Fundamentals of Music Theory
Blending for Fluency and Interdisciplinary Learning

*Blended Learning in the Liberal Arts Conference*

Christopher White (UMass) & Luke Phelan (Five Colleges)

*Supported by the Teagle Foundation*
Please write a sentence or two in response to the following questions:

1. How would you define “music”?

2. How does music communicate emotion?

3. What’s your favorite piece of music and why?

(Oh, and register for our demo course)
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Today

• Overview

• Goals & Course Description

• Mock Lesson

  • Begin in “Lecture,” which turns to our blended materials, which then returns to “classroom” discussion

• Assessment
Goals

• Increase efficiency of and provide immediate feedback to students’ learning of basic musical skills

• Shift classroom focus toward broader cultural/social questions surrounding musical theory and practice
• **Increase efficiency of and provide immediate feedback to students’ learning of basic musical skills**

• Online tools that allow students to practice particular skills to a point of fluency
  
  • Shows them what they get wrong; provides hints to help them troubleshoot
  
  • Online quizzes to validate this fluency
  
  • Helps me and them know how they are doing
• Shift classroom focus toward broader cultural/social questions surrounding music theory and practice

• Less time on developing fluency in the classroom means more time for higher-level work

• Online homework also includes short writing responses/prompts to initiate and deepen classroom discussion
And so

• Increase efficiency of and provide immediate feedback to students’ learning of basic musical skills
  • Makes something we used to do better

• Shift classroom focus toward broader cultural/social questions surrounding musical theory and practice
  • Adds new things that we didn’t do before
How we quantify / qualify these goals & learning outcomes

• “Do what we used to do just better”:
  • Will grades be higher?

• “Doing a new thing: open up time for developing more musical sophistication”
  • Will musical sophistication increase?
  • Specifics to follow the mock lesson!
Course Details

Fundamentals of Music Theory

- 80 student cap
- No prerequisite
- Not within the music-major sequence
- Only such course within the 5-College Consortium
- Provides a “Quantitative” General Education requirement for UMass students

- Comparable classes include Introduction to Psychology, Statistics 101, Introduction to Computer Programming
Notating Pitch

a mock lesson
Notating Pitch

a mock lesson

that points you toward internet-facing tools

after which we’ll come back together for discussion
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(and then close with some assessments of how this all worked out)
Staff notation

Writing note heads on a series of lines and spaces

Each move between a line to its adjacent space (or a space to its adjacent line) is a step (aka 2nd)
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Each move between a line to its adjacent space (or a space to its adjacent line) is a step (aka 2nd)
We use clefs to show exactly what pitch corresponds to each line and space

- *Clefs* show us where a particular letter name appears on a staff
  - “This line is an F!”
  - “This line is a C!”
- Because once you know where one letter is, you can extrapolate the whole letter system onto your staff
The earliest notation put letters next to lines.
Clefs

• And from this developed clefs that show you where C is, where F is, where G is….

• But the most prominent ones ended up being the ones that show you where F and G are
Early G and F clefs
The develop into...
Early G and F clefs

In principle, you can put these wherever you want on the staff, but these positions become VERY standardized after the 1700s.
Common names:

- G clef with the G on the 2nd line = Treble Clef
- F clef with F on the 4th line = Bass Clef
Mnemonics
Mnemonics

Every Good Boy Does Fine

All Cars Eat Gas Good Burritos Don't Fall Apart
Mnemonics

- **FACE E**
  - Every Good Boy Does Fine
  - All Cars Eat Gas
  - Good Burritos Don't Fall Apart

- **Cows Eat Grass**

- **Every Good Bird Does Fly**

- **Elephants Get Big Dirty Feet**
And you can go above and below the staff by hanging off or adding *Ledger Lines*
And you can go above and below the staff by hanging off or adding **Ledger Lines**
And finally
Treble and bass clefs actually capture pitches in different octaves
How do we know WHICH octave we’re talking about?
How do we know WHICH octave we’re talking about?

By number designations!
We designate the octave of the pitch by using a number after the letter
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We designate the octave of the pitch by using a number after the letter.
You have an example with all the C’s on your handout
Let’s name these pitches together
Before we split up into groups, let’s consider where this all came from
Before the 12th century, most pitch notation in Western Europe were these squiggles that just showed the basic contour of a melody.

