

THE COMPREHENSION OF BASIC MUSIC THEORY  
AMONG UNDERGRADUATE  
MUSIC MAJORS

THESIS

Presented to the Graduate Council  
of Texas State University-San Marcos  
in Partial Fulfillment  
of the Requirements

for the Degree

Master of MUSIC

by

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James Harvey Hickey, B.M.

2006

This thesis is dedicated to the memory of:

my grandparents

Thomas Philip Hickey, "Papa Tom" (1909-1999)  
Diana Naranjo de Hickey, "Mama Diana" (1914-1993)  
Miguel Angel Cavazos, "Papa Grande" (1901-1974)  
Lilia Caballero de Cavazos, "Mama Grande" (1911-2002)

my brother

Thomas Paul Hickey, "Tommy" (1974-1980)

and

Dorothy Hanley Tillman (1926-2003).

Though you are gone,  
I know you are present in the family that surrounds me.  
Gracias por acompañarme siempre. Los quiero mucho, y los extraño.

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**ABSTRACT**

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This thesis explores the factors that may contribute to undergraduate music majors' comprehension of music theory fundamentals. Influential factors include textbook content and communication quality, professors' teaching approaches, students' primary instruments, and suggestions offered in secondary literature. Textbooks are reviewed for their quality and content. Secondary literature – including journal articles, theses, and dissertations – is reviewed and discussed. University professors were interviewed regarding their teaching approaches. A select group of students responded to a questionnaire asking for their opinion about various concepts and their level of difficulty, preferred presentational order of concepts, and their preferences to certain teaching approaches.

## CHAPTER 1

### INTRODUCTION

Comprehension implies more than just memorization. Comprehension implies knowing something, and being able to discuss it, think about it, maybe even research and analyze it. The main difference between comprehending something and memorizing it is simply that when information is memorized, it is only intended to be remembered for a very short period of time, for example, high school students memorizing dates just to help them pass a test. But when one *comprehends*, the knowledge learned becomes a part of oneself, and one can use it to one's advantage to aid in the learning of new ideas and concepts.

When university students comprehend subject matter, regardless of their field of interest, they must use everything they can around them – all available resources, ideally – to give them what they need to advance to the next level. If students do not comprehend the fundamental knowledge of their field, how will they ever expect to advance to the levels needed to face the more serious challenges?

The author of this thesis had a strong interest in how undergraduate music majors comprehend basic music theory. Being a pianist himself, he has never had a difficult time with comprehending theoretical concepts. It is his intention to explore what he believes

are a few of the various factors that can affect a student's comprehension of the fundamentals of music theory.

The author maintains that, though many factors may contribute to a student's comprehension of fundamental music theory, this thesis is limited to the discussion of four factors. They include (1) the textbook adopted (including its language and how user-friendly it is), (2) secondary literature, (3) the professor's teaching approach (which can also be influenced by ideas, methods, and philosophies published in said publications), and (4) the students themselves (their learning styles, strengths, weaknesses, even their instruments).

As for textbooks, they are all different from each other, because they are inevitably written by different scholars who inevitably think differently about different concepts. Some textbooks are more widely used than others. Some educators may publish their own textbooks because, according to them, other texts fail to cover a concept a certain way, or other educators may feel that the language of one book needs to be corrected, and therefore they will publish other books to offer more educational options. Additionally, when publishing a textbook, the author(s) must take into account what types of supplemental material will be offered (e.g., a CD-ROM, a fold-out keyboard, both, or something else). If a CD-ROM is included, what will it consist of? Will it include exercises to serve as drills for concept mastery, or will it be limited to listening examples whose notation is discussed in the text? Within the text, how are the concepts presented? Is the language clear, concise, easily understood, or too technical? Is the book primarily for students who are taking a fundamentals course as an elective, or is its intended audience music majors needing to learn the fundamentals for the first time, or

requiring remediation? To answer such questions, the author reviewed eighteen textbooks: fundamentals textbooks as well as textbooks that are used throughout all theory core courses. These textbooks are reviewed in Chapter 2.

Another factor to consider is secondary literature. This includes journal articles, Masters theses, doctoral dissertations, or anything else that deals with one particular topic and how it relates to other, possibly more general topics. The author researched and found over twenty publications that are, in one way or another, applicable to the comprehension of fundamentals. These publications are reviewed in Chapter 2.

These publications can influence another equally important factor: a professor's teaching approach. Will the professor implement research-based suggestions from the secondary literature into her / his classroom? Will she / he adhere to textbook explanation or allow her / his own professional opinions and concerns supersede what the textbook recommends? How much will the professor work with the textbook or secondary literature suggestions? To what extent will such publications work for the professor? To answer these questions, the author interviewed four music theory professor, who either teach or have taught a music theory fundamentals course, particularly at Texas State University-San Marcos.

Most importantly, all the work done (i.e., textbooks written, secondary literature published, professors' research) culminates ultimately in students' comprehension of the material. Will they understand it? Does the chosen textbook serve them well? Do they get lost or confused? Is their primary instrument of any avail to their success in a fundamentals course? Do they have a preference of concept order? Do they all find the same concepts to be easy or difficult? To answer these questions, the author, with the

help of his advisor, created and administered a short questionnaire to music students enrolled in three different levels of music theory classes at Texas State University-San Marcos. Their responses will be the primary focus of this thesis. The author will explore all of the aforementioned factors in detail, especially how they apply to the comprehension of basic music theory among undergraduate music majors.

## CHAPTER 2

### REVIEW OF COLLEGE TEXTBOOKS

#### **2.1. Introduction to the Review of College Textbooks**

Varying factors influence how a student comprehends music theory, and each factor plays a distinctive role. If manipulated correctly by the professor, the effects should be beneficial to the students' comprehension of the subject matter. Learning more about these varying factors requires us, first of all, to analyze how common college textbooks introduce music theory fundamentals. But fundamental music theory textbooks and workbooks are only one of the influential factors. Many students may not take the initiative to do work, unless it is assigned by the professor. Whether the material being discussed in class makes any sense is at the discretion of the professor.

But professors' influence is also just one factor of students' comprehension. Is the student's instrument to any avail when studying for a theory test, or is it only the pianists who have the answers at their fingertips? Most fundamentals textbooks are designed with a classroom setting in mind. Music theory could be seen as a relatively abstract subject matter; and it may be necessary for a professional who knows the subject matter to guide the students, and to relate theory to music practice. Though self-teaching textbooks do exist, they may not take the collegiate approach to teaching music theory that professors will prefer. But every varying factor has its own responsibility to uphold, in order to make the new and abstract clear for young minds.

From a textbook, we can derive what students are learning, how materials are explained, how they are organized, and so on. Inevitably, there is no perfect way to teach music theory; much less is there a theory textbook that explains all aspects of the basics perfectly. Is there even a “perfect” way to teach the subject matter? Probably not. For this reason, there are many different textbooks that cover the same topics and concepts. By comparing textbooks, it might be easier to focus on differences rather than on similarities. However, both are important: while major differences might point out unique underlying fundamental approaches, similarities may point to common ways of the comprehension of theoretical concepts. Even textbooks that have advanced into further editions may either be more or less thorough in how they cover the material. For example, one of the more widely used textbooks is *Tonal Harmony* (Kostka & Payne 2004). Already in its fifth edition, some students may find its jargon too technical. On a good point, the examples it offers are more diverse (but very short). Despite the fact that a multitude of criticisms could be written about the Kostka & Payne text, that is not the focus here, simply because this text assumes the students have prior knowledge of music theory basics. However, the fundamentals introduced – very briefly – by the authors at the beginning of their textbook, will be discussed later.

## **2.2. *Practical Beginning Theory* by Benward, Jackson, & Jackson (2000)**

To begin, attention will be given to the fundamentals textbook *Practical Beginning Theory* (Benward et al, 2000). Already in its eighth edition, this book offers two CD-ROMs to use in conjunction with the text. Well organized, the text is divided into five Parts, which are each subsequently divided into shorter Chapters. Part I covers the

physical properties of music, giving the student the chance to see music from a scientific point of view. Part II discusses taking music and combining its components to formulate tonality, scales, key signatures, intervals, and triads. Parts III, IV, and V, respectively, cover rhythm and meter, melody, and harmony. After Part V, three appendices (the first covering musical forms, the second providing supplemental keyboard harmony, and the third offering a fingerboard harmony for guitar), a glossary, a musical examples index, and a general index close the text. The one tool the textbook lacks that accompanies other textbooks is a fold-out keyboard. Although such an addition may be unnecessary, considering the inclusion of the two CD-ROMs, it would probably prove only beneficial to the student if she / he, upon learning the basics, has a keyboard to use as a reference for applying the concepts discussed.

To delve into further detail regarding the layout of such textbooks, it is important to investigate the order in which particular concepts are introduced. In this text, Part I (Chapters 1 through 5) goes over the physics of sound, and then immediately discusses the notation of pitch. Then, various pitches are associated with their placement on the keyboard. After covering pitch notation, rhythmic notation is discussed, followed by additional notational signs (that to some professors may seem frivolous to mention early: namely dynamic markings, tempo markings, etc.). Part II explains notated pitch and shows students how it is organized in scales and triads. It is within the twelve chapters (6 through 17) of Part II where one very important concept – intervals – seems to be taught in segments, as opposed to all at once. For instance, the first intervals to be mentioned are the seconds, then the unison, octave, and thirds, followed by the perfect fifth. Once the perfect fifth is discussed, the authors take advantage of the students' new exposure to the

fifth and bring in the discussion of the easily complicated Circle of Fifths (including major key signatures). After the fifths, one might think intervals would be continued, but instead, the minor scale is discussed. The minor scale, being a topic that could take up at least a week's worth of time to cover, is only lightly covered at this point in the text. Upon its being mentioned at the beginning of Chapter 11, the authors show the whole-step / half-step pattern that forms the scale, including in the discussion the connection to its label of being a *natural* minor scale. After this labeling, there is an additional Circle of Fifths, showing the minor scale pattern of the order of minor keys (i.e., not even giving the number of sharps or flats in the key signature). After discussing the minor Circle, there are two very brief explanations of *relative* and *parallel* scales, including a chart related to the Circle that provides the key signature information to the major and minor keys (except *only* through the relative keys' relationships). The explanations adhere to only a short paragraph for relative scales:

“Major and minor scales that share the same key signature are called **relative scales**. G major and e minor both have a key signature of one sharp (F sharp); therefore, G major is the *relative major* of e minor, and e minor is the *relative minor* of G major. The relative minor scale always begins a *minor third* below the major scale with the same key signature.” (Benward et al, 2000, 96)

and for parallel scales:

“Major and minor scales that share the same *tonic note* are called **parallel scales**. *C major*, with no sharps or flats, and *c minor*, with three flats, are parallel scales. The key signature for the *parallel minor scale* is the same as that of the major key a minor third above the tonic of the major scale.” (Ibid., 96)

Such explanations, as short as they are, are very accurate. In fact, the shorter and more accurate the explanation, the greater the likelihood of a student

comprehending the concept completely. If a student has less to remember and can remember it *all*, their achievement will improve.

