# A Proposal for the Inclusion of Jazz Theory Topics in the Undergraduate Music Theory Curriculum

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# Abstract

The demands of the twenty-first century require musicians to be more stylistically versatile since there are more opportunities for performance when musicians are familiar with not only classical but also jazz and popular music. Understanding the theory behind jazz and pop styles will help prepare the musicians for these opportunities. Since all music students take music theory, it is in the students' best interest for teachers of theory to include jazz theory topics in the classical music theory curriculum. The purpose of this thesis is to propose the inclusion of jazz theory topics in the undergraduate music theory curriculum. To show how jazz theory can be incorporated into the theory curriculum, this thesis provides an example section of a theory textbook on the topic of chord-scale theory.

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# Chapter 1

## Introduction and General Information

The demands of the twenty-first century require musicians to be more stylistically versatile, specifically in jazz, commercial, and pop music. Musicians are asked to perform in many different styles of music. Professional classical performers may encounter jazz, commercial, and pop styles in any concert. Teachers are asked to instruct in many styles. School music teachers may be required to teach a jazz band or combo. Private music instructors may be asked by students to teach them pieces in jazz, commercial, and pop styles. Colleges and universities seek to employ individuals who can teach jazz as well as classical styles in the private studio. To play in and teach these styles, it would greatly benefit performers and teachers if they are familiar with jazz theory. Pop and commercial music use much of the same theory as jazz theory. Since all music students take classical music theory, jazz theory topics should be included in the music theory curriculum to ensure all students understand jazz theory. The purpose of this thesis is to propose the inclusion of specific jazz theory topics in the undergraduate music theory curriculum, and to provide an example textbook section on a jazz theory topic, specifically chord-scale theory.

In Chapter 2, background literature is discussed that addresses the importance of jazz theory knowledge, demonstrates the trend of including jazz theory in the undergraduate music theory curriculum, and shows the priority of jazz topics present in music education courses. This chapter also includes the results of a survey intended to

discover what jazz topics, if any, are included in the music theory and music education curricula. Finally, Chapter 2 reviews several music theory textbooks looking specifically at the jazz theory topics they include.

In Chapter 3, I present an example section of a theory text that introduces the jazz topic of chord-scale theory. In jazz, *chord-scale theory* is the method of associating specific scales and modes to chord types. Chord-scale theory is important to jazz performers since this method is used in improvisation. This example chapter includes an explanation of concepts and important terms, as well as providing self-tests for testing student comprehension.

Chapter 4 presents a summary of the findings in this thesis and a discussion of which jazz theory topics to include in the undergraduate music theory curriculum and how these topics could be incorporated into the curriculum.

# Chapter 2

# Background Material

The goal of this thesis is to propose a curriculum for the coverage of jazz topics in music theory classes at the university level and to present an example chapter of a textbook on a jazz topic. Some relevant research already exists in the areas of music theory pedagogy, jazz in music education curricula, and jazz education in secondary schools.

## *Literature Review*

Music theory pedagogues White (2002) and Rogers (2004) provide ideas about the teaching of college music theory in their books on music theory pedagogy. These books are widely used in graduate theory pedagogy courses and by teachers in the design of undergraduate music theory curricula. White discusses many common music theory skills typically covered in the undergraduate music theory sequence such as aural, keyboard, and writing skills, along with analytical and theoretical concepts. Rogers discusses most of the same topics as White, including the history of different philosophical teaching approaches. Neither author discuss the inclusion of jazz theory topics in the music theory curriculum, which suggests that either jazz theory is not taught in the undergraduate music theory sequence so was not included in their texts, or that the authors do not think it is important to teach jazz theory in the theory sequence.

The same conclusions can be inferred from a study published by Nelson (2002). Nelson reported the results of a survey conducted by the College Music Society Executive Board in 2000 which "addressed issues concerning faculty and curriculum, teaching loads, course content, textbooks, placement exams, and the like" (p. 60). The survey inquired about time spent (i.e., semesters/quarters) on the different music theory topics, but did not specifically ask about jazz topics.

The results of the 248 responses to the survey, as reported by Nelson (2002), indicate that most schools require two years of music theory courses. Topics covered in theory classes include fundamentals, harmony, sight singing, aural training, keyboard harmony, and in some cases form and analysis, counterpoint, and twentieth-century music. Nelson states that the trend to cover all of these topics in a two-year sequence is an area of concern and "does not provide the student with the best environment to learn all of these [topics]" (p. 64). Nelson fears that there is not enough time in the two-year theory sequence for students to adequately learn the material. The inclusion of other topics, such as jazz theory, would put an even heavier burden on theory teachers and students.

In a more recent article discussing the core curriculum in music theory, Marvin (2012) reports on conversations with 14 teachers of music theory core courses in which she asked the teachers about pedagogical trends as well as trends in recent textbooks. She identified six themes of pedagogical development:

1. The engagement of professional music theorists in designing and teaching the core music theory classes instead of composition and performance faculty teaching theory as part of a comprehensive musicianship approach.
2. A focus on engagement with music repertoire and analysis with somewhat less focus on figured bass and part-writing skills.
3. Integration of aural and written skills and an increase time devoted to aural training.
4. Increased use of technology in assignments by uploading materials to the web and requiring students to use internet streaming for listening, and the use of digital public domain files instead of anthologies.
5. The growth of remedial classes for freshmen music theory, putting students a semester to a year behind in the theory sequence.
6. The inclusion of improvisation as a core activity in new textbooks and new editions of textbooks. Several schools also reported that they are including music outside of the Western tradition.

In the last trend, Marvin states that some schools do include jazz examples to illustrate traditional harmonic concepts, or include a short unit on jazz harmony. She also reports that a few schools go even further and allow students to pick a specialized theory class of their choice, including jazz theory, in their fourth semester. Marvin concludes that the trend of including non-Western music is likely to continue (p. 262).

Even though the inclusion of topics, such as jazz, is an increasing trend in the music theory curricula, research has shown that jazz topics are not a priority in music

education curricula. Hewitt and Koner (2013) found that very few jazz topics were covered in instrumental music classes. They sent a questionnaire to NASM-accredited institutions to "determine the priority given by instructors to the curricular components of instrumental music classes" (p. 45) asking for the titles of methods courses, the required and recommended textbooks for these courses, and the types of assignments included in the classes (p. 49). Methods classes were defined as "courses that focused primarily on the content of instrumental music teaching, methods for teaching, and materials used for teaching instrumental music" (p. 48). The results of the 282 responses showed that, of the 11 class titles of instrumental methods classes, only 5% were listed as Jazz Band Methods, the lowest percentage; only 5% of the schools had a methods class dedicated to jazz band. In addition, Hewitt and Koner determined that jazz band related topics had a very low priority (30 out of 33 in rank) of topics taught in instrumental methods classes. It can be deduced from these results that schools regard jazz topics as not very important in music education methods classes.

Mishra, Day, Littles, and Vandewalker (2011) reported similar results to Hewitt and Koner when they examined music education class descriptions instead of only the course titles. Mishra, Day, Littles, and Vandewalker (2011) believe that "introductory classes in music education form an important bridge between assumptions preservice teachers have of the teaching profession and the realities of teaching" (p. 7). This belief led them to investigate introductory music education courses by looking at "the published course descriptions of introductory courses in music education" (p. 7) at sixty colleges selected at random from NASM's 2007 list of nationally accredited Schools of Music.

None of the 60 schools had jazz methods courses listed in their catalogs, suggesting that music education students are not taught jazz pedagogy.

West (2015) also found that college students who are preparing to be teachers, or preservice teachers, are not taught how to teach jazz. He performed a comprehensive examination of literature on jazz education for the collegiate and professional level and the K-12 level. In his research, he recognized that an "underlying problem with teacher education programs [is that they] do not involve preservice teachers [specifically] in the practice of improvisation" (p. 35) or jazz in general. This problem is also recognized by Goodrich (2005) and Mantie (2007).

Goodrich (2005) found that the success of a specific high school jazz band was partially due to the students' immersion in the jazz culture, including a high level of improvisation. He studied a singular, exemplary high school jazz band to determine "why it performed at a consistently high level, and which elements of the jazz culture, if any, were prevalent in the ensemble, particularly with regard to how music was learned and performed" (p. iii). Students in this jazz band were mentored by peers and adults, listened to live groups and recordings, were taught improvisation, performed in school concerts, attended festivals with guest artists, gigged, and made recordings. Goodrich concluded that "implications from this study include the need for more teacher preparation in jazz education" (p. iv). He states that the jazz topics music education students need to learn could be integrated into ensemble requirements, keyboard classes, theory classes, and history classes so that the students receive more than a "glimpse" of jazz music (p. 225-226).

Mantie (2004, 2007) made similar discoveries to Goodrich (2005) regarding jazz education curriculum and instructional practices in secondary schools. His research showed that jazz improvisation was significantly deemphasized in secondary school jazz programs compared to big band ensemble playing after "explor[ing] ways in which jazz education practices in Manitoba secondary schools might be redesigned to better reflect those aspects of jazz that should make it a valued part of music education and public schooling" (2004, pg. iv). Mantie (2007) remarks that "the results of [his] larger study [in 2004] suggest that current practices in jazz education at the secondary level largely ignore improvisation in favour of polishing the notes on the printed page" (p. 1) even though instruction of improvisation raises the performing level of secondary school jazz bands and combos. He concludes that "while improvisation may be musically and educationally desirable, its inclusion in schools is complicated by poor teacher training practices and the…requirements of the educational system" (2007, para. 3). Goodrich (2005) and Mantie (2007) both conclude music education students need better preparation to teach improvisation in jazz bands at secondary schools. In order to teach jazz improvisation, teachers need to have jazz theory knowledge. Ciorba (2006) and May (2003) learned from their research on predicting jazz improvisation achievement that jazz theory knowledge has a great effect on the teaching of improvisation to high school students.

Ciorba's (2006) primary goal "was to create a model to predict jazz improvisation achievement" (p. ii). He used a sample of students from three high schools in south Florida and four high schools in southeast Michigan to participate in the assessment of

different variables of jazz improvisation. The variables he tested were jazz improvisation achievement, self-rating of ability, self-efficacy, motivation, jazz theory knowledge, time spent practicing, music aptitude, academic achievement, sight-reading ability, and listening experience. To evaluate the students' jazz theory knowledge, Ciorba created an assessment based on a test developed by Jamey Aebersold and titled it the Jazz Theory Assessment Measure (JTAM). On the test, students were asked to identify chord tones implied with a chord symbol, to provide the appropriate scale for a given chord symbol, to construct scales, and to identify ii-V-I progressions in major and minor keys. After Ciorba assessed the students, he conducted tests to determine whether the variables were independent or if they were dependent on each other. He then used a formula to determine what combination of the different variables best predicts jazz improvisation achievement. Ciorba found that "jazz theory knowledge had a large direct effect on jazz improvisation achievement…and a moderate effect on sight-reading ability and self-assessment" (p. 83). He concluded that it is imperative for students to develop their knowledge of jazz theory when learning jazz improvisation.

May (2003) conducted a study with the purpose of "identify[ing] factors underlying instrumental jazz improvisation achievement and…examin[ing] the extent to which knowledge of jazz theory, aural skills, aural imitation, and selected background variables predict achievement in instrumental jazz improvisation" (p. 245). He gave 85 wind players enrolled in college jazz ensembles improvisation tasks that were to be evaluated using the Instrumental Jazz Improvisation Evaluation Measure (IJIEM). The results of May's study revealed that, although "neither jazz theory achievement nor aural

skills entered into the prediction equation[,]…both [were] highly correlated with the composite improvisation scores and with aural imitation" (p. 255). Therefore, jazz theory and aural skills are important topics for students to learn.

Cioba's (2006) and May's (2003) research strongly defend the importance of jazz theory knowledge for the execution of improvisation. Therefore, music education teachers and private instructors need to have jazz theory knowledge so that they can teach their students improvisation. Jazz theory knowledge is useful not only for improvisation, but also for general awareness of the music that jazz performers play. Just as music history and music theory help students understand the classical music they perform, jazz theory is helpful when performing any jazz-related music. Because Hewitt and Konner's (2013) research shows a low percentage of jazz methods classes in music education curricula and Mishra, Day, Littles, and Vandewalker's (2011) research indicated that jazz methods instruction does not appear in introductory music education classes, it would be beneficial to include jazz theory topics in areas that are required for all music students, such as the undergraduate music theory curriculum.

*Survey*

None of the research above specifically investigated the teaching of jazz theory topics in the undergraduate music theory curriculum, and little research has been conducted on jazz topics taught in college music education courses. Therefore, I conducted a survey to try to determine what jazz topics, if any, are included in the music theory and music education curricula, as well as the resources used in these classes.

