Name one possible interpretation of this unconventional element. (2)

13. In what major section of the piece does a similarly unconventional element occur? (2)

14. Fill in the blank: The second major motive in this piece is used most often in _____ and in _____ material as a means of _____ energy and using _____ harmonic motion to drive toward a _____. (4)

15. In what section of the piece is the third major motive found? (2)

16. What is surprising about the MC? (2)

17. What technique is used to evade a cadence in the second phrase of the secondary theme? (2)

18. List two performance recommendations discussed in the presentation. (4)

19. List two striking features of the piece discussed in the presentation. (4)

Appendix 4 (cont'd)
Sample Student Assignment and Grading Key.

Form and Analysis
Final Project Assignment, Answer Key

Lecturer's name: _____

Lecturer's piece: _____ Total points: _____/60

1. What is the overall form of this piece? (2)

   Sonata form

2. What theme type is used in the primary theme? (2)

   Sentence

3. To what key does the transition modulate? (2)

   A major (V)

4. What two features of the medial caesura (MC) clarify that it is present? (4)

   The word *abnehmend* (decreasing) and the dominant lock in the bass.

5. What two theme types are present in the secondary theme? (4)

   CBI + continuation and sentence.

6. What is the name of the short section that follows the EEC in the exposition? (2)

   Codetta

7. Does the development utilize pre-core/core technique? Why or why not? (4)

   No because there is no pre-core present, only a core that is repeated in sequence.

8. Which two development keys are present? (4)

   E minor (ii) and a minor (v).

9. Briefly describe each of the three main motives in this piece. (6)

   The first motive consists of a quarter/sixteenth tie followed by three sixteenths, which form a double neighbor figure. The second motive consists of a dotted quarter note followed by an ascending or descending eighth note scale. The third motive consists of a legato melody made up of quarter and half notes in varying contours.

10. Which two harmonies are stretched in the primary theme? (4)

    Pre-dominant (V7/V) and dominant (V) harmonies.

Appendix 4 (cont'd)
Sample Student Assignment and Grading Key.

Form and Analysis
Final Project Assignment, Answer Key

11. What is present in the first theme type of the secondary theme that makes it slightly unconventional? (4)

    A two-measure unit that seems to evoke the contrasting idea that does not use fragmentation, increased surface rhythm, or accelerated harmonic motion.

12. Name one possible interpretation of this unconventional element. (2)

    Schumann sought to further enforce the presence of secondary theme material/He wanted to keep the legato texture of the secondary melody present in order to create juxtaposition with the rather frantic nature of the piece's main, sixteenth-note motive/The melody of this 2-measure unit leads into the melody of the cadential idea and serves to drive the phrase to its cadence.

13. In what major section of the piece does a similarly unconventional element occur? (2)

    The development.

14. Fill in the blank: The second major motive in this piece is used most often in fragmentation and in transitional material as a means of increasing energy and using rapid harmonic motion to drive toward a cadence. (4)

15. In what section of the piece is the third major motive found? (2)

    The secondary theme.

16. What is surprising about the MC? (2)

    It contains harmonic shifts.

17. What technique is used to evade a cadence in the second phrase of the secondary theme? (2)

    One more time.

18. List two performance recommendations discussed in the presentation. (4)

    Use this awareness of the piece's three main motives to accentuate them when appropriate. Make a decision about your own interpretation of the surprising and unusual features of this piece.

19. List two striking features of the piece discussed in the presentation. (4)

    The relentless use of the sixteenth-note motive. The evading of cadences.

Appendix 4 (cont'd)
Sample Student Assignment and Grading Key.