Once that is finished, intervals return, but only briefly. Fourths, fifths, and the tritone are covered, followed by the minor triad. After the triad comes the sixths, sevenths, and then the augmented and diminished intervals. The remaining major scales are then discussed, followed by various scales, namely the augmented, diminished, and whole-tone. Ending Part II is intervallic inversions and compound intervals.

Now, regarding the placement and order of appearance of these very essential concepts, is the order of concepts an appropriate one to follow? Major and minor intervals are being discussed both before and after the minor scale is even mentioned. Should minor intervals wait to be covered until they are commonly applicable (minor scales), or would it be more efficient to include *all* forms of intervals, followed by an array of various applications of each interval? Similarly questionable is the Circle of Fifths. It is introduced after its respective interval (the fifth) is explained. But once the discussion on the Circle is over, the authors begin discussing the minor triad, before continuing with the remaining intervals. At the beginning of this Part, the major scale is the second concept to be discussed (after the introduction of the tonal center). The major scale's tonal "fraternal twin," the minor scale, is not mentioned until much later, in the latter half of Part II. One might see this delay in theoretical discussion as necessary, so students may first grasp the concept of the major scale firmly before proceeding with a new scale. But if that is the case for delaying the minor scale's introduction, why are other scales, such as the whole-tone scale mentioned immediately thereafter? Some professors may prefer to mention "alternative" scales after intervals and major and minor

scales have already been mastered. Others may find it more pedagogically appropriate to introduce similar topics closer together. In this context, however, the layout for Part II is probably best, because the basics of music theory are so essential; one concept must ideally be mastered before moving on to the next. That may be why the minor scale is mentioned later on in Part II, as opposed to introducing it together with the major scale. With this “space” between concepts, it offers the students the chance to indeed *comprehend* a concept. Once they have gained understanding of it and have advanced, then there is the opportunity to review what was learned and introduce it in a similarly applicable manner.

To continue with the remaining three Parts of the text, Part III adheres to a simple topic (with its own respective complexities): rhythm and meter. This short four-chapter (18 through 21) portion of the text initially covers simple meter in its three forms: duple, triple, and quadruple in the first chapter alone. Following are discussions on syncopations and triplets, before compound meter is finally discussed. Moving on, Part IV, the shortest Part, spanning three chapters (22 through 24), simply covers melody in more than one way. First, melody is discussed as movement and rest. (Additionally, it is in *this* chapter that the scale degree names are first introduced.) The following discussion consists of differing melodic motions, such as conjunct and disjunct. Finally, a more formal (and somewhat unexpected) approach to rhythmic and melodic motives, repetition, and sequence is discussed. Would it not be more pedagogically appropriate to leave formal analytical discussions in the context of a more applicable class? Form should probably not be discussed in an essentials worktext (i.e., a combined workbook and textbook).

Finally arriving at Part V, the very important topic of harmony is discussed over the remaining six chapters (25 through 30). In its given order, first to be discussed are triads' arrangements and their successions. Following this are non-harmonic tones, then harmonizing a melody, and additional harmonies, including the I, ii, ii<sup>7</sup>, IV, V, and V<sup>7</sup> chords. Part V ends with a discussion of chord symbols, and how they are applied to jazz, blues, and popular music.

Contrary to other CD-ROMs, Benward et al (2000) consists of a two-disk set of tracks for the ear-training exercises found in each chapter, except Chapters 2 and 3. The latter chapters are excluded, because the ear-training exercises only require, apparently, professor-student participation.<sup>1</sup> In other words, the workbook gives the professor directions regarding what to play for the students, and how they should ideally respond. Exercises in the CD-ROM range from instructing the students to identify, in their workbook, the higher of two consecutive pitches, identify major, minor, diminished, and augmented triads, listen to a chord progression and identify a certain quality when they hear it, and other similar activities.

Clearly, the organizational (and pedagogical) layout is unique to this fundamentals worktext (a combination textbook / workbook). Despite that, the fact that this book is a *workbook* actually makes it somewhat similar to other fundamentals textbooks in that it provides a good, "plain English" discussion of the concept at hand, and then allows, within itself, the chance for students to practice what they have just been heard in the lecture. The book is both a textbook and a workbook: learn it, and then apply it. This layout is particularly important, due to the importance of the fundamentals of

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<sup>1</sup> One may find this very unnecessary, since all the other ear-training exercises can also simply rely on professor-student participation.

music theory. Unless a student can grasp the fundamentals to the point at which the knowledge of concepts becomes second nature, a student may struggle to survive in core music theory classes later.

### **2.3. *Foundations of Music and Musicianship* by Damschroder (2006)**

Now in its third edition, *Foundations of Music and Musicianship* (Damschroder 2006) is another fundamentals text to be reviewed. Highly organized, the book is divided into two Parts, each consisting of six Chapters, and each chapter further divided into three sections: Pitch, Rhythm, and Activities. Within the Activities portion of each chapter, the students will find exercises to apply what they had just learned, and with the convenience of perforated pages, the professor has the freedom to collect assigned work, if she / he so chooses.

Upon first opening the book, the students and professor will find a foldout keyboard that, in contrast to the second edition of the text, is attached to the book. The third edition of the fold-out keyboard in Damschroder (2006) is dissimilar to some other textbooks with foldout keyboards in that the note names are printed on the keys (including the enharmonic spellings on the black keys). In this way, the keyboard differs from the other few textbooks that also provided a keyboard for reference, but compares to *Introductory Musicianship* (Lynn 2007) in providing the note names – and enharmonic spellings – on the keys. The unique feature about the keyboard is that above it, there is a grand staff giving the proper notation for each white key (from C<sup>2</sup> to C<sup>6</sup>).

Despite being a very appropriate resource for freshman music majors and minors, the textbook's primary audience is the population of students who are only taking a music

class to fulfill a fine arts requirement (Damschroder 2006, xiii). A CD-ROM accompanies the text. Its use, as Damschroder insists, enhances the learning experience, particularly for those students who are non-music majors.

The CD-ROM, designed by Tim Koozin, covers all twelve chapters. For each chapter, there are the appropriate drills and a list of aural examples from the book coming from the Activities portion of each chapter. Each chapter's set of drills consists of twenty-four questions graded on a 100 point scale. The drills can be stopped at any moment, and at the point they do, the student is then given the choice to either print out a grade report based on her / his work, or continue to the main menu and choose another activity. The questions' answer opportunities vary depending on the question: (1) either yes / no, (2) multiple choice, or (3) notation. Though it seems the CD-ROM's features may appear to be a great combination with little – if any – shortcomings, the grading technique for the drills is a shortcoming in itself. Rather than grading consistently on students' first responses (the way normal assessments should work), a student can score 70% if, after guessing incorrectly on each question the *first* time, they get the answer correct on the second, third, fourth, (and so on) attempt. Technically, if this is the case, it is nearly impossible to “fail” the activity with anything below 70%. This grading approach can be viewed both positively and negatively: positively, the drills are just that – drills – and not official tests with which the student's average will be calculated (unless the professor should so choose); negatively, it is *because* they are drills that the grading should be as strict as the grading for an actual test. When a student writes her / his answers on the test and submits it to the professor, the student's time is up, and she / he will then be assessed. From that point onward, through the submission of their exam, the

student has indicated that she / he has done all she / he knows how to do. With a grading system as on this CD-ROM, it gives the student a false impression that she / he does not need to study or improve, when, in reality, the student needs more practice. Students are students because they are learning to get the answer right on the *first try*.

With the aural exercises, the student has the choice to adjust the tempo to the example she / he is listening to, or even change the instrument (though still synthesized) the example is played with. Each example may be played as many times as the student may deem necessary. There is no grading involved with the aural drills.

The textbook, after listing the table of contents, begins with a message to both students and professors. In the preface to the students, Damschroder simply informs the student as to what she / he should ideally get out of the music course, and how the book is catered to explain concepts as succinctly as possible. The student is simply informed about how the textbook is designed to *help* the student, rather than make the course more difficult. In the preface to the professor, the author mentions how the book discusses concepts, what audience the text is intended for, what features should be made use of despite their “optional” availability, and most significantly, the new features and revisions made to the text that make it the third edition, including the way that every chapter consists of the same amount – approximately – of new information, so the students are involved in a quantitatively consistent learning process throughout the book.

To briefly review the order in which concepts are discussed, it is important to remember that the book is divided into two Parts, with six chapters in each and three sections per chapter: Pitch, Rhythm, and Activities. Each Activities-section consists of four subsections: laboratory work, pitch exercises, rhythm exercises, and audio exercises

(for CD-ROM use). The Pitch and Rhythm sections of each chapter end with a useful “Tips for Success,” which offers students “quick and easy” methods to arrive quickly at the answer after already learning the reasoning behind it. Very simply, Part I covers intervals, scales, and triads. Part II covers chords and chord progressions.

Beginning Part I, Chapter 1 deals with the piano keyboard in the Pitch section, as well as quarter and half notes in 4/4 in the Rhythm section. Chapter 2 discusses intervals and triads in C as well as 2/4 and 3/4 meters. Chapter 2 explains the F and G major scales and rests. Chapter 4 is concerned with all three minor scales, in addition to eighth notes and rests. Chapter 5 introduces keys with more accidentals in their signature, and upbeats and repeats. Chapter 6 discusses the five interval qualities and compound meter.