The survey (see Appendix B) is divided into five sections. The first section includes general questions about the required music theory courses (i.e., the number of classes required, the texts used) and whether a jazz theory course exists separately from the classical theory course and, if so, the text for the jazz theory course. The next three sections of the survey included questions on which jazz topics are included in the music theory curriculum, the music education curriculum, and classes outside those two subjects. If jazz topics are taught, the participant was asked to indicate any textbooks used and the topics covered in the courses. The last section of the survey asked demographic questions about the music department/school (e.g., the number of music students, the degrees offered).

The participants were also asked to select which of 10 jazz topics listed were included in undergraduate music theory, music education, and jazz theory courses. The ten jazz topics were:

1. *How to read jazz chords/symbols*. A basic knowledge of lead-sheet symbols.
2. *Understanding a lead-sheet*. Being able to read the chord symbols, as well as recognizing the form of a piece, and how to follow a lead sheet in a jazz combo setting.
3. *The 12-bar blues form/chords*. Understanding the form and the chords present in a 12-bar blues pattern. In its earliest model, the form of a blues piece is AAB (due to the text, not the harmonic progression) with the progression below:

| | | | | |
|---|---|---|---|---|
| (A) | I | I | I | I |
| (A) | IV | IV | I | I |
| (B) | V | V | I | I |

4. *The seven modes and how to transpose them*. The diatonic modes in jazz are the common modes: Ionian, Dorian, Phrygian, Lydian, Mixolydian, Aeolian, and Locrian. Students should know how to write these modes on any pitch.
5. *Major and minor pentatonic scales*. Major pentatonic scales are anhemitonic (ones with no half-steps) and thus exclude the 4$^{th}$ and 7$^{th}$ scale degrees of the major scale. Minor pentatonic scales are also anhemitonic, and thus exclude the 2$^{nd}$ and 6$^{th}$ scale degrees of the natural minor scale. While any scale consisting of only five tones is considered a pentatonic scale, the major and minor pentatonic scales are specific sets of tones as specified above.
6. *Whole-tone and diminished (octatonic) scales*. The whole-tone scale contains intervals of only whole-steps. The octatonic scale contains intervals that alternate between whole- and half-steps.
7. *Advanced scales*. Advanced scales include the diminished whole-tone scale, the Lydian dominant scale, the Lydian augmented scale, and the Locrian ♯2 scale.
8. *Knowledge of which scales/modes can be played on the different chords*, also known as chord-scale theory.
9. *Basic chord progressions* such as ii-V-I.

10. *Jazz notation vs classical notation*. Understanding the differences between jazz and classical notation, including rhythmic differences in performance (e.g., swung eighth notes).

*Method*

*Procedure.* An invitation to participate in the survey (see Appendix A) was sent via email to individuals belonging to the National Association of Music Executives in State Universities (NAMESU) and to National Association of Schools of Music (NASM) schools in the southeast region of the United States. NAMESU is a group of 50 individuals, with one representative from a university from each state. E-mails for the NASM schools were gathered from the website of each school. In some cases, the contact email was for the department of music and, in other cases, the contact email was a specific person. The email was sent to 250 NASM schools. Sixty people opened the email and 7 (11.7%) of the 60 continued on to the survey. The email was also sent to 49 of the NAMESU individuals; the representative from Tennessee was excluded since he works at the survey's university of origin. A reminder email was sent two weeks later. A final email was sent another two weeks later.

The recruitment invitation email introduced the purpose of the survey and asked for the recipient's participation. Those receiving the email were informed that the survey requested information about jazz curriculum from the theory, education, and possibly other areas, and encouraged the recipient to consult with faculty from each of those areas to answer the questions or to pass the survey on to another person in the department if

someone else could better answer the questions. The survey was created using the Qualtrics program and delivered via the web. A link to the survey was included in the recruitment email. Answers were collected and stored online in the Qualtrics program.

There were a total of 15 submitted responses to the survey. The participants were not required to answer each question on the survey. Participants may have chosen not to answer every question because the survey inquired about classes in several areas of the music departments and jazz topics may not have been taught in all areas. Thus, there was a different number of total responses for each question.

*Participants*. As stated above, 15 people completed some part of the survey. Of the six participants that completed the demographic section of the survey, half (3) indicated they were from public four year schools, and half (3) from private four year institutions. The size of the participating schools ranges from fewer than 50 students to 200 students in the music program; three participants (50%) indicated their schools have less than 50 music students, one (17%) came from a school having 101-150 music students, and two (33%) come from schools having 151-200 music students. All of the schools offered BA/BM degrees, with five schools having undergraduate minor options and only one school having a Masters program. Music performance and music education are the most offered degrees by the schools.

*Results and Discussion*

Since only 15 responses were received, it is hard to draw conclusions on which jazz topics are included in music theory, music education, and jazz classes. However, the

results can provide some information on what is being taught. Overall, the survey responses reveal jazz theory topics are included in only half of the participant's music theory classes, with even fewer schools including jazz topics in music education classes.

*Section 1*. The first section of the survey was intended to gather information about each school's music theory sequence. Seven of 11 (64%) participants indicated their music majors are required to take four semesters of music theory. Four of six (67%) participants responded that they used *Tonal Harmony* by Kostka and Payne (2009) in their theory classes. One participant listed *Music Theory and Practice* by Benward and Saker (2009), and one listed *Harmony and Context* by Roig-Francolí (2011) as the theory text used. A separate jazz theory course was included in five of 11 (45%) participating schools, but they do not use a textbook for the jazz theory course.

*Section 2*. The second section of the survey inquired about specific jazz topics taught within the music theory curriculum. Five of nine (56%) respondents indicated that jazz theory is covered in music theory classes, but no textbook was used for the jazz theory section of their music theory course. Of the five participants that indicated that jazz theory is covered in music theory classes, only four disclosed which jazz theory topics were included. All four indicated they include how to read jazz chord/symbols, understanding a lead sheet, major and minor pentatonic scales, whole-tone and diminished (octatonic) scales, and basic chord progressions in their classes. Three out of four (75%) participants also include a discussion of the 12-bar blues form/chords, the seven modes and how to transpose them, and knowing which scales/modes can be played on the different chords.

*Section 3*. The third section of the survey included questions about jazz topics included in the music education curriculum. Two of seven (29%) participants indicated that they offer a separate jazz methods class and three of seven (43%) participants said that a portion of a music education class was devoted to jazz methods. Most of the schools do not use a textbook, although one participant indicated the use of the *Jazz Educator's Handbook* by Beach and Jarvis (2002) in the class.

Very few jazz theory topics are included in the music education jazz methods classes. Four of the five (80%) participants that included jazz methods in music education classes indicated that jazz theory topics were included in those method classes. The only topics covered by all four respondents was basic chord progressions. Three participants also include discussions of how to read jazz chords/symbols, understanding a lead sheet, and knowing which scales/modes can be played on the different chords.

*Section 4*. The fourth section of the survey asked about jazz theory topics covered in classes in areas other than music theory and music education. Seven people responded to questions in this section. Four of the seven (57%) indicated that jazz theory topics were included in courses such as piano class, music theory and musicology electives, twentieth-century music history, and jazz appreciation. Topics covered included how to read jazz chords/symbols, understanding a lead sheet, the 12-bar blues form/chords and jazz notation versus classical notation.

*Conclusion*

Despite the small number of participants in this survey, the results show that most of the jazz theory topics mentioned above are included in half of the schools' music theory programs. Also, the results indicate that very few jazz theory topics are included in the music education courses. The results of this survey reflect trends similar to those in the studies mentioned in the literature review, specifically the trends of some music theory curricula to include jazz theory topics and a low priority of jazz topics in music education courses. Given these results and the fact that all music students take music theory, it is logical to include essential jazz theory topics in the classical music theory curriculum to ensure that all the students are exposed to some jazz theory.

*Textbooks*

If jazz theory is to be included in music theory classes, textbooks used in theory classes must include jazz information. Some textbooks used in theory classes include jazz theory topics, jazz musical examples, or both, and some include none. Several textbooks will be reviewed in this section and were chosen because they are popular music theory textbooks, were listed in responses of the survey, or were mentioned in an article by Kang (2006) advocating for using jazz and popular music to teach class music theory concepts.

Kang states that "it is possible to find meaningful connections between the vocabulary and concepts covered in a theory class and jazz, show tunes, and popular music" (p. 54). Like Kang (2006), American jazz pianist Billy Taylor also recognizes the

use of combining jazz with classical music theory. He explains how jazz literature can be used in relationship with many classical music theory concepts:

> Observe how many devices of the past can be found in capsule form in jazz…the two part song form, rondo form, and the through-composed variation form. The various bass ostinato patterns in use are the direct descendant of the passacaglia, and the twelve measure standard blues is a true chaconne. Clear-cut harmonic sequences are the off-spring of the Baroque instrumental style of Corelli and Vivaldi; the majority of harmonic structures are pure Ravelian-Debussyian impressionism or Seriabinesque [*sic*] stereo-types, and the roots of the subtle melodic glissandos, syncops, and chromatic embellishments range all the way from the 17th-Century bel-canto to the 'elevated speech' of Milhaud's Les Choephores (as cited in Barr, 1974, p. 28).

As Taylor states, jazz literature can be used as examples of classical theory concepts. Many textbooks reviewed do include some of the ten jazz theory topics included in my survey, but they are shown only using classical theory notation and not shown the relation to jazz material. Also, some textbooks do include jazz topics that were not included in my survey, such as the tritone substitution, and the Blues form.

There are eight textbooks that are reviewed in this section. Three textbooks are listed in the survey, four are mentioned by Kang (2006), and two are recent textbooks in music theory. The Roig-Francolí (2011) textbook was mentioned both in the survey and by Kang. These eight texts will be reviewed in the following order: *Tonal Harmony with an Introduction to Twentieth-Century Music* by Kostka and Payne (2009), *Music in*

*Theory and Practice* Benward and Saker (2009), *Harmony in Context* Roig-Francolí, *Harmonic Practice in Tonal Music* by Gauldin (2004), *Tonal Facts & Tonal Theories* by Jablonsky (2005), *The Musician's Guide to Theory and Analysis* by Clendinning and Marvin (2011), *Theory for Today's Musician* by Turek and McCarthy (2014), and *Contemporary Musicianship: Analysis and the Artist* by Snodgrass (2016).

*Tonal Harmony with an Introduction to Twentieth-Century Music* by Kostka and Payne (2009) covers classical theory topics and does not relate any of the topics to jazz or use jazz terminology. Kostka and Payne also do not use any jazz or pop musical examples in the textbook. The only topic related to jazz, lead sheet symbols, is included in an appendix. Kostka and Payne explain their approach to the textbook as "introduc[ing] students to the most common vocal and instrumental textures encountered in tonal music" (p. v), yet they have left out a genre of tonal music very common in music today.

Benward and Saker (2009), in their textbook *Music in Theory and Practice* vol. 1-2, claim in the preface that their "text integrates a study of jazz and popular music, which is indigenous to American culture, into the traditional study of European art music" (p. xi). It is true that jazz is distinctly American and an important part of our culture, yet the authors present few musical examples in the textbook from jazz and popular styles, and only a few jazz theory topics are taught. The jazz topics presented in the text include the 12-bar blues progression and jazz chord symbols. In the discussion of the 12-bar blues, Benward and Saker show five different blues progressions but do not explain which is the original progression, the history of the blues progression, and why there are different

variations. The few jazz topics and jazz musical examples provided are an improvement from the lack of jazz content in the textbook by Kostka and Payne (2009), but the amount of material included is still very small.

Another textbook listed by a participant in the survey and by Kang (2006) is Roig-Francolí's (2011) textbook, *Harmony in Context*. This textbook, designed for the undergraduate music theory curriculum, contains examples of jazz, show tunes, and popular music. Some jazz topics are covered, although not in great depth. The topics covered include the harmonic content of a blues progression, the tritone substitution, and $9^{th}$, $11^{th}$, and $13^{th}$ chords. In his discussion of the blues progression, he leaves out the form of the blues. He uses many musical examples from jazz and pop styles such as "Can't Buy Me Love" by The Beatles, Hart and Rodgers' "Bewitched," and Weill's "Mack the Knife" as examples to illustrate other classical concepts. The Roig-Francolí text includes the most musical examples in jazz, show tunes, and pop styles of the texts mentioned so far.

When discussing jazz topics, Roig-Francolí uses classical (roman numeral) notation instead of the notation most associated with the jazz and pop styles. For example, in the key of F major, an F major $7^{th}$ chord is written as $I^7$ instead of $FMaj^7$. While analyzing non-classical music, it is important to use terminology most associated with the style. Even though this book is a good example of using jazz and popular musical examples to teach classical concepts, it teaches few jazz topics.

The next textbook mentioned by Kang (2006) is Gauldin's (2004) *Harmonic Practice in Tonal Music*. This text is designed for the undergraduate music theory

sequence, has many examples of jazz, show tunes, and popular music, and covers many jazz topics. An appendix includes the seven diatonic modes and many scales used in jazz such as the pentatonic, the whole-tone, and octatonic scale. Another appendix is devoted to jazz chord symbols. The tritone substitution is discussed in two places in the book for a paragraph each. Lastly, a full chapter is dedicated to extended tertian chords and shows how these chords are used in classical, jazz, and popular music. This textbook is a great example of using jazz and popular musical examples to illustrate classical theory concepts and includes many important jazz theory topics.