- This was called “in campo aperto” or “open field” notation.
Aubilatae deo univertera, re ubila

In platum dumte, nominiaus

Venera audite a. narrabe nobomna

Quanta festa dominus a

Mes alle

Lucas.
alleluia mal le

Exultate justi, domino. Se cu lorum amen.

Et pleatur osmeum lau de tu, allele tum in lae, ut pos

Sic canter, realle tum in gaude bunt la bi a

Me a dum canteruero tum bidelle tum alle

Amen
But the monks are avid readers, and are aware of an old old old old Greek practice of naming pitches by letters.
Note that some monk came in and wrote some letters under the contour scribbles.
Note that some monk came in and wrote some letters under the contour scribbles.
Two problems

• Contour is imprecise

• Adding letters can get hard to read
So, some monks starting writing a reference line
Guido of Arezzo

- Guido basically invents modern musical notation in the early 11th century
- He invents “Staff notation” and the practice of using clefs
- This takes off, and by the 12 century, almost everyone is using this type of music notation
And it looks like this
And it looks like this
As is everything we learn about in this class, staff notation arises from medieval monks trying to solve a problem.

Your discussion questions ask you to think about the problems staff notation was trying to solve.
Discussion Questions

• Please think of at least two reasons why early Middle-Ages (“early Medieval”) Western European cultures did not need precise musical notation

• What “problem” was staff notation trying to solve?

• What sorts of societal or cultural changes might have been happening around the 11th and 12th centuries to make staff notation so immediately popular?

• In American culture, the percent of the population who can read music peaked in the early 20th century and has been declining ever since (Taruskin 2009). Why do you think this is? Is it because there are aspects of our culture that are similar to that of the Middle Ages? Is it because we are developing some new/novel societal characteristics? In other words, does this trend arise from society regressing or progressing? Or neither?
Now, let’s drill!

Please divide into groups
(Perhaps based on your musical background?)
Now, let’s drill!

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(perhaps based on your musical background?)

Homework 4 Practice will help you gain fluency

Begin Homework 4 when you are ready to test your fluency

(And you can peruse the other homeworks, practices, and the corresponding unit readings!)
Discussion
How we quantify / qualify learning outcomes

• “Do what we used to do just better”:
  • Will grades be higher?

• “Doing a new thing: open up time for developing more musical sophistication”
  • Will musical sophistication increase?
  • Apply a rubric to the questions you first answered
  • The Questionnaire and Rubric are in the GoogleDrive folder
Grades

• Compare to 5 other previous semester this course taught (myself and three other teachers)

• Higher grades than average, but not statistically significant (according to one-sided $t$-tests)

• But, no D’s or F’s

  • This is very statistically significant according to two-sided $t$-tests ($p<.01$) when compared to number of D’s and F’s (pooled) in other semesters

  • Due to both more drops and (perhaps) a better/consistently prepared student body
The questions

1. How would you define "music"?

2. How confident are you in your answer to #1?
   1 2 3 4 5 6 7 8 9 10

3. How does music communicate emotion?

4. How confident are you in your answer to #3?
   1 2 3 4 5 6 7 8 9 10

5. What's your favorite piece of music and why?
The rubric
<table>
<thead>
<tr>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Cause and effect structure</td>
</tr>
<tr>
<td>2. Shows awareness of musical values are culturally situated</td>
</tr>
<tr>
<td>3. Technical vocabulary</td>
</tr>
<tr>
<td>4. Awareness of alternate viewpoints</td>
</tr>
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</table>
Let’s grade some!
Plans Going Forward

• Add more bells and whistles to our current tools

• “Flip” some lectures by presenting basic material and concepts via video

• Use in other classes

  • Standardizing incoming students’ musical fluency is a huge struggle in virtually all music departments

• Present some more sophisticated musical concepts using internet-facing tools

  • E.g. Have tools to walk students through writing their own music by representing chord-progression and melodic norms
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- Present some more sophisticated musical concepts using internet-facing tools
  - E.g. Have tools to walk students through writing their own music by representing chord-progression and melodic norms
Thanks!

Questions?