Concluding Chapter 6 is another distinguishing feature of the text: a practice midterm exam.

Part II continues the fundamentals excursion with Chapter 7 covering triads and chords as well as sixteenth notes and rests in simple meters. Chapter 8 focuses on chordal inversions and reviews sixteenth notes, but this time with an emphasis on rests in compound meters. Chapter 9 looks at chordal analysis and triplets. Chapter 10 pays attention to the leading tone in both chords and scales, and syncopation. Chapter 11 talks about chord progressions in major keys, and ties. Chapter 12, then, appropriately taking a cue after Chapter 11, discusses chord progressions in minor keys as well as meters with half-note beats. Concluding the abundance of fundamentals explanations, a practice final exam follows at the end of Chapter 12. After the practice final exam, an extensive appendix features important miscellaneous information: additional meters, chromatic scales, clefs, conducting patterns, enharmonic keys, pop music symbols, precise pitch

designations, seventh chords and their respective inversions, and transposition. In addition to including the expected glossary and index of terms, the book provides two more sections: scores for music analysis, and the solutions to the exercises given throughout the book.

All in all, Damschroder (2006) proves to be a good source to use to practice what is taught. Students have a plethora of referential material (with the keyboard alone that goes as far as not only giving note names but showing their proper notation), a helpful and very user-friendly CD-ROM, a balance between the logic behind the concepts explained in the chapters, and a smaller section of tips and tricks to remember concepts more easily, and so on. Compared to its former edition, the third edition of Damschroder (2006) proves to be more informative, more *insightful*, and more resourceful. One of the main goals the author has, just like other fundamentals authors, presumably, is to explain the fundamentals well enough so that even those taking the course to satisfy that fine arts requirement will be intrigued enough to enter and further explore the music world.

#### **2.4. *A Creative Approach to Music Fundamentals* by Duckworth (2007)**

In regard to the educational features a textbook has to offer, *A Creative Approach to Music Fundamentals* (Duckworth 2007) – in its ninth edition – offers both a foldout keyboard and a CD-ROM. The foldout keyboard features a four-octave span from C<sup>2</sup> to C<sup>6</sup>. Each key is labeled accordingly (and the black keys, enharmonically) with a vertical dotted line connecting each key to its correct notation location on the grand staff provided above the keyboard. Additionally, the second octave on the keyboard displays guitar chord graphs above and below the given key (e.g., above for a C major chord and below

for a C minor chord). Considering the CD-ROM, this offers a technological approach to supplemental learning and enrichment. It is useful, beneficial, and can also help the student by taking her / him out of the (at times) mundane world of textbook readings. The CD-ROM, titled “Focus on Fundamentals,” is a combination CD-ROM that allows the student to participate in interactive activities corresponding to the respective chapter. Instant feedback is available, and answers can be submitted to the professor electronically. Also, musical examples are available for the student to listen to as another form of educational enrichment. Activities are available as well as pre-tests (which can prep the student for the classroom paper examination).

Duckworth begins the text with a preface, in which he gives separate messages. The first addresses the students. This is an ideal way to begin a book: discuss the book’s intentions with those who will be learning from it – with the help of their professor. In this address to the students, Duckworth makes the students aware that *he* is aware of the way music has changed in the past decades, from the 12-tone row of the early twentieth century, to rock and roll, pop songs, love ballads, and so forth (the music that is mass disseminated). So what is his point in his address? He states: “To put it more succinctly, musical styles change, the fundamentals do not” (Duckworth 2007, xv).

Moving on in his Preface, Duckworth discusses the contents of the textbook: what it consists of, and how its components serve the students’ learning abilities best. It is here that he mentions the enclosed foldout keyboard. Here, the author also mentions the enclosed CD-ROM and explains its purpose very clearly:

“In addition to the text, which includes written examples to test your musical intelligence, aural examples to help you practice your musical skills, and periodic quizzes to measure your progress, there is a fold-out keyboard at the [front] of the book to help you learn the

notes, and a CD-ROM, called *Focus on Fundamentals*, containing both practice materials and sound files of some of the examples in the book. There is even a website that you can visit.” (Ibid., xv-xvi)

Duckworth is clearly aware of students’ individual learning strengths and shortcomings. This awareness is what this thesis is based on: students’ individual comprehension in conjunction with classroom learning of fundamentals concepts. The author then addresses the professor, stating simply: “This ninth edition . . . has been designed to give each teacher as much flexibility as possible in choosing and customizing topics and activities for their class” (ibid., xvi).

Following the Preface, the author includes a five-part Introduction. In order, they are titled “The Elements of Music,” “The Characteristics of Musical Sound,” “Musical Talent, Musical Knowledge,” “A Theory of Music,” and finally “How to Practice.” The author’s language throughout, though casual and conversational, is professional and friendly.

This text discusses the fundamentals of music in fourteen chapters, with five progress-checking sections called “Focus on Skills” spread throughout text, appearing after Chapters 2, 4, 7, 10, and 13.

Maintaining the consistency of the clarity of the language, Chapter 1, titled “The Basics of Music,” covers the basics of the basics: rhythm, pulse, meter, measures, note values, rests, pitch notation, clefs, the keyboard (with separate discussions regarding the white keys and the black keys), and finally, accidentals. Uniquely, however, every chapter ends with a “Focus” – a short discussion regarding how to apply, what has been learned to future possible activities that will either be assigned or encouraged to engage in. In the first

Focus, for instance, students are asked to bring in a piece of sheet music, so it may be discussed among the class; using the newly learned concepts, the students are asked to identify anything in the music they can, based on what they have already learned.

Two very short chapters – 2 and 3 - discuss rhythm. Chapter 2 focuses on simple meter, but also discusses dotted notes, time signatures, how to count in a simple meter, common versus cut time, and tempo. Chapter 3 focuses on compound meter, ties, syncopation, and repeat signs.

Chapter 4 takes care of pitch: enharmonic pitches, ledger lines, octave signs and identification (i.e.,  $C^3$  and  $C^5$  and their respective locations both on the keyboard and on the staff), stems, dynamics, and “How to Read a Musical Map” (ibid., 68). Here, the author illustrates the idea of a musical map: “[Music may] contain notational shortcuts – space-saving devices indicated by a variety of symbols and abbreviations. If you understand the code (recognize the symbols and abbreviations), then reading the musical map is easy. But if you don’t, you can become hopelessly confused” (ibid., 68).

Chapter 5 touches upon the concept of the major scale. Duckworth discusses scales as interval patterns, elements of the major scale, naming the scale degrees, and ear training (where even the concepts of relative and perfect pitch are mentioned).

Chapter 6 introduces major key signatures (both sharp and flat). The author also makes it a point to discuss enharmonic keys. After those are discussed, an explanation of the Circle of Fifths is provided as applicable to major keys. While in the context of

tonality, Duckworth veers off slightly and discusses, at the end, counting for triplets and duplets.

Chapter 7 simply centers its attention on intervals, interval identification (through size and quality) followed by compound intervals. The chapter closes with harmonic inversions of intervals.

In Chapter 8, minor key signatures are discussed. Similar to only two chapters prior – in that it is only stemming *from* the concept of major key signatures – minor key signatures are first discussed as related keys to those of their major counterparts. The parallel key concept then follows the relative key discussion. The minor key signatures – both the “sharp” and “flat” key signatures – are discussed in their entirety with both visual aids (how they actually look on a grand staff) and a table, simply providing the key name and the number of sharps / flats per key. Thereafter, a minor Circle of Fifths is provided.

Chapter 9 returns the reader to the concept of scales – minor scales. The minor scales, appropriately, are discussed in all three forms: natural, harmonic, and melodic. After beginning discussion over the physical nature of the natural minor scale (i.e., the arrangement of whole-steps and half-steps that give the natural minor scale its unique sonority), a chart is given, listing the intervals that pertain to both natural minor and major scales. This way, students are able to see, mathematically, how the differences in half-step number that create the differing intervals make up the unique sonorities of the scales. The explanatory contrast between the two chapters (Chapter 5 on major scales and Chapter 9 on minor scales) accounts for a thought-provoking observation: Chapter 5 discusses the concepts of intervals (half- and whole-steps), scales as interval patterns,

elements of the major scale, the scale degree names, and, finally, ear training. Within Chapter 9, after discussing the three types of minor scales, two other concepts are given attention: minor scales in musical situation and sight-singing of minor scales. But what makes the minor scale so important that it warrants a discussion about the scale in musical situations? The author explains:

“Consider for a moment the names *harmonic minor* and *melodic minor*. These names give us a clue as to why and how composers might use various versions of the minor scale within the same piece. Remember that the harmonic minor version creates a real leading tone a half step below the tonic, and that this, in turn, creates slightly different chords and stronger harmonies. The harmonic minor form of the minor scale, therefore, is used by composers primarily to create particular chords and harmonic progressions. The melodic minor version, on the other hand, deals with the difficult interval of the augmented second, and is used mainly in melodic situations ... Just keep in mind that the sixth and seventh degrees of the minor scale are unstable, and you must look *inside* the music to be certain which form is being used.” (Ibid., 176)

The “unstable” sixth and seventh scale degrees of the minor mode are changeable by half-steps. Still, the scale maintains a minor quality. Moreover, Chapter 5 did not discuss sight-singing<sup>2</sup>, so why is Chapter 9 making note of it? The reason is due to the varying ways of using solfège syllables when singing the minor scale. There are two systems: *do*-based minor and *la*-based minor.

Remaining in the realm of scales, Duckworth brings the reader to Chapter 10, a short chapter discussing only the pentatonic scale (major and minor), as well as the Blues Scale. The pentatonic scale, according to the author, is potentially highly ambiguous,

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<sup>2</sup> In this textbook, when the author mentions “sight-singing” – which is supposed to imply singing at first sight – he means singing in general while reading the music.

with one interval being larger than a whole-step. Additionally, the pentatonic scale possesses a unique sonority due to its lack of any half-step presence.