Another textbook mentioned in Kang's (2006) article is Jablonsky's (2005) *Tonal Facts & Tonal Theories: A Concise, Practical Guide to Musical Analysis and Composition*. This book is not a widely used music theory text, but is one "designed to introduce the fundamentals of analysis so that [the student] can look at a wide variety of compositions, both classical and popular[/jazz], and begin to address the questions of form and substance that they present" (p. vi). Many pop/jazz theory topics are included in the text: the seven diatonic modes, tritone substitution, altered dominant chords, blues progression, lead sheet notation, and the pentatonic scale. However, only about one half a page or less is spent on each of these topics except for lead-sheet notation, which is discussed over several pages, and the pentatonic scale, which is discussed over two pages. This is a very unique textbook, but would not serve the typical undergraduate music theory sequence well because it does not cover the traditional topics including diatonic and chromatic harmony. It would be best used in a theory fundamentals class.

The final text mentioned by Kang (2006) is Clendinning and Marvin's (2011) *The Musician's Guide to Theory and Analysis*. This text uses musical examples from jazz, show tunes, and popular music to explain classical theory concepts as well as jazz and popular theory concepts. Designed for the typical four-semester undergraduate music theory sequence, this text aims to prepare the young musician for a music career that not only includes classical music, but music in the "current marketplace" (p. xxiii). The authors explain that today's musician might "perform music for recordings, broadcast, or podcast; write music for films, video games, web designers, or advertisers; or create new forms of jazz, rock, or electronic dance music" (p. xxiii) and that the more a musician knows about different kinds of music, the better prepared they will be in their careers.

Clendinning and Marvin devote an entire chapter (22 pages) to forms of popular music. This chapter teaches three jazz topics: jazz chord symbols, chord extensions, and 12-bar blues. The musical examples in this chapter use the appropriate form of jazz notation. Other topics included in this textbook related to jazz, but discussed in the context of twentieth century classical music, include modes, whole-tone scales, and octatonic scales. This textbook has only a few musical examples from jazz and popular music. There are 28 musical examples of jazz and popular music throughout the entire book, with 12 of the examples in the chapter dedicated to popular forms.

Turek and McCarthy (2014), in their text *Theory for Today's Musician*, appear to have a similar philosophy as Clendinning and Marvin (2011) regarding the purpose of their text and what musical literature should be included. They state:

> A musician's training today is incomplete without an exposure to [jazz]. Truly versatile performers are able to play in the style when required. Composers who hope to make a living at their trade are at a disadvantage if they cannot write in the style. And music educators must be able to relate to the many offshoots of jazz that appeal to their students (p. 555).

In this text, two chapters are dedicated to jazz topics, totaling to 42 pages. In the chapter titled "Harmonic Principles in Jazz," Turek and McCarthy cover the concepts of triad extensions, chord substitution, and implied lines (defined as noticing and creating melodic lines that connect jazz chords to each other smoothly).

The second chapter on jazz topics, "The Blues," is dedicated to the blues form, minor blues, blue notes, blue-note scales, and harmonic substitution. Turek and McCarthy discuss where the blues comes from and how it has changed throughout the years. They use many musical examples with appropriate jazz notation, from both jazz and pop styles in these two chapters, as when illustrating classical theory concepts.

A new textbook by Snodgrass (2016), *Contemporary Musicianship: Analysis and the Artist*, covers the traditional topics typically seen in an undergraduate music theory sequence, but in "an innovative manner, combining music history, popular culture, aural skills, and composition to reach a broader audience that includes the amateur musician, music therapist, performer, and the music business/industry student" (p. xvii). The textbook, along with supplemental online chapters, covers the typical music theory sequence topics and uses a vast amount of jazz and popular musical examples. Despite this, the book teaches only one jazz theory topic: reading jazz symbols.

This review of textbooks reveals that, with the exception of the textbook by Gauldin (2004), not many jazz topics are included in texts used by music theory classes. Many of the textbooks do include jazz and popular musical examples, but these examples are used to explain classical concepts and not jazz concepts. Snodgrass's (2016) textbook is the best example of a text that uses jazz and popular musical examples to illustrate traditional music theory concepts. The textbook by Roig-Francolí (2011) also integrates many jazz and popular musical examples, but does not use appropriate jazz notation. The textbook that teaches the most jazz theory topics is Gauldin's (2004), *Harmonic Practice in Tonal Music*; it includes many musical examples from jazz and popular styles.

*Conclusion*

The literature reviewed, the results of the survey, and the review of textbooks suggest that not many jazz topics are included in the undergraduate music theory sequence, music education courses, and in many popular textbooks. However, musicians today need an exposure to the theory and notation of jazz music. Therefore, I propose that, at a minimum, 10 jazz theory topics need to be included in the undergraduate music theory sequence. The 10 topics include how to read jazz chords/symbols, understanding a lead sheet, the 12-bar blues form and harmonic progression, the seven diatonic modes and how to transpose them, major and minor pentatonic scales, whole-tone and diminished (octatonic) scales, other advanced jazz scales, chord-scale theory, basic jazz chord progressions, and jazz notation. Many classical and jazz concepts differ only in the language used and the musical context

(e.g., octatonic scales and the diminished and auxiliary diminished scales). In the next chapter, I present an example chapter of a theory textbook on a jazz theory topic, that of chord-scale theory, to show how this jazz topic could be included in the music theory curriculum.

# Chapter 3

# Proposed Method

## *Introduction*

The purpose of this chapter is to provide an example of a textbook chapter on the jazz theory topic of chord-scale theory. In jazz, *chord-scale theory* is the method of associating specific scales and modes to chord types. Levine (1989) illustrates chord-scale relationships by arranging a fully extended chord as a scale (figure 1). He states that "the expression '*play* this scale *on* [emphasis added] that chord' [implies that] … the scale and the chord were two different things" (p. 60). He asserts "the scale and the chord are, for the most part, two forms of the same thing" (p. 60).

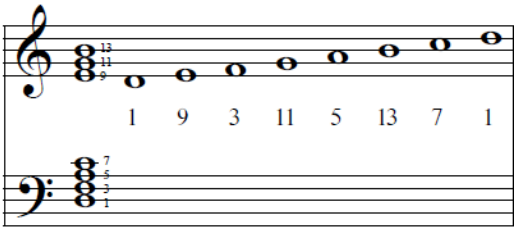



*Figure 1. Fully extended D-7 chord arranged as a scale.*

Nettles and Graf (1997) explain chord-scale theory another way, saying:

> Chords form a vertical structure of notes (tertian structure), while scales describe a horizontal one (stepwise order). Extended chord structures (13th chords) contain all notes of…[an individual] scale. If this vertical structure is turned into a horizontal line, the chord becomes the corresponding scale and vice versa (p. 16).

Chord-scale theory is important for students to learn since it can be used to aid in improvisation. But, there are some jazz pedagogues that worry about the method of chord-scale theory limiting improvisation as a conceptual art. Love (2009) argues that "a student with [a] deep understanding of chord-scale theory might not consider how a scale [of one chord] relates to the scale [of another chord] that follows. Yet scalar connection profoundly affects the sound of an improvised solo" (p. 155-156). Salley (2007) also has concerns of chord-scale theory "pertain[ing] to its limitation as a conceptual approach for teaching improvisation" (p. 98). He explains that chord-scale theory fails to help the improviser differentiate between melodies relating to the "*sounding* chord" and melodies relating to the chord that is "*about* to sound" (p. 99). These jazz pedagogues have valid concerns about how the chord-scale theory is used, but not about the theory itself or having the knowledge of chord-scale theory. Chord-scale theory provides structure within specific harmonies and can be used along with other various methods to achieve what these jazz pedagogues want, which is to think globally when improvising.

The remainder of this chapter is an example textbook section on chord-scale theory. It is formatted as a chapter of a textbook, complete with important terms highlighted in bold, summaries of material, and self-tests for the student (with answers provided for the instructors). The understanding of chord-scale theory requires that students have a prerequisite knowledge of major and minor scales, intervals, triads, 7th chords, and chord inversions, so this section would follow these topics in a textbook.

*Student Textbook Chapter: Chord-Scale Theory*

**Chord-scale theory** is a method of relating jazz chords, or chord changes, to scales and modes. This theory can be used to help you learn to improvise and teach improvisation. Improvisation involves a knowledge of what notes belong to certain chords. You will learn what scales, or collection of pitches, work best on each chord.

*The Diatonic Modes*

Chord-scale theory is based on scales and modes. You have already learned your major and minor scales. Modes are similar to scales in that they are groups of notes contained within an octave that have a specific pattern of whole- and half-steps. Each mode is a different version of a major scale, starting on a different scale degree (figure 2).

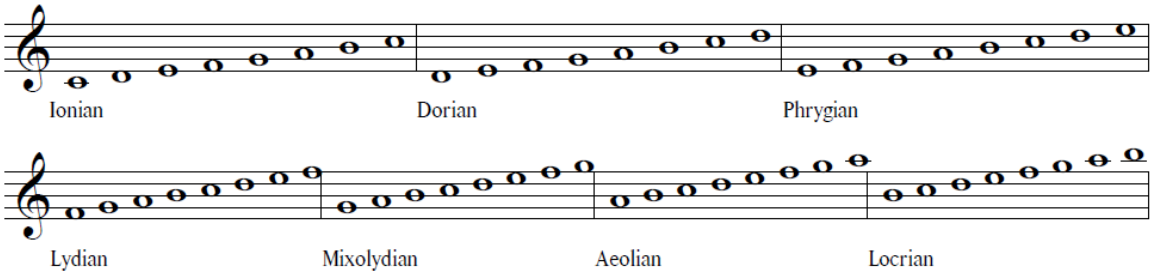



*Figure 2. All modes in the key of C Major.*

There are three different ways to think about the construction of the diatonic modes:

1. by their whole-/half-step pattern
2. by the alterations from the major and minor scales, and
3. by knowing what scale degree of a major scale the mode starts on. (see table 1)

For example, the Dorian mode has the whole- and half-step pattern WHWWWHW, is the same as a natural minor scale with a raised 6th scale degree, and starts on the 2nd scale degree of a major scale, which is the second mode of a major scale (figure 3).

*Table 1. Ways to think about the modes*

| ***Mode*** | ***Whole-/Half-Step Pattern*** | ***Alterations from Major/Minor Scale*** | ***Scale degree of major scale the mode starts on*** |
|---|---|---|---|
| Ionian | WWHWWWH | Major scale | 1st |
| Dorian | WHWWWHW | Natural minor scale with a raised 6th | 2nd |
| Phrygian | HWWWHWW | Natural minor scale with a lowered 2nd | 3rd |
| Lydian | WWWHWWH | Major scale with a raised 4th | 4th |
| Mixolydian | WWHWWHW | Major scale with a lowered 7th | 5th |
| Aeolian | WHWWHWW | Natural minor scale | 6th |
| Locrian | HWWHWWW | Natural minor scale with a lowered 2nd and 5th | 7th |

To write a given modal scale, you can use any of the three methods. For example, if you want to write a Dorian mode on F, you can think of the whole- and half-step pattern of this mode and write the notes up from F following that pattern (figure 3-1). To use the second method, since a Dorian mode is the same as a natural minor scale with a raised 6th scale degree, you can notate an F natural minor scale and raise the D♭ (6th scale degree) to a D (see figure 3-2). Using the third method, you can remember that the Dorian scale starts on the 2nd scale degree of a major scale. F is the 2nd scale degree of an E♭ major scale. So if you write the E♭ major scale starting and ending on F, you will notate an F Dorian scale (see figure 3-3). When learning and using chord-scale theory, we recommend you use the third method, relating each mode to a key signature.

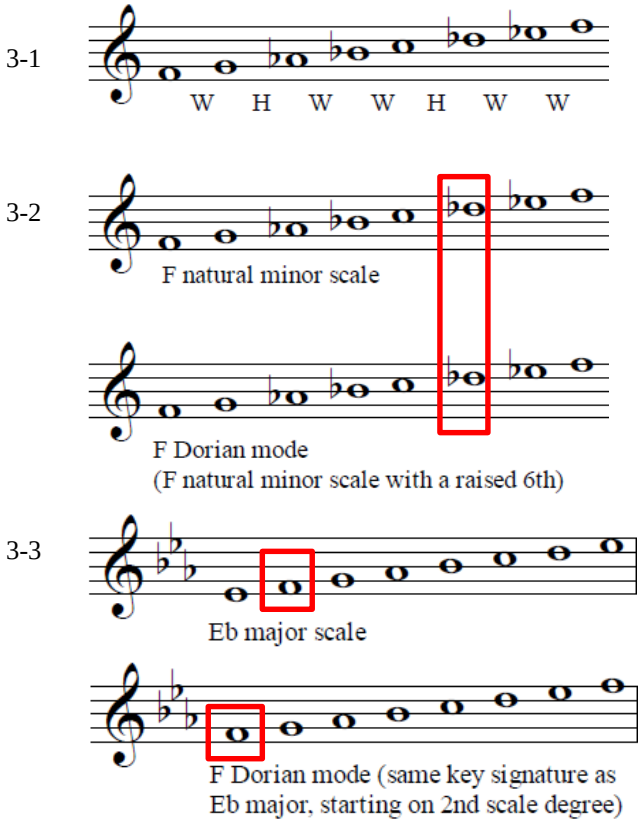
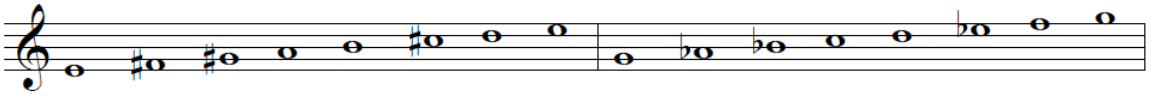



*Figure 3. F Dorian mode shown constructed using 3 different methods.*

✓ <u>Self-Check 1</u> (Check your answers at the end of the chapter in figure 25)

Identify the mode type and root in each measure and to which major key signature it belongs:



Mode: _____
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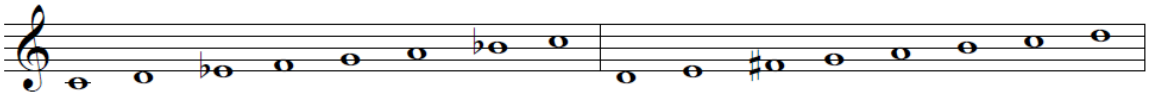

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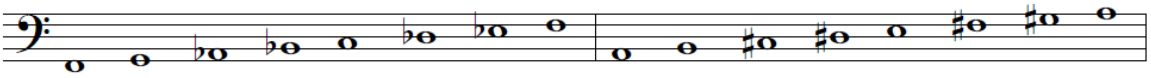

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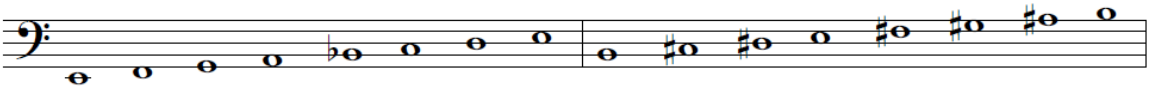

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Mode: _____
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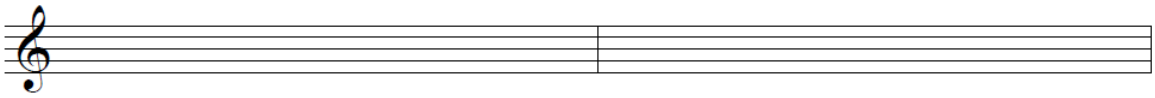
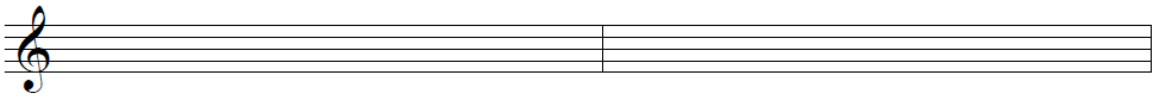
Write out the specified modes:



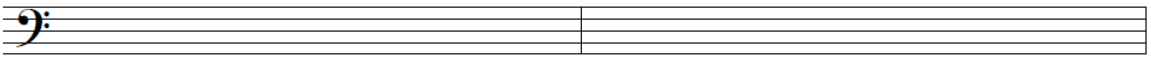
F Mixolydian

E Dorian



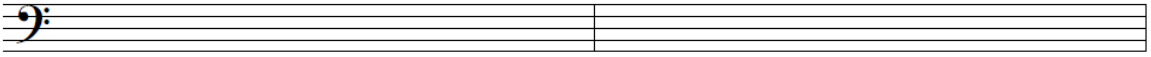
Bb Lydian

A Phrygian



C Aeolian

F# Ionian



G Phrygian

Bb Dorian

*Figure 4. Self-Check 1.*

*Other Scales: Octatonic, Whole-Tone, and Jazz Scales*

There are a few other scales you need to know before we continue with chord-scale theory. These scales are the whole-tone, octatonic (diminished), auxiliary diminished, diminished whole-tone (altered), and Lydian dominant scales.

The **whole-tone scale** (figure 5) is a hexatonic scale. It is a group of six notes contained within an octave that have a whole-step (a major 2nd) between each two tones. There are only two differently sounding whole-tone scales, one containing C and one containing C♯/D♭.

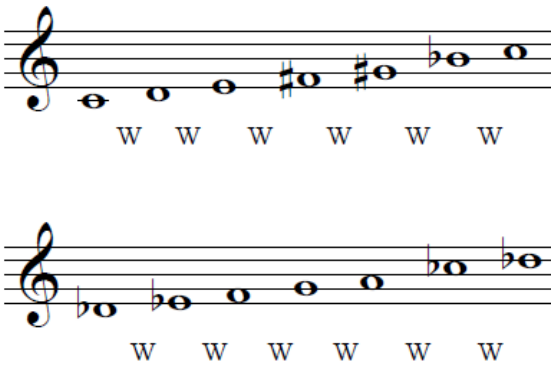



*Figure 5. The whole-tone scale shown with the whole-step relationship.*

The **octatonic scale** is comprised of eight (octa) different notes (tone). The intervals between each two adjacent tones alternate between whole- and half-steps. There are only three unique octatonic scales. In jazz, two different names are used for the octatonic scale. When the interval pattern starts with a whole-step it is called the **diminished scale**; when the interval pattern starts with a half-step it is called the **auxiliary diminished** scale (figure 6).

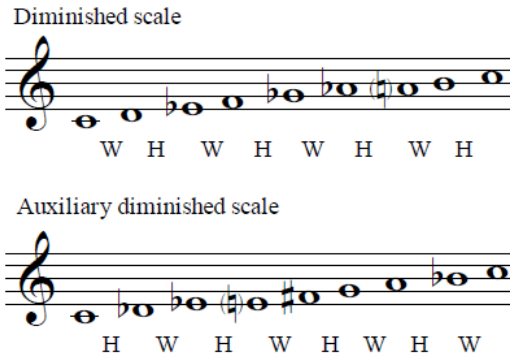



*Figure 6. The diminished and auxiliary diminished scales shown with the whole- and half-step relationship.*

The **diminished whole-tone scale** or **altered scale** (figure 7) contains a tetrachord (a 4-note section) of both the auxiliary diminished scale and the whole-tone scale. The first four notes of the diminished whole-tone scale are the same as the first four notes of the auxiliary diminished scale, while the last four notes are from a whole-tone scale. The two tetrachords are connected by a whole-step.

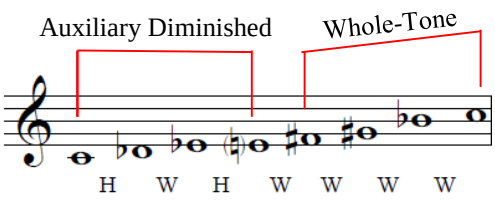



*Figure 7. The diminished whole-tone or altered scale shown with the whole- and half-step relationship.*

The **Lydian dominant scale** (figure 8) is another hybrid scale that combines the unique elements of the Lydian and Mixolydian modes: the raised 4$^{th}$ and lowered 7$^{th}$ scale degrees.

You should learn to identify and write all these scale types before continuing with chord-scale theory.

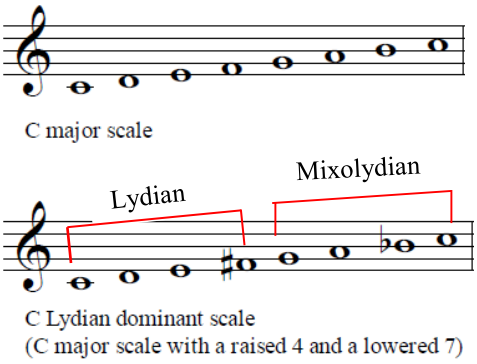



*Figure 8. Lydian dominant scale compared to the major scale.*

✓ <u>Self-Check 2</u> (Check your answers at the end of the chapter in figure 26)

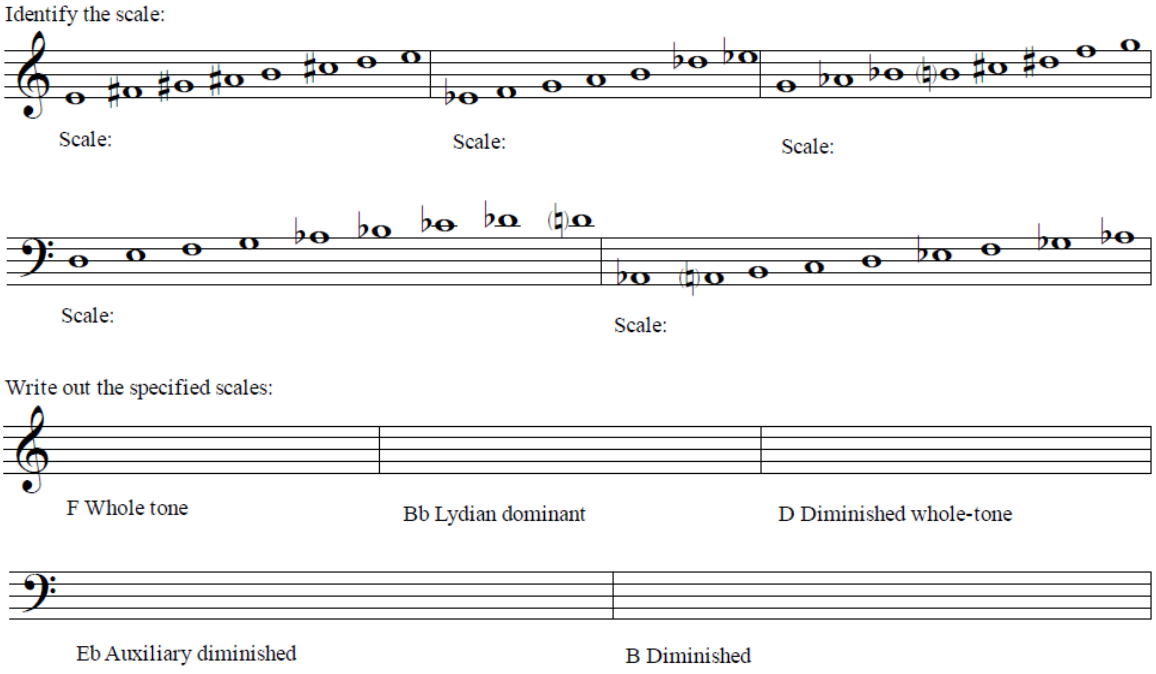
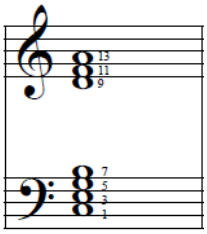



*Figure 9. Self-check 2.*

*Extended Chords*

In previous chapters, you learned about 7th chords–chords that include a 7th above the bass. You can extend a tertian chord even further by adding more thirds above the 7th. Adding a third above the 7th results in a 9th above the bass. Adding another third creates an 11th above the bass, and adding yet another third gives us the note a 13th above the bass. When the 13th is added the chord is fully extended (figure 10) since adding more thirds will result in duplications of pitches already in the chord.




13 = Major 13th
11 = Perfect 11th
9 = Major 9th
7 = Minor 7th
5 = Perfect 5th
3 = Major 3rd

*Figure 10. Fully extended C major chord.*

If there are no alterations marked in the chord symbol, the qualities of the intervals are a major 9th, perfect 11th, and major 13th. In jazz, even when a 9th, 11th, and 13th are not specified in a chord, it is implied that the pitches are present. For example, when a Dm or Dm7 chord is listed, it is expected that the chord is fully extended to the 13th.

*Jazz Notation*

Table 2 below lists the symbols used in jazz chords. As in figured bass, a note is lowered by a half-step when the flat symbol "♭" is placed in front of the scale degrees (figure 11). In jazz, the sharp "♯" and plus "+" symbols both mean the same thing: to

raise a note by a half-step (figure 12). A “7” without an accidental always indicates a minor 7th. When a 7th above the bass needs to be a major 7th, it is indicated by the short hand “Maj” or a triangle (Δ) in front of the 7 (figure 13). Sometimes a 4 is used instead of 11, and likewise a 6 instead of a 13 and a 2 instead of a 9 because they are the same pitch class. The variation of simple or compound intervals entirely depends on the publisher of the music. Compound intervals are generally more common, especially in the spoken vernacular.