Chapter 11 devotes itself to triads: their basic structure (major and minor), open / closed position, and augmented / diminished. Further, the discussion includes scales, triad inversions, and how to label them.

Chapter 12 brings students to a new level of analysis in a triadic context, when Duckworth applies triads to a musical context. Triad labeling is introduced (through Roman numeral analysis, chord symbols, and guitar tablature), followed by seventh chords (dominant, diatonic, and their inversions). The chapter closes with instructions of how to recognize triads as block chords or arpeggiations.

Chapter 13 builds on triads and seventh chords, and, with them, discusses chord progressions. Here, Duckworth explains tendency tones, the dominant-tonic relationships, cadences (imperfect authentic, perfect authentic, plagal, and deceptive), simple chord progressions (two to three chords in length), and 12-bar blues.

Now having taught the students everything about the fundamentals (though omitting figured bass), Duckworth's final chapter, 14, challenges students to write a song using primary and secondary chords, the harmonization of melody, and one of four forms: strophic (conceivably 12-bar blues), binary, ternary, or 32-bar song form.

Closing the text, the author provides twelve Appendices. They offer additional information regarding already-learned concepts that are applicable to the enrichment of the students' musical knowledge. Respectively, they contain: (A) graded rhythms for counting and performing; (B) graded world rhythms in two and three parts; (C) syllables for sight-singing scales and modes; (D) graded melodies for sight-singing and playing;

(E) chromatic scale and major scale fingerings for keyboard instruments; (F) the C clef; (G) other scales and modes; (H) transposing the modes; (I) a brief introduction to timbre; (J) a brief discussion of acoustics; (K) basic guitar chords; and (L) using the enclosed CD-ROM titled “Focus on Fundamentals.”

Overall, with very clear language, strong organization throughout, lots of opportunities and real musical situations for students to practice what they learn, and a CD-ROM to assist the students at their own pace outside the classroom, Duckworth has clearly put a strong effort into making music theory’s fundamentals a more easily understood subject in music academia.

### ***2.5. Music Language and Fundamentals by Gretz (1994)***

Unlike many books, Ronald Gretz’s *Music Language and Fundamentals* (1994) supplies neither a fold-out keyboard, CD-ROM, nor a website for additional instruction or reference materials.

This thirteen-chapter textbook is, as Gretz points out, “designed for a beginning music education major or a non-music major” (Gretz 1994, ix). Each chapter is made up of two parts: a primary section and an additional section. The last chapter, 13, is a cumulative review of all that has already been discussed throughout the text with particular regard to pitch, meter / rhythm, and harmony. The primary section of each chapter focuses on reading, identifying, and writing music notation. The additional section consists of various related exercises to promote the practice of the discussed material, much like the average workbook. These exercises are also comprised of keyboard activities (for piano lab professors), and may even address miscellaneous

concepts (i.e. double accidentals, exercises with either the half note or eighth note as the beat, etc.).

To begin, Chapter 1 focuses on the notation of pitch. Here, the “musical alphabet” is introduced, along with pitch location, clefs (bass and treble), ledger lines (and their rationale), the grand staff, and octaves. A short Chapter 2 pays attention to accidentals, enharmonic notes, spelling, and whole- and half-steps in both chromatic and diatonic contexts. Chapter 2 discusses the notation of rhythm, including note parts, note types, flags, stems, their staff placement, rules for adding stems, beat / meter, measure lines, conducting patterns, simple meters, ways in which pitch duration can be changed, the anacrusis, and finally, rests. Appropriately following these rhythmic discussions, Chapter 4 talks about rhythmic patterns, beaming notes, and the visualization of patterns in two contexts: with rests, and when notes are tied.

Chapter 5 takes the focus off notes, their construction and placement, and discusses the major scale, its properties, and tetrachords. The chapter also provides two methods for writing the scale (either using the tetrachord, or using the major scale’s properties). It even offers three reasons for the use of different scales: (1) *range* varies with every voice and instrument, (2) *tonal color*, making some scales “brighter” than others, and (3) *variety*. Different words can all mean the same thing, but they add variety to one meaning. Chapter 6 discusses key signatures and melody writing. One of the longer chapters in the book, it starts with sharp key signatures, elaborates on the order and placement of accidentals as well as the identification of the key. The discussion moves to the flat scales and covers the same concepts, before introducing the major Circle of Fifths, added accidentals (those within the music but *not* in the key signature),

and “safe” accidentals, which simply confirm which note is to be played, even if already designated in the key signature. Gretz then discusses what makes a melody good and provides melodies that are both easy to sing and remember.

Chapter 7 covers minor keys: all three forms, a minor Circle of Fifths, the identification of minor key signatures, an explanation to both compare and distinguish between major and minor keys, as well as distinguishing between the three forms of minor. Chapter 8 finally introduces a topic that most textbooks would have already discussed by then: compound meters. Here, the chapter discusses rests, beaming, rhythmic patterns (which is covered most extensively among the concepts in this part), and triplets. Chapter 9 focuses on intervals. It discusses their purpose and identification with regard to quantity and quality, and includes a key signature approach in the discussion as well as an explanation of a method of identification. Gretz also talks about perfect intervals, the tritone, compound intervals, consonance versus dissonance, and “quality adjustment” of perfect and major / minor intervals.

Chapter 10 discusses chords: triads and their types, how to identify and write them, their corresponding names, identifying them within a key, as well as their relationships in a major key or in harmonic minor. Chapter 11 goes a step further and includes chord inversions and seventh chords, their purpose, a discussion of the dominant seventh chord, and a description of the practice of inversion notation with Roman numerals. Chapter 12 explains musical structure and form with cadences, phrases (antecedent-consequent), as well as both binary and ternary forms. As mentioned in the preface, Chapter 13 is a cumulative review in relation to pitch, rhythm, and harmony.

Bringing the book to a close are three appendices: (1) Making Music “Musical”; (2) Tempo Indications; and (3) a Guitar Chord Chart.

This book is unique in its approach of the teaching of fundamentals, as it was specifically written for non-music majors and music education majors. This is actually the only book reviewed in this thesis to specify that it was written for music education majors. Further, some concepts that should probably have been discussed early in the book were not explained until much later: compound meter, minor keys, and intervals. Other books would have made these concepts among the first to be discussed, especially intervals, but that discussion is put off not only after all discussions about scales and keys, but after compound meters as well. Despite all the positive qualities it may boast in the preface, the concept discussion order may seem a bit unusual, if not unconventional. However, it would be illogical to say or assume that the author did not find any logic in which topic to discuss first. All authors will write their book based on what they think is best – yet, it is another varying factor affecting the comprehension of music theory.

## **2.6. *Basic Materials in Music Theory: A Programed Course* by Harder & Steinke (2006)**

Probably the most unique approach to teaching the fundamentals the author of this thesis has ever seen, Paul Harder and Greg Steinke have put together a programed course to teach the fundamentals of music theory.

Made up of eleven chapters, three appendices, and providing a CD-ROM for audio examples and ear-training exercises, the chapters of *Basic Materials in Music Theory: A Programed Course* (2006) are organized in *frames*. Every page of the text is

divided into two columns. In the right column, a question is given and provides a visual aid (if necessary), followed by a blank for the answer to be filled in. The left column provides the answer. Before starting the text, the student is advised to use something to cover the left column, and to use the answers provided to check her / his work. Each page consists of at least two frames, numbered in order, to deter the student from skipping around. This way, the information builds on itself and challenges the student to literally expand her / his knowledge step by step. Each chapter ends with a summary and a set of master frames, designed to be a comprehensive review of the chapter, followed by supplementary assignments and, finally, ear-training activities. In fact, prior to the start of Chapter 1, the student will find an “Answer Cover” page. On it, the student finds a small, vertical, non-labeled three-octave keyboard. The student is encouraged to use the keyboard as a cover for the answers found in the left-column frames of the subsequent pages (and / or a potential reference).

Chapter 1 discusses the basic materials of music with regard to time and sound, sound waves, pitch, intensity, timbre, and the harmonic series. Chapter 2 covers the notation of pitch, including the staff, the basic scale, clefs, ledger lines, the grand staff, the *ottava*, half- and whole-steps, accidentals, enharmonic notes, the chromatic scale, and pitch designations. Chapter 2 covers time classification with the beat, simple and compound meters, borrowed divisions, and subdivisions of the beat. Chapter 4 contains note and rest values and a discussion of their relative values, the dot (as part of dotted notes), divisions of dotted and undotted notes and rests, their subdivisions, the unit in simple and compound time, metronome indications, and terms indicating tempo

expressions. Chapter 5 explains time signatures of both simple and compound meters, their relations to meter classification, ties, rhythmic patterns, and syncopation.

Chapter 6 focuses on intervals: harmonic and melodic intervals, their numerical classifications, compound intervals, qualitative classifications, inversions, and enharmonic intervals. Chapter 7 attends to the basic scales, including their structure, modes, and the tonic note. Chapter 8, finally, discusses the major scale, its structure, and how accidentals can be used to form major scales on any note. Chapter 9 talks about all three minor scales, as well as diatonic and chromatic intervals. Chapter 10 covers tonality, major and minor key signatures, relative keys, the use of accidentals for forming various minor scales, the Circle of Fifths, enharmonic keys, and parallel keys. Finally, Chapter 11 discusses triads: the tertian system and the four basic triads. Concluding the text are three appendices: (A) a four-page summary of the text; (B) piano styles; and (C) an orchestration chart.

Many scholars, including the author of this thesis, will argue that the application of music theory is a practice that builds on itself. One cannot expect a student to walk into a calculus classroom without having first passed arithmetic. This textbook is a concrete example of that description, and, indeed, if carefully, thoughtfully, and honestly followed, the potential for success is equal to that of the average classroom experience. The method of learning is all that differs.

### ***2.7. Musical Palette: A Fundamentals Text by Henke (2003)***

Jamie Henke gives fundamentals students a thoroughly thought-out, easily readable fundamentals text. *Musical Palette: A Fundamentals Text* (2003) also takes into

consideration, through its written style, the fact that some students may not easily approach the book if the jargon is too technical. As a result, “this text is written as if the author is actually presenting this material to a class” (Henke 2003, x).