*Table 2. Jazz chord symbols*

| ***Triads and 7th chords*** | ***Quality*** | ***Example*** |
|---|---|---|
| (Root) or (Root)Δ or (Root)Maj | Major | A or AΔ or AMaj = A major |
| (Root)– or (Root)m or (Root)min | Minor | A– or Am or Amin = A minor |
| (Root)Maj7 or (Root)Δ7 | Major/Major | AMaj7 or AΔ7 = A major/major |
| (Root)7 | Major/Minor | A7 = A major/minor (dominant) |
| (Root)–7 or (Root)m7 or (Root)min7 | Minor/Minor | A–7 or Am7 or Amin7 = A minor/minor |
| (Root)–7(♭5) or (Root)min7(♭5) or (Root)m7(♭5) or (Root)Ø | Dim/Minor | A–7 (♭5) or Amin7(♭5) or Am7(♭5) or AØ = A dim/minor |
| (Root)dim or (Root)dim7 or (Root)° | Dim/Dim | Adim or Adim7 or A° = A dim/dim |

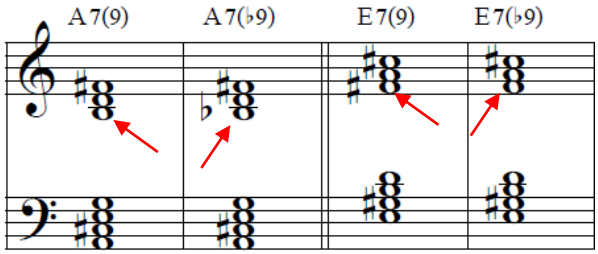



*Figure 11. Difference between chords with a ♯9 and a ♭9.*

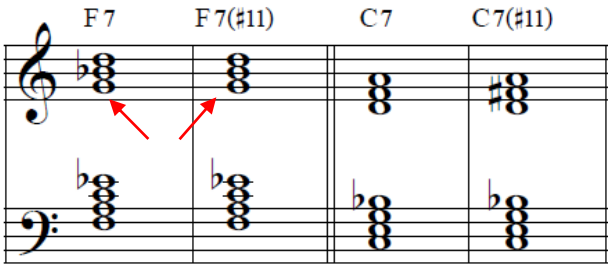



*Figure 12. Difference between chords with a ♯/+11 and a ♮11.*

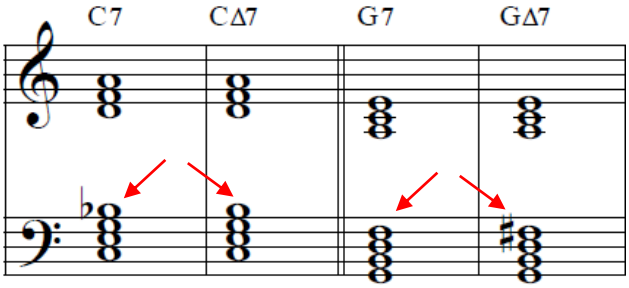



*Figure 13. Difference between chords with the triangle symbol and without.*

*Chord-Scale Theory*

Now that you have learned the modes and other scales, and have reviewed jazz chord symbols, we can continue with chord-scale theory.

**Chord-scale theory** is a method of relating jazz chords to scales and modes. To determine the scale that belongs to a chord:

1. Build the chord indicated by the chord symbol.
2. Extend the chord out to the 13th scale degree.
3. Rearrange the notes as a scale starting with the note that is the root of the chord.

Figure 14 shows a fully extended Dm7 chord and its corresponding scale. The scale formed from the notes of a Dm7 chord is the D Dorian mode. Thus, the Dorian mode is

best paired with a minor 7th chord. An exception occurs when the minor 7th chord is functioning as a vi chord. When this happens, the Aeolian mode is typically used.

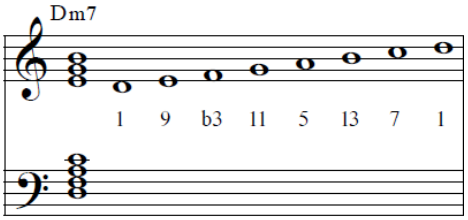



*Figure 14. Fully extended Dm7 chord and rearranged as a scale with the chord tones labeled.*

Let's try some more examples. Figure 13 shows the scale formed from a fully extended major 7th chord. Follow the steps above: build the major 7th chord, extend it to the 13th scale degree, and rearrange the notes as a scale. Figure 15 shows that the Ionian mode (major scale) is formed. Thus, the Ionian scale is best paired with a major 7th chord.

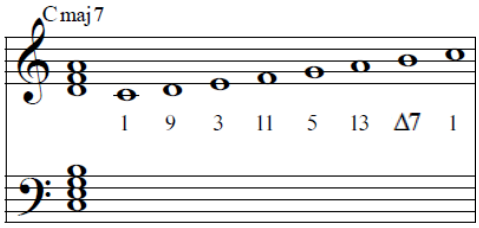



*Figure 15. Fully extended Cmaj7 chord and rearranged as a scale with the chord tones labeled.*

Figure 16 shows the scale formed from a major/minor 7th or dominant 7th chord. Again, build the chord, extend it to the 13th scale degree, and rearrange the notes as a scale. When a major-minor 7th chord is fully extended and rearranged, a Mixolydian mode is created.

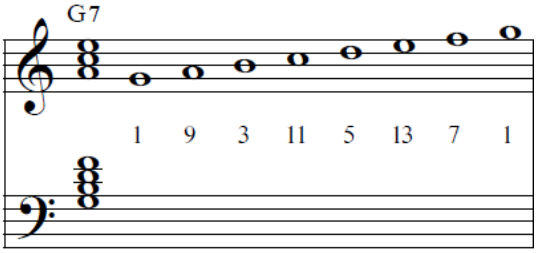



*Figure 16. Fully extended G7 chord and rearranged as a scale with the chord tones labeled.*

Figure 17 shows the scale formed by a half-diminished 7th chord. Build the half-diminished 7th chord, extend it to the 13th scale degree, and rearrange the notes as a scale. A Locrian mode is formed.

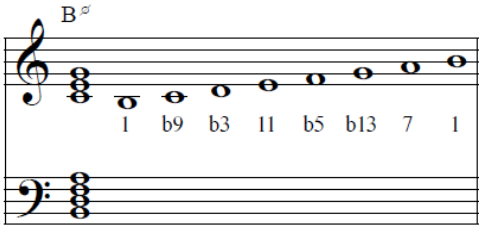



*Figure 17. Fully extended B half-diminished 7th chord and rearranged as a scale with the chord tones labeled.*

Now let's try something a bit different: the dominant 7th chord with a raised 4th. Jazz musicians sometimes like to add more colorful extensions, such as raising the 4th scale degree of a fully extended dominant 7th chord. The scale formed from this chord is a Lydian dominant scale (figure 18).

Another more colorful chord is the major 7th chord with a raised 4th (or 11th), such as the Cmaj7(♯11) or C+4. A Lydian mode is formed from this chord (figure 19). F major would typically have a B♭ which is why the ♯11 causes the note to be a B♮ instead.

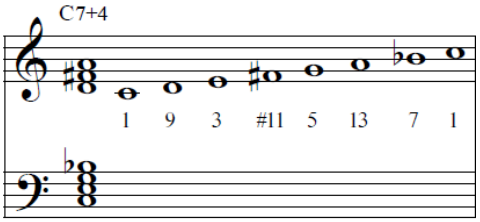



*Figure 18. Lydian dominant scale with the chord tones labeled.*

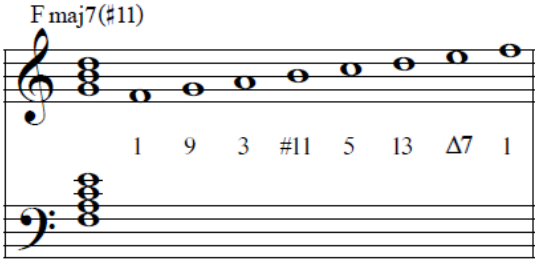



*Figure 19. Fully extended Fmaj7(♯11) chord and rearranged as a scale with the chord tones labeled.*

The whole-tone scale is formed from pitches of an augmented 7th chord. Do you remember that the "+" means to raise a note? When you see a C7+ chord, it is understood among jazz musicians that the "+" is referring to the 5$^{th}$ scale degree. A raised 5$^{th}$ implies a raised 4$^{th}$ as well due to the uncomfortable augmented second it would create if left natural. C7+ is simply a shorthand for all the alterations it implies. Don't forget that when a "7" does not have anything in front of it, the 7$^{th}$ is minor. The augmented 5$^{th}$ and minor 7$^{th}$ are only a whole-step apart, leaving no room for a 13$^{th}$ scale degree. The whole-tone scale also only has six pitches, which also results in having to leave out a pitch. Figure 20 shows the whole-tone scale with the chord tones labeled.

The next three chords are not so simple because the scales formed from them are not simple modes or scales; the scales formed are variations of the modes.

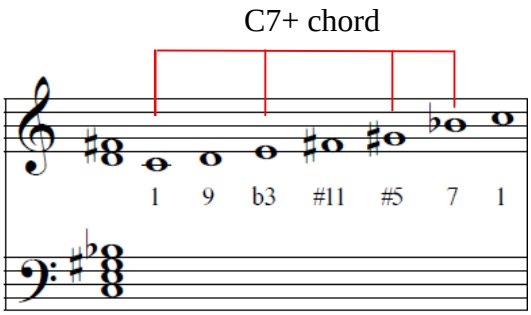



*Figure 20. Whole-tone scale with the chord tones labeled from C7+ chord.*

The first example is called the altered chord. This chord can be written as C7+9 or C7alt (short for "altered"). The designation for this chord is misleading since the "C7" at the beginning of the chord looks like it should be a dominant chord, but what is not shown (but is implied from jazz tradition) is that the 5th scale degree is raised. The "+9" or "alt" is also shorthand in the jazz tradition, and means that if you write out the whole chord, it includes a ♭9, ♯9, ♯11, and ♭13. Therefore, we cannot follow the same process to decipher what scale is best played on this chord. The scale jazz musicians decided that most resembles the tones that belong in the C7+9 chord is the diminished whole-tone scale or altered scale (figure 21).

The last two chords we will look at are the fully diminished 7th chord and the dominant 7th chord with a minor 9th. The scale that jazz musicians play on the fully diminished 7th chord is the diminished scale (figure 22). This scale best represents the tones in the C° chord. The auxiliary diminished scale (figure 23) also outlines a fully diminished 7th chord, but this scale is used only for the dominant 7th chord with a minor 9th. It is not used for the fully diminished 7th (C°) chord since the entire C dominant chord is present in the auxiliary diminished scale and gives the chord a dominant sound.

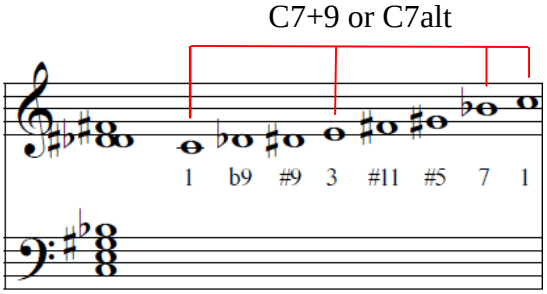



*Figure 21. Diminished whole-tone scale with the chord tones labeled.*

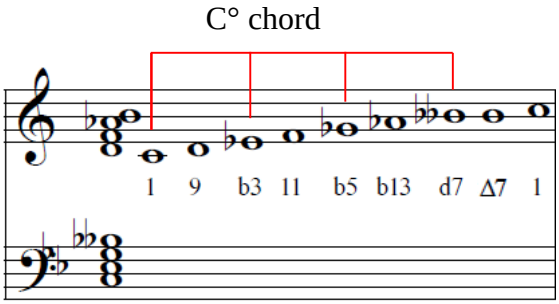



*Figure 22. Diminished scale with chord tones labeled.*

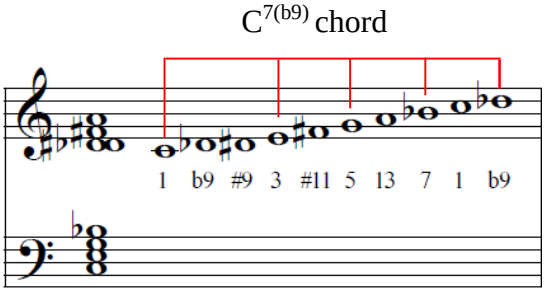



*Figure 23. Auxiliary diminished scale with the chord tones labeled.*

✓ <u>Self-Check 3</u> (Check your answers at the end of the chapter in figure 27)

Write out the scale and the name that can be used in each measure:

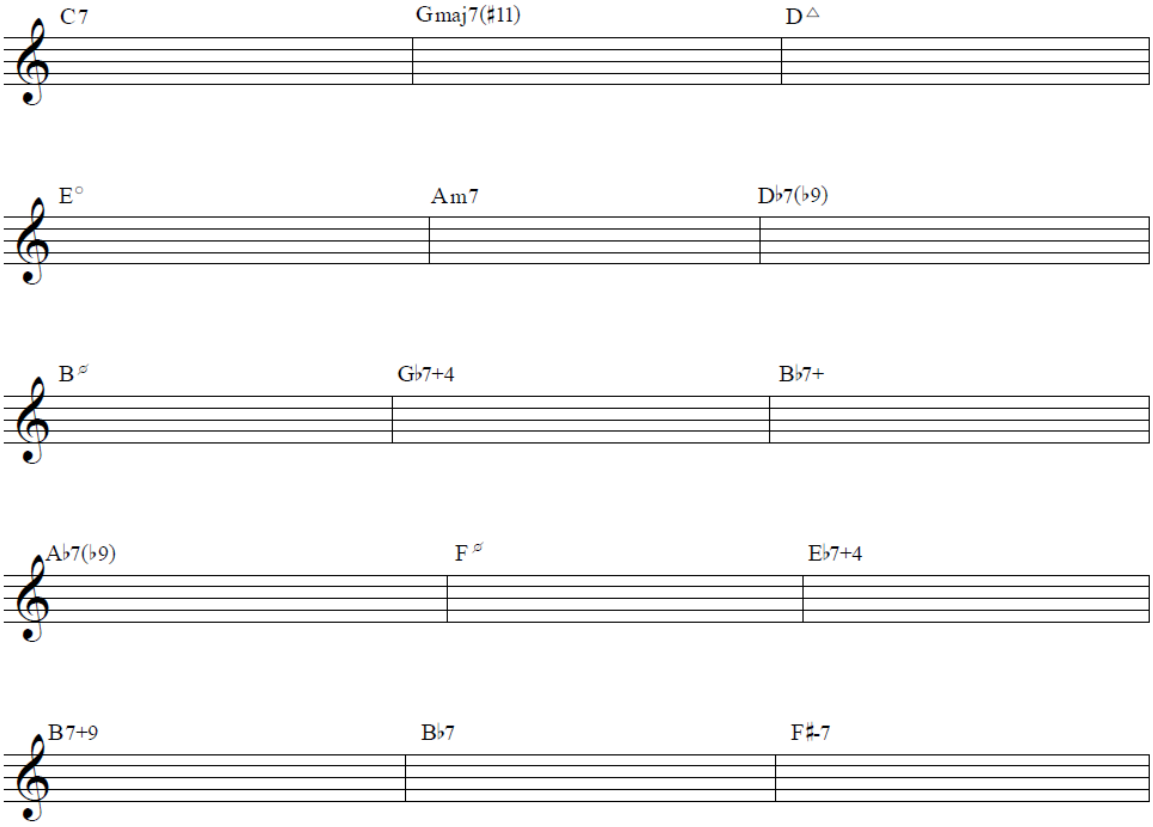



*Figure 24. Self-check 3.*

*Summary*

In summary, every jazz chord can be associated with a particular scale or mode. Knowing chord-scale theory and the notation of jazz chords will help you have a better understanding of jazz music, improvisation, aural skills, teaching, and more. In order to understand chord-scale theory, it is necessary to have sufficient knowledge of the major and minor scales, diatonic modes, other advanced jazz scales, extended chords, and jazz notation.

*Table 3. Chord/Scale Pairings*

| ***Chord*** | ***Scale*** |
|---|---|
| Cmaj7 | C Ionian |
| Cm7 | C Dorian |
| C7 | C Mixolydian |
| CØ | C Locrian |
| C7+4 | C Lydian dominant |
| Cmaj7(♯11) or C+4 | C Lydian |
| C7+ | C Whole-tone |
| C7+9 or C7alt | C Diminished whole-tone or altered |
| C° | C Diminished |
| C7(♭9) | C Auxiliary diminished |

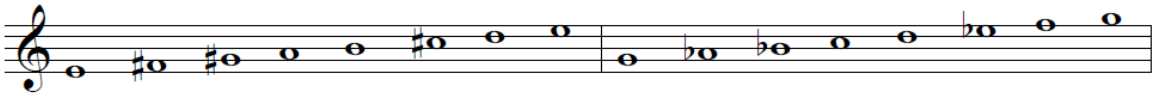
*Glossary*

**Altered scale** - See diminished whole-tone scale.
**Auxiliary diminished scale** - An octatonic scale that alternates between half- and whole-steps, beginning with a half-step.
**Chord-scale theory** - A method of relating the jazz chords, or chord changes, to scales and modes.
**Diminished scale** - An octatonic scale that alternates between half- and whole-steps, beginning with a whole-step.
**Diminished whole-tone scale** - A scale made up of the first four notes of the auxiliary diminished scale and the last four notes of the whole-tone scale. The two tetrachords are connected by a whole-step. Also called the altered scale.
**Lydian dominant scale** - The Lydian mode with a lowered 7th scale degree.
**Octatonic scale** - An octatonic scale is comprised of eight different notes that alternate between whole- and half-steps.
**Whole-tone scale** - A hexatonic scale that is comprised of only whole-step intervals.

*Self-Check Answers*

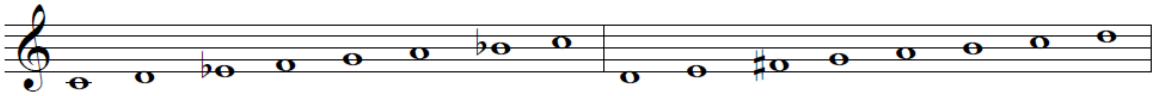
✓ <u>Self-Check 1 Answers:</u>

Identify the mode type and root in each measure and to which major key signature it belongs:



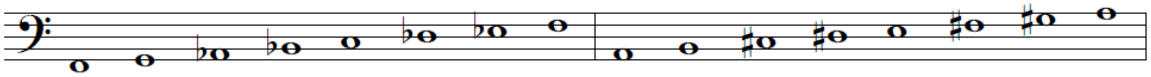
Mode: E Mixolydian
Key Signature: A

Mode: G Phrygian
Key Signature: Eb



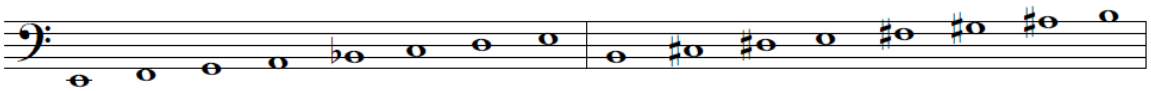
Mode: C Dorian
Key Signature: Bb

Mode: D Mixolydian
Key Signature: G



Mode: F Aeolian
Key Signature: Ab

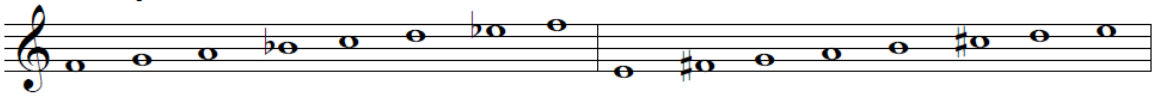
Mode: A Lydian
Key Signature: E



Mode: E Locrian
Key Signature: F

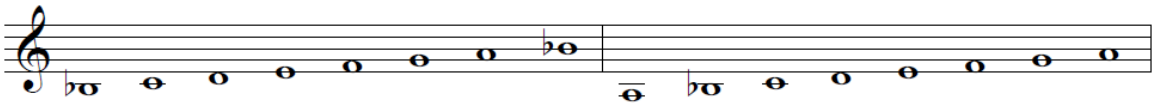
Mode: B Ionian
Key Signature: B

Write out the specified modes:



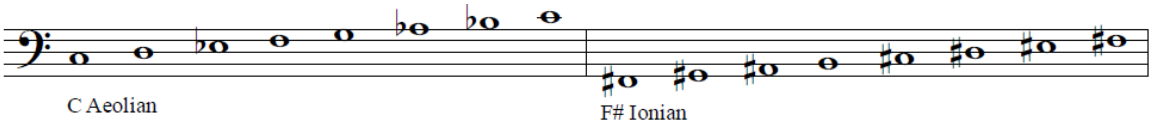
F Mixolydian

E Dorian



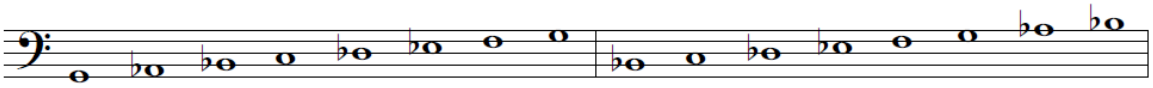
Bb Lydian

A Phrygian



C Aeolian

F# Ionian



G Locrian

Bb Dorian

*Figure 25. Self-Check 1 Answers*

✓ <u>Self-Check 2 Answers:</u>

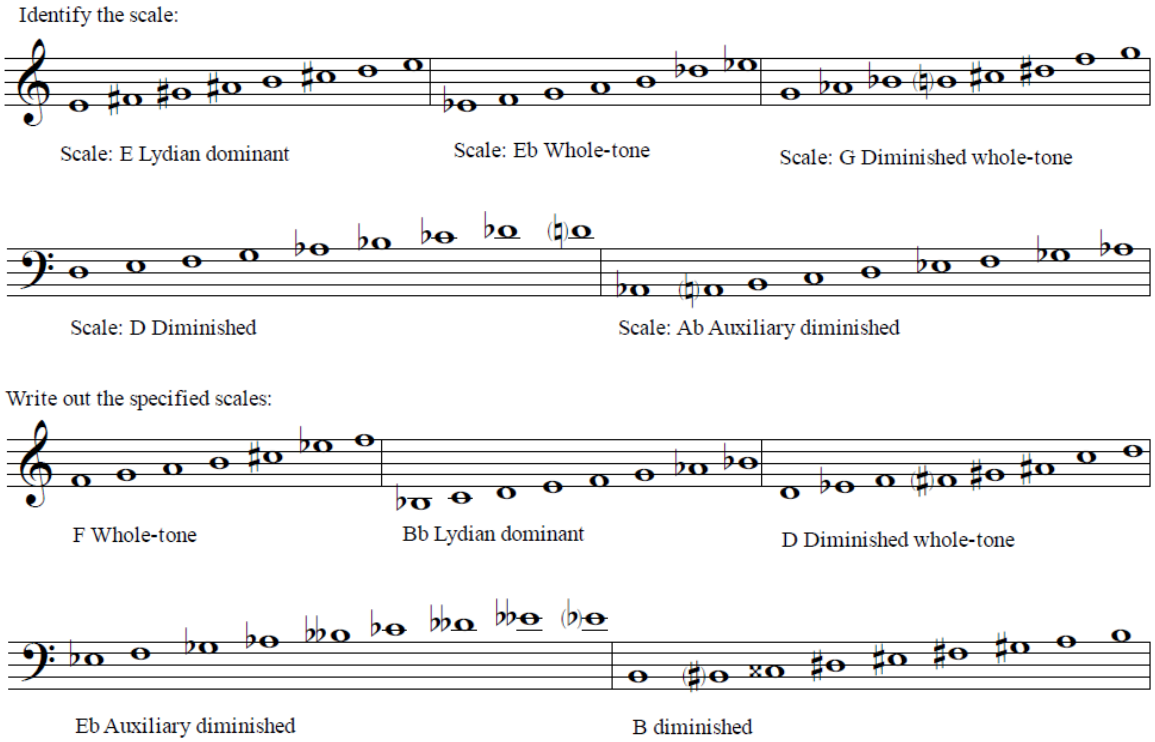



Figure 26. Self-Check 2 Answers.