Consisting of ten chapters and one appendix, each chapter is preceded by a list of terms on the title page of the chapter, as well as a brief outline on the right side of the page, as an overview of what will be discussed. Closing each chapter are “big pictures” (applying what has been learned to real musical situations), written assignments, online ear training activities, ear training activities in the book, sight reading activities, keyboard exercises, and finally, a chance to apply the learned material through composition.

Chapter 1 discusses sound, pitch notation, duration notation, volume notation, and timbre indications. The focus of Chapter 2 is rhythm: rhythmic values, and rhythmic elements. Chapter 3 focuses on scales: tonal music, the major scale (including half-and whole-steps, and scale degree names), and key signatures. Chapter 4 introduces all three minor scales, their scale degree names, relative and parallel keys, and minor key signatures. Chapter 5 connects it all with intervals: their qualities, sizes, letters, spelling intervals, simple, compound, melodic, harmonic, consonant, dissonant, inversions, and how they apply to the major scale.

Chapter 6 explains triads, all four types, including their inversions. Chapter 7 appropriately gives attention to seventh chords, how to spell them, and their inversions. Chapter 8 introduces harmony: scale degree names, chord names, Roman numerals, chord qualities (triads and seventh chords in major and minor keys), and chord position numbers. Chapter 9 goes into melody: conjunct and disjunct motion, motives and themes, repetition and sequence, and phrases and periods. Finally, Chapter 10 is a culmination of

all the materials that the textbook has covered. Discussions include harmony and melody, non-harmonic tones, movement (by step, leap, or repetition), and all types of cadences.

Closing the textbook, the appendix provides a number of links for music dictionaries, online resources for history, theory, composers, and music scholarships, and a student-created site at which students can practice naming notes.

Overall, the style of the writing is probably the most positive of the book's features (not to imply, however, that the book *lacks* positive features). Henke shows a true passion for the teaching of fundamentals, and the language might motivate the student to enjoy the practice of problem-solving. Henke presents the topics of discussion with enthusiasm for the education of fundamentals, which can, in turn, motivate students to *want* to learn and *enjoy* learning simultaneously.

## **2.8. *Fundamentals of Music* by Henry (1999)**

Earl Henry's *Fundamentals of Music* (1999) consists of twelve chapters, further divided into five Parts and followed by five appendices. As for supplemental material, the textbook comes with CD-ROM, which contains audio examples and aural skills exercises. The exercises (ear-training, sight-singing, and keyboard drills), as Henry points out, however, are "provided primarily as an introduction to the full range of professional music study . . . [and are] not intended to facilitate [the student's] mastery of a given topic" (Henry 1999, xi). Each chapter consists of four sections: the text itself, exercises, a self-test with provided answers, and supplementary studies. Further, every chapter starts with a number of terms to be introduced and discussed throughout the text. The supplementary studies are further divided into two sections: "Drill Exercises" (for self-

explanatory purposes), and “Fundamental Skills in Practice,” which suggest creative outlets for newly learned skills.

Part I of the text covers notation and consists of the book’s first three Chapters. Chapter 1 discusses the notation itself and the notation of rhythm. Chapter 2 looks at the notation of pitch, while Chapter 3 focuses on the keyboard, accidentals, and octave designations.

Part II covers meter and encompasses Chapters 4 and 5: simple meters (the metric accent, beat division, time signatures, and syncopation), and the compound meters, borrowed division (temporarily, in the music, dividing a beat by two rather than three). Part III, comprised of Chapter 6 through 8, focuses on scales, intervals, and keys. Chapter 6 talks about major scales, their keys, and transposition. Chapter 7 covers the concept of intervals, the different types, qualities, construction, identification, and inversion. Chapter 8 explains minor scales, their keys, and key relationships. Part IV, covering triads, consists of Chapters 9 and 10. Respectively, they discuss root-position triads, inverted triads, and their identification. Finally, Part V sets itself apart as an “introduction to music theory” and consists of Chapters 11 and 12. They cover diatonic relationships and basic concepts of tonal harmony, such as consonance, dissonance, and cadences.

Concluding the text are the five alphabetically listed appendices: (A) the nature of sound, including acoustics and psychoacoustics; (B) modes and other scales; (C) terms and symbols of tempo and expression; (D) the various C-clefs; and (E) the aforementioned answers to the self-tests.

This textbook seems to take a very scholarly approach to music theory. This is not to say that it is not worthwhile to be of use in the classroom. Its approach appears to be

more of a serious matter than anything else. Other books, such as those already reviewed, convey an ideal of fun that occurs simultaneously. This book, especially through its language, makes learning music sound like a chore, rather than something that should also be enjoyed. It presents itself as too formal, too serious. Regardless of one's aesthetic opinion to language, it further proves that there is not only *one* way to teach music theory.

**2.9. *Study Outline and Workbook in the Fundamentals of Music* by Hill, Searight, Hendrickson, & Estrella (2005)**

Though originally created in the 1940s by Frank Hill, Roland Searight, and Dorothy Hendrickson, *Study Outline and Workbook in the Fundamentals of Music* (2005) has been recently revised and updated by Steven Estrella to include contemporary musical vocabulary and practices.

Through a brief introduction in the preface, Estrella, a music technology specialist, advocates the use of notation programs and software. He also informs the reader of the additional feature: the online learning center available through the publisher's website at <http://www.mhhe.com/hill111> (Hill 2005, ix).

With regard to supplemental material (besides the provided website), Hill et al (2005) has a foldout-keyboard attached at the back. It is identical to books such as Lynn (2007) or Duckworth (2007) in that it is a four-octave keyboard ( $C^2$  to  $C^6$ ), and consists of all the same features, except that it lacks the guitar chord graphics on the keys.

Hill et al (2005) is comprised of ten chapters, followed by five appendices. The ten chapters are all somewhat longer than most chapters in the textbooks that have

already been discussed. Some textbooks will take concepts (though they are all correlated, since fundamental theory builds on itself) and space them out among chapters. Instead, these chapters discuss a substantial amount of material that other textbooks, like Duckworth (2007), spread throughout the text. For example, Chapter 5 discusses meter: all three types of both simple and compound. Other books might devote one chapter to simple meter and another to compound.

Each chapter, after the provided discussion, has a page or two of review questions, followed by a number of worksheets, intended to be submitted to the professor for evaluation. Also, on the back of some of the pages, students will find scratch staff paper for the essential practice of written music notation, which is a practice highly advocated, supported, and promoted by the original authoring team as well as by Estrella.

Chapter 1 discusses staves, pitches, clefs, and keyboards. Within the chapter, Hill covers octave designations, and an introduction to the keyboard. Chapter 2 delves into notes, scales, and key signatures. Obviously, these discussions include accidentals, degree names, enharmonic equivalents, and chromatics. Chapter 2 introduces more scales and key signatures, this time in the minor mode. It is here that the Circle of Fifths – including *all* keys and key signatures – is introduced, and the pentatonic scale discussed. Hill provides a very helpful visual aid for a logical and mathematical understanding of how the major and minor scales – ascending and descending – compare and contrast. A horizontal line, with tiny, evenly-spread markers slightly sticking out below, represents the entity of the scale while each marker represents each half-step within a scale, totaling thirteen. The scale degree number is designated beneath each peg depending on which scale degree of that scale falls on which half-step of the scale (Hill et al, 2004).

In Chapter 4, the author discusses rhythm notation, including flags, beams, ties, dots, slurs, triplets, and rests. Chapter 5 focuses on meter, including all three forms of both simple and compound meter (duple, triple, and quadruple). Further, measure structure, as well as rhythmic types and asymmetrical meters are also discussed. Chapter 6 explains how to *read* rhythm. It explains conducting patterns, traditional syllables, and even mentions the Gordon and Kodály systems.

Though intervals probably should have been discussed within the scales / key signatures chapters, they are introduced in Chapter 7. Here, diatonic, chromatic, and enharmonic intervals are all discussed, as well as intervallic inversions. Chapter 8 introduces chords. Here, the text uses little textbook space in explaining the construction of chords. Later in the chapter, the worksheets provided truly enable the student to focus on chords and their construction within multiple contexts: major keys, inversions, minor keys, harmonization, etc.

Chapter 9 centers on melody and harmony, including counterpoint, non-harmonic tones, harmonic motion, figured bass, letter symbols, and modern harmony / tonality. Finally, Chapter 10 offers students the chance to put theory into practice by discussing composition. Concepts explained are the anatomy of a melody, form, and the setting of text to music.

Following the final chapter, the five appendices go into supplemental explanations, should a student feel compelled to delve further than classroom requirements. In order, they discuss: (1) terms describing tempo, dynamics, and mood; (2) song supplement; (3) guitar chords; and (4) playing melodies on the soprano recorder. Appendix Five serves as a glossary.

Should a student seek additional help, a few books offer a fold-out keyboard, a CD-ROM containing either interactive activities or simply listening examples. Some books also offer a website with additional information and / or activities. Hill et al (2005) provides both the keyboard and the website, but lacks a CD-ROM. A fundamentals professor might notice the potentially unusual organization of the content. It may seem unusual that intervals – so essential to the comprehension of the Circle of Fifths and scales – should be so far apart in discussion from other related chapters. Similarly, it makes this text stand out slightly in that rhythm notation and reading were so far into the textbook, rather than at the beginning, where those concepts are typically found. In the book's defense, this explains why, in the preface, Estrella advises: "Faculty should feel free to assign the worksheets in any order" (ibid., ix).

#### **2.10. *Mastering Music Fundamentals: A Guided Step-By-Step Approach* by Kinney (2005)**

Michael Kinney's *Mastering Music Fundamentals* (2005) is another strong textbook that has a lot to offer young music majors. The author insists that his text is written in a style through which students feel like they are being spoken to. This may imply that the textbook can be used as a self-teaching resource. Upon looking through the text, the only *supplemental* referential feature it provides is a CD-ROM. There is no foldout keyboard available to the students. Would this lack of referential information be beneficial or detrimental to the student? It depends on how concepts are explained in the text. Reading through how the fundamentals are presented, Kinney approaches explanations through a manner in which no referential materials may be needed. This enables the student to rely

solely on their own knowledge, and through the book, increase it through examples and drills (both of which offered in the text and the CD-ROM).

In a brief overview, Kinney's CD-ROM offers further opportunities for the student to practice what she / he has learned. The CD-ROM consists of examples and drills corresponding to each of the nine chapters in the text. In the examples, a list of aural excerpts is given, and the student may play through them all repeatedly for her / his learning to benefit aurally. The drills are simply additional activities that give instant feedback. With the drills, no grade is given. But feedback is instantaneous. The moment a correct answer is filled in, the word "Correct!" appears above the activity. If answered incorrectly, "try again" appears instead. The student is given four "try again" responses before the "try again" message changes, and the program suggests a review of the text to correct the mistake. Students will interact with the software by either typing answers in the spaces available (such as typing the name of the note in a provided textbox below the staff where the note is written), or using the mouse to "write" the answers on the staff.

The text is divided into nine chapters, followed by an appendix, glossary, index, blank work staves (each with a treble clef), and blank pages for notes. The nine chapters are respectively titled (and discuss) (1) The Tools of Music, (2) Rhythm and Meter, (3) Scales, (4) Key Signatures, (5) Modes, (6) Intervals, (7) Triads, (8) Harmonic Functions of Triads, and (9) Transposition. Of all these, Chapters 2, 3, and 4 are divided further into separate Parts. Chapter 2 divides into four parts: *Simple Meter*, *Compound Meter*, *Rhythmic Mode Mixture*, and *Anacrusis, Metronome and Tempo*. Chapter 3 divides into five parts: *Major Scales*, *Minor Scales*, *Whole-Tone Scales*, *Pentatonic Scales*, and *Chromatic Scales*. Finally, Chapter 4 divides into two parts: *Major Key Signatures* and

*Minor Key Signatures.* Moreover, regarding each of these “further-divided” chapters, in each one (as preparation for the discussions that lay ahead in their respective Parts) there are between one and three foundational concepts that are explained before taking the student into the chapter’s targeted material. For instance, in Chapter 2 (Rhythm and Meter), three introductory concepts are discussed: notes and rests, the beat (pulse), and meter. Chapter 2 (Scales) also mentions three introductory concepts: aural characteristics of major and minor scales, brief review of important concepts, and the sounds of scales. Chapter 4 (Key Signatures) opens with one introductory concept: the Circle of Fifths.

Through the writing, the author provides (as previously stated) the student with explanations that encourage students to rely on their musical knowledge, rather than have the need to consult referential material to confirm a correct answer. For example, at the beginning of Part I of Chapter 4 (Major Key Signatures), the author explains the construction of the G major key signature:

“Let’s apply the method of counting up in 5ths to determine the ordering of the major keys on the right side of the circle of fifths. Locate C at the top of the circle and then the pitch that is a 5<sup>th</sup> above it. You will need to count as follows: step 1 is C, step 2 is D, step 3 is E, step 4 is F, and step 5 is G. G is the first sharp key on the right side of the circle. It requires an F# in its key signature; you will need to memorize this! The F# guarantees the half step required between scale degrees 7 and 8 in the G major scale.” (Kinney 2005, 177)

Clearly, the author is providing a step-by-step approach that technically renders referential material unnecessary. Some textbooks provide the supplemental referential material so the students may have, at their disposal, an easy way to either get the answer or acquire hints to arrive at an answer. By lacking these features, this textbook almost forces the students to rely on their knowledge of the material. Just like the various

methods of teaching music theory, this book's methods are not perfect either. The essentials of music is an area that is so comprehensive (and must ideally become second nature upon completion of the course) that the more tools the students have at their disposal to find answers faster, the more supplemental material that is available to them, the better. From this perspective, such explanations that the author provides may seem overwhelming to the students who may already (or may easily) struggle with just trying to pass the class. However, in the textbook's defense, just because the textbook does not offer other supplemental materials, does not mean a student is unable to locate them on her / his own.

In dealing with parallel and relative keys, there are several explanatory approaches available to teach this concept. With Kinney, he begins by providing visual aids (in a way most textbooks do not). He *shows* the relation a minor has to C major, both through intervallic relation via proximity and by displaying two scales: a C major scale spanning two octaves (where he highlights the existence of the a minor scale), followed by an a minor scale, also in two octaves, where he highlights the hidden C major scale. His method for explaining how to construct – or figure out – the key signature to a minor key, he takes the student through a two-step process: (1) take a pitch and label it as scale degree 6 to a major scale, (2) count up until you reach the eighth scale degree, then apply the major key signature (*ibid.*, 203). To some, this process (though extremely simple), may seem very ambiguous. However, it is not a long formula, and in music theory, “quick-n-easy” is an ideal approach to finding answers, so long as the results are accurate all – if not most – of the time. Through his explanations, he does leave a sense of ambiguity, but it becomes clearer with the visual aids that directly apply to the concepts

he is explaining. It is as if the verbal and visual explanations are co-dependent; one cannot work well without the other's help.

To reiterate, it seems that Kinney's main approach is indeed to encourage students to handle solving theory problems without any referential material. Why would this approach serve beneficial? For starters, it is very common that most musicians do not play the piano, or at best, only have sufficient knowledge and experience to be able to communicate a few musical or theoretical ideas.

In any case, familiarity with the piano can serve as a strong visual aid to the theoretical concepts students learn in the classroom. Few other instruments – such as fretted string instruments – provide the visual aid to music theory that the piano offers (in regards to constructing triads, chords, scales, and intervals that require the knowledge of whole- and half-step patterns). Other instruments – such as brass, woodwind, percussion (with a few minor exceptions: the marimba and xylophone) and voice – do not possess such a pedagogical convenience. It is no wonder that nearly all theoretical concepts are discussed in textbooks (and workbooks) using piano excerpts. So, what is the importance of this teaching approach that Kinney employs? All theory pedagogues have one responsibility: to explain and clarify the uses and rules of notational systems musicians use to take what is heard and make it visually concrete. It has been proven repeatedly that though many people can be aural learners, a vast majority need a visual aid, or (ideally) a hands-on activity to reach the ultimate goal: comprehension.

The basic pedagogical premise behind Kinney's book is comprised in the subordinate portion of the title: *Mastering Music Fundamentals: A Guided Step-By-Step Approach*. Kinney's explanations throughout the textbook are indeed "step-by-step,"

because unlike other textbooks, there is no foldout keyboard to serve as a reference. This book is clearly designed to offer theory fundamentals students fool-proof methods and formulas to arrive at answers. Despite the manner of the writing and explanations of the concepts, there is plenty of room for the professor to provide the students with additional – or alternate – explanations or methods to arrive at the same answers. The case is simply that the teaching approach in Kinney (2005) encourages the students to become self-resourceful in developing their musical knowledge. When it comes to teaching music theory, there are professors who believe in a progressive method of teaching, such as encouraging the students to explore different means of finding the same answers. Those professors may decide that as long as the student knows the answer when it matters, then, as a professor, her / his job is done. Other professors may be more conservative, and though they may acknowledge and accept the use of “quick-n-easy” teaching methods, they might insist on teaching the students the foundational concepts as to *why* certain parts of the fundamentals work the way they do. Regardless of how the student may be taught (whether with fast answer approaches or background knowledge to make educated decisions), a definite truth is that so long as the student continues to be an active musician, she / he will eventually learn whatever was not covered in classes the student took. Any educational “gaps” can be filled later. It is never too late.

**2.11. *Explorations: A New Approach to Music Fundamentals* by Kolosick & Simon  
(1998)**

J. Timothy Kolosick and Allen Simon bring students a fundamentally technological advancement with their textbook *Explorations: A New Approach to Music Fundamentals*

(1998). “Designed for students with no previous knowledge of music or computers” (Kolosick & Simon 1998, v), the text provides the students with a 3½ inch floppy disk for Macintosh computer use. The textbook boasts a MIDI input capability for the Music Editor, a View MIDI feature so students may see the MIDI data sent, so they might understand the numbers’ meaning, and an increase of written assignments.

The textbook consists of fourteen chapters. Almost all of them close with a summary of the chapter’s discussed material, followed by four additional sections: (1) music for performance (with rhythms and melodies); (2) creative exercises; (3) practice and tests; and (4) written exercises. Following the final chapter, eight alphabetically listed appendices bring the textbook to an end: (A) a Macintosh tutorial; (B) a reference guide for the software; (C) a discussion of musical sound (including a summary and written exercises); (D) how to work with MIDI; (E) chord qualities and inversions; (F) piano scale fingerings (for major and minor scales); (G) guitar tuning and chords; and (H) modal scales.

A very short Chapter 1 focuses on the white keys of the keyboard. Chapter 2 discusses musical notation, discussing only half-steps and whole-steps. Chapter 2 explains rhythm and simple meter, including tempo. Chapter 4 is the technology chapter, involving everything about music notation and MIDI, as it relates to the software, what MIDI is and does, note spellings, MIDI keyboard entry, and musical calligraphy (musical symbols involved in notation). Chapter 5 turns the student’s attention to the major mode, and discusses scales and major key signatures. Chapter 6 covers minor scales and key signatures.

Chapter 7 presents the first of two discussions on intervals. It is a discussion that is continued in Chapter 8, on how to recognize intervals, their inversions, and the implementation of accidentals. Chapter 9 discusses compound and asymmetrical meter, and includes a discussion of special rhythm terms. Chapter 10 explains diatonic melody. Discussed within the chapter are scale degree labels and types, such as those scale degrees that are stable / unstable when sounded alone. Chapter 11 discusses triads, harmony, triadic inversions, and non-harmonic tones. Chapter 12 introduces seventh chords and their inversions. Chapter 13 is about chord functions, and includes a discussion on cadences. Chapter 14 touches on voice leading (a concept not often discussed in fundamentals textbooks). The voice leading is discussed in the context of root progressions of ascending seconds, thirds, and descending fifths. It also talks about writing chord progressions and writing / arranging for instruments and choirs.