✓ <u>Self-Check 3 Answers:</u>

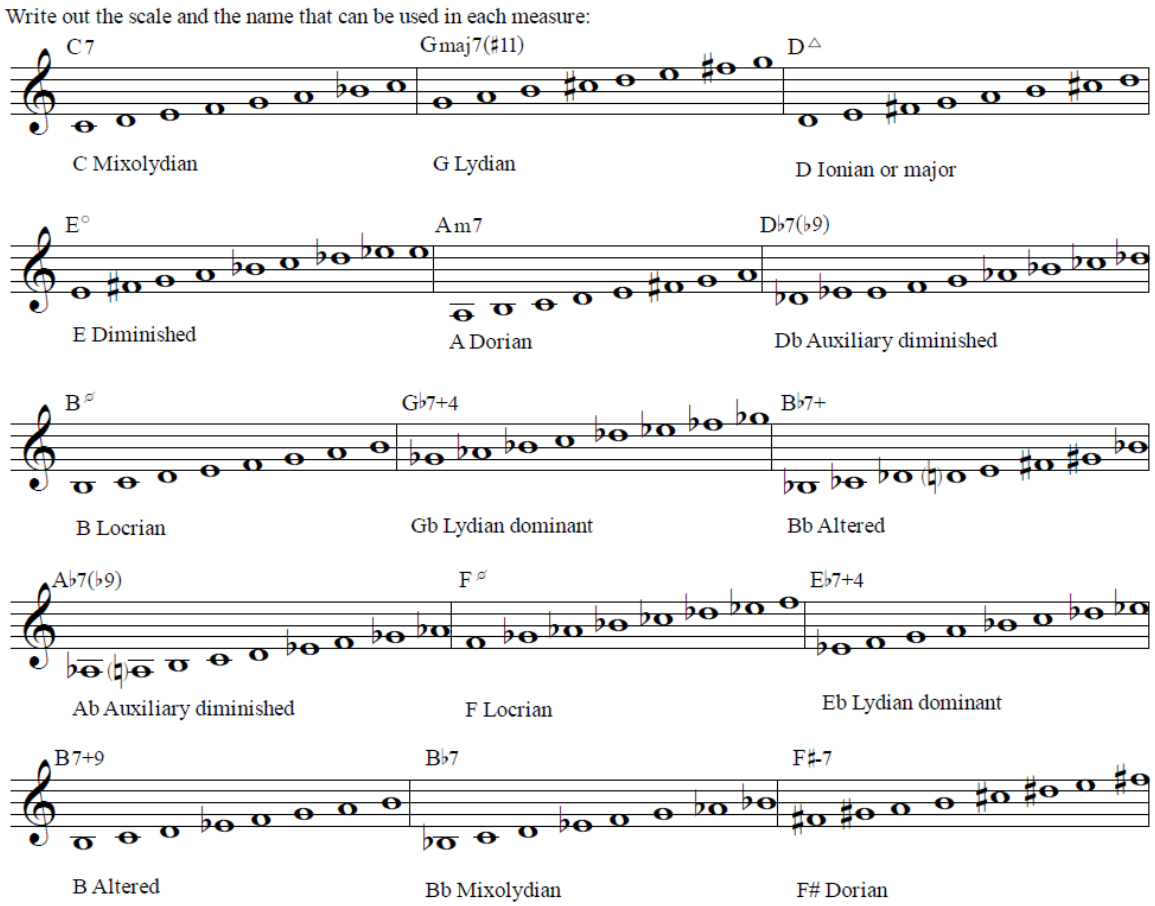



*Figure 27. Self-Check 3 Answers.*

# Chapter 4

## Conclusion

The goal of this thesis was to propose the inclusion of jazz theory topics in the undergraduate music theory curriculum, and to provide an example textbook section on a specific jazz theory topic, chord-scale theory. The literature shows that the inclusion of jazz theory topics has a low priority in music education courses, but also indicates the need for better jazz preparation for secondary school teachers. Studies revealed the importance of jazz theory knowledge and the impact it had on the success of jazz improvisation in secondary schools.

The results of a survey to discover what jazz topics, if any, are included in the music theory and music education curricula indicate that jazz theory topics are included in classical music theory curriculum in some schools, but that very few jazz theory topics are included in music education courses. A review of popular and recent music theory textbooks indicates that most include discussions of only a few jazz theory topics. Therefore, there is a need for some jazz theory to be included in the music theory curriculum. In chapter 3, an example textbook section on chord-scale theory was presented to show how jazz topics could be incorporated into the theory curriculum.

Chord-scale theory is just one topic that should be covered in theory classes. Other topics that should be integrated in theory classes include the following:

1. *How to read jazz chords/symbols*
2. *Understanding a lead sheet*
3. *The 12-bar blues form/chords*
4. *The seven modes and how to transpose them*
5. *Major and minor pentatonic scales*
6. *Whole-tone and diminished (octatonic) scales*
7. *Advanced scales*
8. *Chord-scale theory*
9. *Basic chord progressions*
10. *Jazz notation vs classical notation*.

Jazz notation and understanding a lead sheet can be taught alongside Roman numeral analysis as they both involve learning to read and write chords. The 12-bar blues form can be discussed with other simple forms of music. As shown in chapter 3, the seven diatonic modes, major and minor pentatonic scales, whole-tone and octatonic scales, and other advanced scales can be introduced after major scales, minor scales, triads, and 7$^{th}$ chords are taught. Chord-scale theory can be taught as the modes and other common jazz scales are introduced. Basic chord progressions in jazz can be taught alongside classical harmonic progressions.

Jazz theory topics should be included in the undergraduate music theory sequence since it is important for all music majors to understand this genre of music. Musicians are expected to have more versatility in the styles of music they can play. Each of the jazz

theory topics discussed above can be taught as separate units or integrated with the classical theory topics. I recommend that the topics be integrated so that the students may make connections between different styles of music, thus helping to bridge the gap between two important genres of music.

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# Appendices

*Appendix A – Recruitment Email*

University of Tennessee School of Music

A Survey of Jazz Topics in Music Theory and Music Education Curricula

**Dear [redacted],**

I am writing to invite you to participate in a survey of jazz topics in music theory and music education curricula. The purpose of this study is to discover what topics of jazz, if any, are included in the undergraduate music theory and music education curricula as well as the resources used in these classes. I am conducting this survey as part of my Masters thesis.

The survey should take only 5-10 minutes to complete. Because the questions involve inquiry of curriculum from both the music theory and music education areas, it might be necessary to consult with faculty from each of those areas to answer some of the questions. If it would be better for someone else to complete the survey, please pass this email along to that person.

The survey can be found by clicking here:
Survey of Jazz Topics in Music Theory and Music Education Curricula.

We would ask that you **complete the survey on or before March 1, 2015**.

Thank you in advance for your participation.

Sincerely,

Alexis Smerdon
Graduate Student, MM in Music Theory
University of Tennessee

Barbara Murphy, Ph.D.
Associate Professor of Music Theory
University of Tennessee

*Appendix B – Survey*



**Default Question Block**

INTRODUCTION

The purpose of this survey is to discover what topics of jazz, in any, are included in the undergraduate music theory and music education curriculum as well as the resources used in music programs across the United States.

INFORMATION ABOUT PARTICIPANTS' INVOLVEMENT IN THE SURVEY

This survey will collect data about the various jazz theory topics that might be included in your music theory and/or music education classes. This survey will take approximately 5-10 minutes to complete. Because the questions involve inquiry of curriculum from both the theory and education areas, it might be necessary to consult with faculty from each of those areas to answer some of the questions. I ask that only one person from each school complete this survey. If you are not the best person from your school to complete the survey, please forward the URL to that person.

RISKS

Participating in this survey poses no foreseeable risks.

BENEFITS

If you choose to receive a copy of the results, this knowledge will reveal how your program compares to others and may help you in the design of your course.

CONFIDENTIALITY

The information in the survey records will be kept confidential. Data will be stored securely and will be made available only to persons conducting the survey unless participants specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link participants or institutions to the survey.

CONTACT INFORMATION

If you have questions at any time about the survey or the procedures, you may contact the principal investigator, Alexis Smerdon, at asmerdon@vols.utk.edu, or 530-262-5991 or her faculty advisor: Barbara Murphy, Ph.D. at bmurphy@utk.edu, or

865-974-7549. If you have questions about your rights as a participant, contact the Office of Research Compliance Officer at (865) 974-3466.

DEADLINE

March 1, 2015

- I wish to continue with survey.
- I do not wish to continue.

How many semester/quarters of music theory do all music majors take at your school?

- 1 semester
- 2 semesters
- 3 semesters
- 4 semesters
- 5 semesters
- 6 semesters
- 3 quarters
- 4 quarters
- 5 quarters
- 6 quarters
- Other

What textbook is used in your theory classes?
Please provide author and title of the book(s).

Do you offer a jazz theory course separate from your music theory classes?

- Yes

No

If yes, do you use a text for the jazz theory class? If the answer is yes, please provide the author and title of the text in the comment area.

Yes

No

Is any jazz theory covered in classical music theory courses?

Yes

No

If yes, do you use a text for the jazz theory section of the course? If the answer is yes, please provide the author and title of the text in the comment area.

Yes

No

If you cover jazz theory topics in your music theory classes, which topics do you discuss? Please indicate all topics that are covered. If there are other topics not listed, please include them under "other".

How to read jazz chords/symbols

- [ ] Understanding a lead sheet
- [ ] The 12-bar blues form/chords
- [ ] The 7 modes and how to transpose them
- [ ] Major and minor pentatonic scales
- [ ] Whole tone and diminished (octatonic) scales
- [ ] Advanced scales including auxiliary diminished, diminished whole-tone, lydian augmented, locrian #2, and lydian dominant
- [ ] Knowing which scales/modes can be played on the different chords
- [ ] Basic chord progressions
- [ ] Jazz notation vs classical notation
- [ ] Other

Does your music education program offer:

- ○ a separate music education jazz methods class
- ○ a section of a music education class devoted to jazz methods
- ○ no jazz methods

If your music education program offers a separate jazz methods class or a portion of a methods class devoted to jazz, a what level is this class? Select all that apply.

- [ ] Lower division undergraduate
- [ ] Upper division undergraduate
- [ ] Graduate level

If you offer a jazz methods class or portion of a class, do you use a text? If yes, please provide the author and title of the text in the comment section below.

- Yes

- No

If you offer a jazz methods class or portion of a class, what topics do you cover in this class? Please indicate all topics that are discussed.

- How to read jazz chords/symbols
- Understanding a lead sheet
- The 12-bar blues form/chords
- The 7 modes and how to transpose them
- Major and minor pentatonic scales
- Whole tone and diminished (octatonic) scales
- Advanced scales including auxiliary diminished, diminished whole-tone, lydian augmented, locrian #2, and lydian dominant
- Knowing which scales/modes can be played on the different chords
- Basic chord progressions
- Jazz notation vs classical notation
- Other

Does your music department/School include jazz theory topics in any other courses (e.g., musicology, music keyboard/piano class, ensembles?)? If yes, please include areas in comments.

- Yes

No

If you include jazz topics in other classes (as marked in the previous question), please indicate which topics are covered in those classes.

- How to read jazz chords/symbols
- Understanding a lead sheet
- The 12-bar blues form/chords
- The 7 modes and how to transpose them
- Major and minor pentatonic scales
- Whole tone and diminished (octatonic) scales
- Advanced scales including auxiliary diminished, diminished whole-tone, lydian augmented, locrian #2, and lydian dominant
- Knowing which scales/modes can be played on the different chords
- Basic chord progressions
- Jazz notation vs classical notation
- Other

**Demographic information:**

The name of your university/college:

Indicate the type of school your university/college is:

- Public 4 year
- Public 2 year
- Private 4 year
- Private 2 year
- Other

Indicate the name of your music school:

- School of Music
- Department of Music
- Other

The size of your Department/School of Music:

- < 50
- 51-100
- 101-150
- 151-200
- 201-250
- 251-300
- 301-350
- 351-400
- > 400

Please indicate the areas in which your school offers different types of degrees:

| | Music | Musicology/ | Music | Bu |
|---|---|---|---|---|

| | Performance | Education | Theory | Composition | Jazz | Ethnomusicology | Therapy | Ac |
|---|---|---|---|---|---|---|---|---|
| Associate Degree (AA, AFA) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Undergraduate Minor | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Bachelor of Music (BM) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Bachelor of Arts (BA) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Master of Music (MM) or a Master of Arts (MA) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Doctoral of Musical Arts (DMA) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Doctor of Philosophy (PhD) | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

**End of Survey**

Thank you for participating in this survey!

If you would like a copy of the results, please fill out the information below.

By entering my personal information, I consent to receive email communications from the survey author's organization based on the information collected.