The best attribute about Kolosick & Simon (1998) is probably the software it comes with. Throughout the book, figures depicted a Macintosh screen with the appropriate parts of the program applicable to the topic at hand. Regarding the chapter titles, other books are much more specific in what the chapters discuss. One observation is that the book strongly promotes active learning. In several instances, one finds that assignments and worksheets dominate the chapter, indicating either that the explanations are incredibly concise, or they omit / lack some significant explanations, therefore making more space for the practice than the explanation. It seems ironic that a textbook that boasts about the conveniences of technology is already so obsolete. But then again, in the world of technology, one year can make the most state of the art functions obsolete.

### **2.12. *Tonal Harmony* by Kostka & Payne (2004)**

A very reputable textbook for music theory is *Tonal Harmony* (Kostka & Payne 2004). Now in its fifth edition, it is a textbook (with an accompanying workbook) that thoroughly covers music theory through advanced concepts, such as theorist / composer Arnold Schoenberg's twelve-tone technique. Though the textbook is divided into six Parts, this thesis will adhere to the review of its first four chapters making up Part I: Fundamentals.

Chapter 1 (the longest of the four in Part I) approaches the fundamentals in a very "essential" way in that it takes pitch notation and associates its placement on the staff with its location on the keyboard (a vital tool for the comprehension of music theory). After discussing staff placement, discussion of the major scale and major key signatures follows. Minor scales and key signatures follow immediately thereafter. Once those have been covered – contrary to the format of Benward et al (2000) – the scale degree names are discussed. Following this are discussions over intervals (first perfect, major and minor, then augmented and diminished). Then comes the inversions of these intervals. Preceding a summary, a discussion on consonant and dissonant intervals ends the chapter.

The chronological layout of this chapter alone differs from that of Benward et al (2000). Aside from the example regarding the delay in the discussion of the note names of the scale, and their immediate discussion in the first chapter in Kostka & Payne (2004), another example of their differing layout is the introduction of minor scales after the major scales. In Benward et al (2000), the major scales are discussed early on in the first chapter, while the minor scales are not mentioned until the middle of the chapter, choosing instead to discuss select (not even all) intervals first. In Kostka & Payne (2004),

not only are the major and minor scale discussions back to back, but they are followed by their respective key signature discussions, and *then* the intervals are covered, and not just a select few, but *all* of them.

Chapter 2 covers rhythm in meticulous detail. It is much more thorough than its coverage in Part III of Benward et al (2000). Beginning Chapter 2 is a discussion about rhythm, including duration symbols, beat and tempo, and meter. After these are discussed, the authors explain how a beat is divided. This clearly introduces the concept of simple and compound meters. The main difference, it seems, between Kostka & Payne (2004) and Benward et al (2000), is that Kostka & Payne (2004) takes greater care in addressing concepts, taking them on one at a time, so as to make every concept as clearly understood as possible so as not to confuse any students. In Benward et al (2000), the authors seem to combine similar concepts all into one topic, which may only confuse a student trying to understand the “foreign” language of music.

Chapter 2 focuses on triads and seventh chords. First to be covered are the triads, then the seventh chords, and then their respective inversions. Once these are discussed, figured bass and lead sheet symbols are explained, and then additional information in chord recognition in varying textures is given. In this chapter, its two topics of focus already make this book’s pedagogical organization different from that of Benward et al (2000). In Benward et al (2000), triads and seventh chords are covered in different chapters, and in different *Parts* of the worktext (triads in Part II and seventh chords in Part V).

Completing the fundamentals part of Kostka & Payne (2004) is Chapter 4, which discusses diatonic chords in both major and minor keys. Being the shortest chapter in the

fundamentals portion, it starts by reviewing the minor scale, followed by a discussion about both diatonic triads in both major and minor respectively. Following the triads are the discussions for diatonic seventh chords, also for both major and minor respectively. This chapter is probably the only place in Kostka & Payne (2004) that is similar to the pedagogical layout of Benward et al (2000) in that both diatonic triads and seventh chords are discussed at the end of the chapter (or Part).

### **2.13. *Introductory Musicianship* by Lynn (2007)**

Now in its seventh edition, Theodore Lynn's *Introductory Musicianship* (2007) is both a textbook and a workbook all together. It provides a CD-ROM as well as a four-octave, removable fold-out keyboard starting from C<sup>2</sup> through C<sup>6</sup>. All the keys are labeled, *including* enharmonic spellings. Further, each key is, via a dotted line above, designated to its appropriate notation location on the grand staff provided above the keyboard. Additionally, on the second octave, guitar chord graphics are provided: one above the key for the respective major chord, and one below for the respective minor chord. Despite the fact that the textbook consists of ten chapters (called "units"), the CD-ROM only addresses six (the four left out cover melodic / rhythmic exercises at three levels of difficulty, and an appendix). Once the CD-ROM is opened on one of the six chapters, an internet window opens to reveal links to worksheets from the text. Some worksheets are interactive, and when finished, may be electronically submitted to the professor for evaluation. The rest are in .pdf format, which are identical to the worksheets in the text, and must be printed before being worked on. The interactive worksheets do not provide

instant feedback, but if a student marks an answer incorrectly, she / he can click on the “Reset” button below the given problem to clear her / his answer and try again.

Again, the book is comprised of ten total units, or chapters, each further divided into smaller alphabetically labeled sections. Unit 10 serves as an appendix. The textbook is filled with many exercises to promote an active learning philosophy of “practice makes perfect.” Like any other field of study, no one can become reasonably proficient without adequate amounts of practice to master the material. On each page with exercises, reference numbers are provided to give the students a section of the book they may return to, so she / he may review the information they are applying in the exercises. Overall, there are no direct answers given for the exercises (for the exception of sample problems as part of the directions or a small group of answers “hidden” upside-down at the bottom of the page), but rather review opportunities. Another important feature with this text is its emphasis on melodic, harmonic, and rhythmic fluency. Of the ten Units, three of them are devoted to improving students’ melody and rhythm skills, through performance exercises. Each Unit (the first being Unit 2) gives students easy rhythms and melodies to perform. Respectively, Units 5 and 7 give students intermediate and difficult exercises to add to the challenge and improve their abilities. Hence, besides developing students theory skills (written in a way that the text assumes the student has little or no musical background), their aural skills are touched upon at varying levels of difficulty. For the exception of the three melodic and rhythmic practice units, all of the units end with worksheets, followed by a review of the entire unit. This way, the students not only apply what they just learned, but they go over it again.

Unit 1, introducing the basics of the fundamentals, subdivides into fourteen smaller sections of discussion. In Unit 1, the student will find the staves, clefs (and how to *draw* them), staff extensions, the grand staff, notes (and all aspects of their construction), rests, meter signatures (including both accented and unaccented beats), simple and compound meters, unequal metrical divisions, triplets, and duplets, barlines, accidentals, whole- and half-step patterns (in both diatonic and chromatic contexts), enharmonic equivalents, performance signs, and finally, keyboard registers.

With Unit 2, the students will engage in melodic and rhythmic performance activities. In Unit 2, there are six groups of exercises (respectively, three for rhythm, and three for melody).

Unit 3 discusses scales, keys, and modes. Divided into seventeen alphabetical sections, this unit already covers three large, time-intensive concepts in one solid unit.<sup>3</sup> In this unit, scales are discussed first, followed by the Circle of Fifths in relation to major keys. The discussions that follow include overtones, key signatures, tetrachords, major sharp scales, and major flat scales. Once all these concepts have been completed, the Circle of Fifths discussion resumes, this time in the minor context. It is then followed by discussions of sharp and flat minor scales, all three types of minor scales, the functions of relative and parallel keys, chromatic scales, the church modes, other scales (i.e., pentatonic, whole-tone, original scales), and finally, the twelve-tone row is mentioned. Other fundamentals textbooks may not include such concepts as the twelve-tone row in the textbook's regular chapters, but may allude to them in an appendix. The aim of this text is clearly to *expose* the student, in a very fundamental manner, to some of the most basic scales she / he is learning to understand.

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<sup>3</sup> To recall Zinn & Hogenson (1994), modes were not addressed until the end in a separate appendix.

Unit 4 devotes itself to intervals. In this unit, students first learn to construct intervals. Thereafter, they are introduced to perfect and major intervals, minor, and diminished and augmented intervals. Then, the students start with basic construction instructions with regard to generic labels: seconds, thirds, fourths, etc. The latter part of the unit instructs the students on how to build intervals with their respective qualities: half- and whole-step construction from the bottom up, and from the top down. As a part of the downward intervallic construction technique, three methods are brought up: (1) method identification and alteration, (2) method counting by whole- and half-steps, and (3) method by interval inversion. Ending the unit is a discussion of the tritone, followed by both simple and compound intervals, and finally, both the hearing and singing of intervals.

Unit 5 revisits rhythmic and melodic exercises, this time, at an intermediate difficulty level. This unit, divided into four smaller parts, offers (besides more complex rhythmic and melodic exercises) solfeggio with major and minor keys.

Unit 6 discusses both triads and chords. In this unit, not only are the four principal triads mentioned, but the five different seventh chords are brought up as well. To complete the chapter, aside from appropriately explaining to the student the differences of inversion patterns (between triads and seventh chords), the unit also touches upon the use of commercial chord symbols. Serving as a very useful referential tool, the unit provides the student with a table with all root-position triads. This works as a visual aid, to enhance the learning experience.

Unit 7 follows, with the last set of rhythmic and melodic exercise. This time, the level of difficulty is at its highest. Taking into consideration the previous training the

textbook has given the student, the exercises in this unit are more complex. Rhythmically, the student will practice mixed meters with both constant and changing note values. Syncopation is incorporated as well, and melodic exercises encompass the church modes and mixed meters.

Unit 8 challenges the student's thinking through the practice of melodic writing and transposition. Transpositional practices in this Unit include note shifting on the staff, scale degree transposition, clef changes, and especially instrumental transposition.