First Name:

Last Name:

Company Name:

Email Address:

Address 1:

Address 2:

City:

State/Province (US/Canada):

Postal Code:

Survey Powered By Qualtrics

*Appendix C – Survey with Responses*

## Initial Report

Last Modified: 02/16/2015

1. INTRODUCTION The purpose of this survey is to discover what topics of jazz, in any, are included in the undergraduate music theory and music education curriculum as well as the resources used in music programs across the United States. INFORMATION ABOUT PARTICIPANTS' INVOLVEMENT IN THE SURVEY This survey will collect data about the various jazz theory topics that might be included in your music theory and/or music education classes. This survey will take approximately 5-10 minutes to complete. Because the questions involve inquiry of curriculum from both the theory and education areas, it might be necessary to consult with faculty from each of those areas to answer some of the questions. I ask that only one person from each school complete this survey. If you are not the best person from your school to complete the survey, please forward the URL to that person. RISKS Participating in this survey poses no foreseeable risks. BENEFITS If you choose to receive a copy of the results, this knowledge will reveal how your program compares to others and may help you in the design of your course. CONFIDENTIALITY The information in the survey records will be kept confidential. Data will be stored securely and will be made available only to persons conducting the survey unless participants specifically give permission in writing to do otherwise. No reference will be made in oral or written reports which could link participants or institutions to the survey. CONTACT INFORMATION If you have questions at any time about the survey or the procedures, you may contact the principal investigator, Alexis Smerdon, at asmerdon@vols.utk.edu, or 530-262-5991 or her faculty advisor: Barbara Murphy, Ph.D. at bmurphy@utk.edu, or 865-974-7549. If you have questions about your rights as a participant, contact the Office of Research Compliance Officer at (865) 974-3466. DEADLINEMarch 1, 2015

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | I wish to continue with survey. | | 15 | 100% |
| 2 | I do not wish to continue. | | 0 | 0% |
| | Total | | 15 | |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 1 |
| Mean | 1.00 |
| Variance | 0.00 |
| Standard Deviation | 0.00 |
| Total Responses | 15 |

2. How many semester/quarters of music theory do all music majors take at your school?

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | 1 semester | | 0 | 0% |
| 2 | 2 semesters | | 2 | 18% |
| 3 | 3 semesters | | 0 | 0% |
| 4 | 4 semesters | | 7 | 64% |
| 5 | 5 semesters | | 0 | 0% |
| 6 | 6 semesters | | 1 | 9% |
| 7 | 3 quarters | | 0 | 0% |
| 8 | 4 quarters | | 0 | 0% |
| 9 | 5 quarters | | 0 | 0% |
| 10 | 6 quarters | | 0 | 0% |
| 11 | Other | | 1 | 9% |
| | Total | | 11 | |

| Other |
|---|
| Varies based on major. Between 4 and 7. |

| Statistic | Value |
|---|---|
| Min Value | 2 |
| Max Value | 11 |
| Mean | 4.45 |
| Variance | 5.87 |
| Standard Deviation | 2.42 |
| Total Responses | 11 |

3. What textbook is used in your theory classes?Please provide author and title of the book(s).

| Text Response |
|---|
| Kostka and Payne: Tonal Harmony |
| Music in Theory and Practice, Benward & Saker |
| Materials vary from class to class, but all classes are repertoire based so no class uses a textbook. |
| Kostka/Payne Tonal Harmony |
| Harmony and Context by Roig-Francoli |
| Kostka and Payne Tonal Harmony |

| Statistic | Value |
|---|---|
| Total Responses | 6 |

4. Do you offer a jazz theory course separate from your music theory classes?

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | Yes | | 5 | 45% |
| 2 | No | | 6 | 55% |
| | Total | | 11 | |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 2 |
| Mean | 1.55 |
| Variance | 0.27 |
| Standard Deviation | 0.52 |
| Total Responses | 11 |

5. If yes, do you use a text for the jazz theory class? If the answer is yes, please provide the author and title of the text in the comment area.

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | Yes | | 0 | 0% |
| 2 | No | | 4 | 100% |
| | Total | | 4 | |

**Yes**

| Statistic | Value |
|---|---|
| Min Value | 2 |
| Max Value | 2 |
| Mean | 2.00 |
| Variance | 0.00 |
| Standard Deviation | 0.00 |
| Total Responses | 4 |

6. Is any jazz theory covered in classical music theory courses?

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | Yes | | 5 | 56% |
| 2 | No | | 4 | 44% |
| | Total | | 9 | |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 2 |
| Mean | 1.44 |
| Variance | 0.28 |
| Standard Deviation | 0.53 |
| Total Responses | 9 |

7. If yes, do you use a text for the jazz theory section of the course? If the answer is yes, please provide the author and title of the text in the comment area.

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | Yes | | 0 | 0% |
| 2 | No | | 3 | 100% |
| | Total | | 3 | |

**Yes**

| Statistic | Value |
|---|---|
| Min Value | 2 |
| Max Value | 2 |
| Mean | 2.00 |
| Variance | 0.00 |
| Standard Deviation | 0.00 |
| Total Responses | 3 |

8. If you cover jazz theory topics in your music theory classes, which topics do you discuss? Please indicate all topics that are covered. If there are other topics not listed, please include them under "other".

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | How to read jazz chords/symbols | | 4 | 100% |
| 2 | Understanding a lead sheet | | 4 | 100% |
| 3 | The 12-bar blues form/chords | | 3 | 75% |
| 4 | The 7 modes and how to transpose them | | 3 | 75% |
| 5 | Major and minor pentatonic scales | | 4 | 100% |
| 6 | Whole tone and diminished (octatonic) scales | | 4 | 100% |
| 7 | Advanced scales including auxiliary diminished, diminished whole-tone, lydian augmented, locrian #2, and lydian dominant | | 1 | 25% |
| 8 | Knowing which scales/modes can be played on the different chords | | 3 | 75% |
| 9 | Basic chord progressions | | 4 | 100% |
| 10 | Jazz notation vs classical notation | | 1 | 25% |
| 11 | Other | | 2 | 50% |

| Other |
|---|
| transcriptions, patterns,etc. |
| The fourth semester of our theory sequence is split between contemporary techniques and jazz; our jazz instructor teaches his portion with his own materials |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 11 |
| Total Responses | 4 |

9. Does your music education program offer:

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | a separate music education jazz methods class | | 2 | 29% |
| 2 | a section of a music education class devoted to jazz methods | | 3 | 43% |
| 3 | no jazz methods | | 2 | 29% |
| | Total | | 7 | |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 3 |
| Mean | 2.00 |
| Variance | 0.67 |
| Standard Deviation | 0.82 |
| Total Responses | 7 |

10. If your music education program offers a separate jazz methods class or a portion of a methods class devoted to jazz, a what level is this class? Select all that apply.

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | Lower division undergraduate | | 0 | 0% |
| 2 | Upper division undergraduate | | 5 | 100% |
| 3 | Graduate level | | 0 | 0% |

| Statistic | Value |
|---|---|
| Min Value | 2 |
| Max Value | 2 |
| Total Responses | 5 |

**11.** If you offer a jazz methods class or portion of a class, do you use a text? If yes, please provide the author and title of the text in the comment section below.

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | Yes | | 1 | 25% |
| 2 | No | | 3 | 75% |
| | Total | | 4 | |

| Yes |
|---|
| Doug Beach/Jeff Jarvis Jazz Educator's Handbook |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 2 |
| Mean | 1.75 |
| Variance | 0.25 |
| Standard Deviation | 0.50 |
| Total Responses | 4 |

**12.** If you offer a jazz methods class or portion of a class, what topics do you cover in this class? Please indicate all topics that are discussed.

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | How to read jazz chords/symbols | | 3 | 75% |
| 2 | Understanding a lead sheet | | 3 | 75% |
| 3 | The 12-bar blues form/chords | | 2 | 50% |
| 4 | The 7 modes and how to transpose them | | 1 | 25% |
| 5 | Major and minor pentatonic scales | | 2 | 50% |
| 6 | Whole tone and diminished (octatonic) scales | | 1 | 25% |
| 7 | Advanced scales including auxiliary diminished, diminished whole-tone, lydian augmented, locrian #2, and lydian dominant | | 1 | 25% |
| 8 | Knowing which scales/modes can be played on the different chords | | 3 | 75% |
| 9 | Basic chord progressions | | 4 | 100% |
| 10 | Jazz notation vs classical notation | | 2 | 50% |
| 11 | Other | | 2 | 50% |

| Other |
|---|
| The class is more of a jazz per. course which helps students understand materials/resources to teach jazz in the public school. |
| Since some of this is covered in theory sequence, there is also a focus on setting up and rehearsing a jazz band. |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 11 |
| Total Responses | 4 |

**13.** Does your music department/School include jazz theory topics in any other courses (e.g., musicology, music keyboard/piano class, ensembles?)? If yes, please include areas in comments.

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | Yes | | 4 | 57% |
| 2 | No | | 3 | 43% |
| | Total | | 7 | |

| Yes |
|---|
| Piano proficiency exposes students to realizing chord progressions. |
| We offer theory and musicology electives at the grad and undergrad level which include Jazz topics. |
| Yes, we have a bit of jazz included in the 20th-c. portion of music history, but also a stand-alone elective course in jazz appreciation. |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 2 |
| Mean | 1.43 |
| Variance | 0.29 |
| Standard Deviation | 0.53 |
| Total Responses | 7 |

**14.** If you include jazz topics in other classes (as marked in the previous question), please indicate which topics are covered in those classes.

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | How to read jazz chords/symbols | | 3 | 75% |
| 2 | Understanding a lead sheet | | 3 | 75% |
| 3 | The 12-bar blues form/chords | | 3 | 75% |
| 4 | The 7 modes and how to transpose them | | 2 | 50% |
| 5 | Major and minor pentatonic scales | | 2 | 50% |
| 6 | Whole tone and diminished (octatonic) scales | | 2 | 50% |
| 7 | Advanced scales including auxiliary diminished, diminished whole-tone, lydian augmented, locrian #2, and lydian dominant | | 2 | 50% |
| 8 | Knowing which scales/modes can be played on the different chords | | 2 | 50% |
| 9 | Basic chord progressions | | 2 | 50% |
| 10 | Jazz notation vs classical notation | | 3 | 75% |
| 11 | Other | | 1 | 25% |

| Other |
|---|
| In music history, the jazz component is mostly an introduction to general aspects of style and form. |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 11 |
| Total Responses | 4 |

**15.** The name of your university/college:

| Text Response |
|---|
| [redacted] |
| [redacted] |
| [redacted] |
| [redacted] |
| [redacted] |

| Statistic | Value |
|---|---|
| Total Responses | 5 |

16. Indicate the type of school your university/college is:

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | Public 4 year | | 3 | 50% |
| 2 | Public 2 year | | 0 | 0% |
| 3 | Private 4 year | | 3 | 50% |
| 4 | Private 2 year | | 0 | 0% |
| 5 | Other | | 0 | 0% |
| | Total | | 6 | |

| Other |
|---|

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 3 |
| Mean | 2.00 |
| Variance | 1.20 |
| Standard Deviation | 1.10 |
| Total Responses | 6 |

17. Indicate the name of your music school:

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | School of Music | | 1 | 17% |
| 2 | Department of Music | | 3 | 50% |
| 3 | Other | | 2 | 33% |
| | Total | | 6 | |

| Other |
|---|
| Department of Visual and Performing Arts |
| School of Performing Arts |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 3 |
| Mean | 2.17 |
| Variance | 0.57 |
| Standard Deviation | 0.75 |
| Total Responses | 6 |

18. The size of your Department/School of Music:

| # | Answer | Bar | Response | % |
|---|---|---|---|---|
| 1 | | | 3 | 50% |
| 2 | 51-100 | | 0 | 0% |
| 3 | 101-150 | | 1 | 17% |
| 4 | 151-200 | | 2 | 33% |
| 5 | 201-250 | | 0 | 0% |
| 6 | 251-300 | | 0 | 0% |
| 7 | 301-350 | | 0 | 0% |
| 8 | 351-400 | | 0 | 0% |
| 9 | > 400 | | 0 | 0% |
| | Total | | 6 | |

| Statistic | Value |
|---|---|
| Min Value | 1 |
| Max Value | 4 |
| Mean | 2.33 |
| Variance | 2.27 |
| Standard Deviation | 1.51 |
| Total Responses | 6 |

19. Please indicate the areas in which your school offers different types of degrees:

| # | Question | Performance | Music Education | Theory | Composition | Jazz | Musicology/ Ethnomusicology | Music Therapy | Music Business/Arts Administration | Conducting | Collaborative Piano | Other | Total Responses |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Associate Degree (AA, AFA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 2 | Undergraduate Minor | 3 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 1 | 2 | 10 |
| 3 | Bachelor of Music (BM) | 3 | 3 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 9 |
| 4 | Bachelor of Arts (BA) | 2 | 2 | 0 | 1 | 0 | 0 | 0 | 1 | 0 | 0 | 1 | 7 |
| 5 | Master of Music (MM) or a Master of Arts (MA) | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 4 |
| 6 | Doctoral of Musical Arts (DMA) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| 7 | Doctor of Philosophy (PhD) | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

| Statistic | Associate Degree (AA, AFA) | Undergraduate Minor | Bachelor of Music (BM) | Bachelor of Arts (BA) | Master of Music (MM) or a Master of Arts (MA) | Doctoral of Musical Arts (DMA) | Doctor of Philosophy (PhD) |
|---|---|---|---|---|---|---|---|
| Min Value | - | 1 | 1 | 1 | 1 | - | - |
| Max Value | - | 11 | 11 | 11 | 9 | - | - |
| Total Responses | 0 | 5 | 4 | 4 | 1 | 0 | 0 |

# Vita

Alexis J. Smerdon was born in California in 1991. Throughout elementary, middle, and high schools, she participated in many extracurricular musical, dance, and sporting activities, including band, choir, musicals, soccer, cross-country, and track and field. She attended Brigham Young University–Idaho on academic and music scholarships and graduated with a Bachelor of Music degree in trombone performance in April 2013. She attended the University of Tennessee where she was as a Graduate Teaching Assistant for the trombone studio from 2013-2015. She received a Master of Music degree in trombone performance from the University of Tennessee in December 2015. In January 2016 she co-founded the Knoxville Youth Trombone Choir with colleague, Abigail Lyon. She will graduate in August 2016 with a secondary Master of Music degree in music theory with a concentration in pedagogy.