Unit 9 serves as the last "real" Unit of the text and covers harmonization and chord progressions. In this Unit, the student learns the technique of doublings in triads and seventh chords. Common chord progressions – from common tones to parallel movement – are also discussed. Three characteristics of harmonization – non-harmonic tones, the addition of an accompaniment, and accompaniment patterns – are covered. Finally, figured bass is introduced consisting of its five procedural characteristics: (1) figured-bass symbols for triads, (2) realization, (3) figured-bass symbols for seventh chords, (4) chromatic alterations, and (5) inversions.

Unit 10 concludes the text as an appendix, discussing general music terms, performance terms, orchestral instruments, voice types, and signs and symbols. To even the beginning musician, most of this information may already be slightly common knowledge. This unit serves as a review for those who are familiar with the content, and introduces the non-musician to a smaller, but nonetheless important, world.

Like any fundamentals textbook, this one is not perfect either. There never has been, nor does there seem to be, any one perfect way to teach music theory, *especially* the fundamentals. What most – if not all – music professors will agree on is the fact that in

order to achieve success in comprehension of the fundamentals and how all concepts work co-dependently, the one unchangeable fact is that no student will develop or improve without practice, and constant practice at that. In this realm, Lynn (2007) excels. Like most fundamentals texts, each unit closes with a few worksheets for multiple opportunities to practice. Moreover, to promote the ideal of active learning, if answers are not provided (which in this book, that is usually the case), there is a reference given by the respective assignment section, so the student can, individually, review the information and apply the lesson to the assignment. Lynn (2007), through the worksheets, lacks the answers in most of the assignments. This will promote class discussion, which in turn will encourage the students to analyze, synthesize, and, in general, discuss the content with their professor. Why is discussion so necessary? Just as there is no perfect fundamentals text available, just as there are different methods of teaching the same concept, so too will there be instances when the material learned is understood differently depending on the thought processes of the student. The more brain activity going on, the better, and the more accustomed to analysis the student will become, and analysis encompasses the main idea of music theory.

#### **2.14. *Foundations of Music* by Nelson & Christensen (2006)**

Another common textbook is *Foundations of Music* (Nelson & Christensen 2006). Nelson and his co-author created this text, as it states in the preface, “for non-music majors at the college level, but it could also be used successfully at the advanced high school level or as a supplement to first-year theory for college-level music majors” (Nelson & Christensen 2006, xi). After revealing the thirteen-chapter layout, the authors

go into five individually discussed, somewhat informal discussions regarding the approach to learning music theory fundamentals.

Throughout the five discussions – each with its own individual title – and written in a more vernacular rather than stuffy scholarly voice, they talk about why students (especially non-music majors) even decide to take a fundamentals class. In the first discussion titled “I Want to Learn About Music!,” the authors discuss that, though non-music majors may take the class to fulfill a fine arts requirement, the professor hopes that the class will open the students to a broader world of music. The second discussion in the Preface – “This Is a Major Scale. So What?” – emphasizes what little music literacy a non-music major will have upon registering for the course. The book aims to instill a sense of music literacy in the student, and presents rudiments from a holistic standpoint. The third discussion, titled “That Sounds Nice. What Is It?” further delves into discussing the importance of achieving music literacy, for instance, reading the music while it is performed. The fourth discussion called “At Last! My Own (Digital) Tutor!” goes into discussing all the benefits of learning the fundamentals through the CD-ROM program included in the book. Considering the adage “practice makes perfect,” if a student truly desires to improve her / his skills in music literacy, a very necessary practice is drilling and applying what is being learned. The authors state that through use of the included CD-ROM, “drill and practice are made more enjoyable” (ibid., xiii). If, indeed, using the CD-ROM to practice and drill fundamentals concepts will make the learning experience *fun*, then it is only an incentive for the student, so practicing what is learned does not become something mundane, but pleasant instead. The last discussion, “The Focus Is Always on the Music,” stresses the primary importance of listening to as much music as

possible, especially inviting the students to share music of their favored style.

Additionally, the authors communicate the ideal that their book is written with the awareness that, despite all the information they have included in their publication, they call upon the professors to add to and elaborate on any given topic with the professor's own professional experience. Professors are also warned to expect a diversity of backgrounds in music upon teaching the course, which is an aspect of teaching that is easily implied.

As mentioned earlier, this text is divided into thirteen chapters. The first twelve, however, actually cover what can be agreed upon as “the most basic and essential topics,” while Chapter 13 provides topics for enrichment and additional study (ibid., xvi). For every part of the chapter where immediate application is encouraged, there is a computer exercise available through the CD-ROM. Chapter 1, just as Benward et al (2000), focuses on the physical aspects of the sound of music. It discusses overtones, dynamics, and even introduces performance articulation techniques, such as *staccato* and *tenuto*. In addition to explaining the concepts of articulation, this chapter provides folk music or traditional songs, in which these concepts are directly applicable.

Chapter 2 discusses the notational system, ranging from notes and rests, the names for individual pitches (letter names, not scale degree names), and finally the pitch registers on the piano.

Chapter 3 focuses on simple meter, and rhythmic vocabulary, such as performance tempo. It makes the connections between counting time in simple meters, the beat, and conducting, so the student is able to *feel* what the downbeat is and thus

better understand the pulse of music. In conjunction with meters, the chapter also discusses the use of beaming notes that, together, form beats.

Chapter 4 delves into the concept of scales; however, it adheres strictly to the major mode and the major scales' whole-step and half-step pattern. Key signatures – both sharp and flat – are introduced, the Circle of Fifths, and a special emphasis on the leading tones of the scale, regardless of which pitch the scale begins on, and which clef it uses. This leading tone emphasis is definitely ideal, so the students can make the *aural connection* between keys and a scale's tonal center. Additionally, since the main interval – the fifth – has been introduced through the Circle, the remaining intervals in the scale are discussed as well as the scale degree names.

Chapter 5 continues the more advanced discussion of meter left off from Chapter 2 and covers compound meter. It discusses how they are classified, with further discussion on how beaming works, and especially makes note of how meter is established through accents (i.e., agogic and dynamic accents) and patterns.

Returning from a brief hiatus on scales, Chapter 6 talks about the minor mode and immediately uses traditional folk songs to clarify the concept of a tonal difference in *mood*, when a different *mode* is used. Appropriately, all three types of minor modes are discussed, especially how they differ from each other through the raising – and lowering – of the necessary scale degrees. The chapter also discusses other very important concepts: modulation and the chromatic scale. These discussions are then followed by written exercises and musical examples available for students to study and see how these new concepts are applicable in commonly heard music.

Moving on to Chapter 7, we find discussions of other scales: church modes and the pentatonic scale. Chapter 8 returns the students' attention to rhythm and further analyzes this concept. It covers syncopation as well as the rhythms commonly found in jazz and popular music. This kind of discussion can be very helpful to a musician's – even a *non*-musician's – understanding of rhythm. The latter is often more heard by the general public. The lack of listening to art music, however, obviously does not make jazz or popular music any less “musical” than art music, considering – at least – its rhythmic elements. The material will probably cater to more students' lives by helping them theoretically understand the music they already enjoy. That is a great benefit indeed.

Though it might seem as a poor organizational layout to only start discussing intervals (from [generically speaking] seconds to compounds, all their inversions, qualities [major, minor, perfect, augmented, diminished], and other properties [diatonic, chromatic, enharmonic, consonant, dissonant, and those needing resolution]) in Chapter 9 – as opposed to discussing them in a chapter that dealt with scales (major and / or minor) –, it is indeed important to discuss intervals separately, because they are the building blocks for understanding the function of chords and harmony (since those two concepts are covered in the next chapter).

Chapter 10 covers triads, the dominant seventh chord, the concept of texture, inversions, primary triads – tonic, subdominant, and dominant chords – and lastly non-chord tones. Now that the first ten chapters have covered a decent amount of essential concepts, the authors find it appropriate to introduce simple forms in Chapter 11. Concepts discussed include phrases and cadences, phrase relationships, different song forms, the forms of popular music, and a discussion of harmonizing melodies. Again, in

the chapter covering rhythm, the authors make a point to discuss the forms and harmonies of the songs the students are very likely familiar with (e.g., Bob Dylan's *Like a Rolling Stone* and the traditional *Home on the Range*).

Finally, we arrive at Chapter 12, which covers the last of the essentials of music theory: the authors explain what to look for in a score when analyzing music. This chapter takes a very wise step forward in helping students to apply everything they have learned so far. Briefly put, the chapter begins:

“While looking at a piece of music is indispensable for study, it can obviously (and thankfully) never replace *listening* to the music. Still, as we noted at the beginning of this book, the written score is a very necessary link between the composer and the performer, and all musicians at some point must come to terms with the various skills of music reading. Let's summarize all that we've learned so far.” (Ibid., 218).

Very intelligently organized and thought out, the list of “What to Look for in a Score” lists five items:

1. Format
2. Basic information
3. “Road signs” (including performance patterns like double bar lines, repeat sign locations, *Dal Segnos*, *Da Capos*, etc.)
4. Texture
5. Form, shape, and design

Once the “checklist” of musical elements to look for has been covered – and previously learned material reiterated – a brief list of musical excerpts follows including, but not limited to:

1. Friedrich Kuhlau's *Sonata* Op. 55, No. 1,

2. *Minuet in C* by Ludwig van Beethoven, and
3. Haydn's *Scherzo* in F major.

Each example is appropriately followed by a few questions for the students to answer regarding the five musical elements in the “checklist” introduced at the beginning of the chapter.

Chapter 13 is considered as the “enrichment and additional studies” chapter. This chapter provides various musical examples from around the world, including (but not limited to) Japan, Taiwan, and Greece. Other musical examples are excerpts from different genres, including (one of each) opera (Puccini's *Madama Butterfly*), musicals (Jerry Bock's *Fiddler on the Roof*), and cantatas (Stravinsky's *Les Noces*). After covering these examples, which discuss the concept of synthetic scales, the topic of seventh chords returns in greater detail. The discussion includes the five types of seventh chords: major, major-minor, minor, half-diminished, and diminished. Borrowed chords are discussed thereafter, including the simple concept of the Picardy Third. Next, added sixth chords are explained, for instance how seventh chords can be disguised as added sixth chords. (However, the authors just call these chords “sixth chords,” which may easily be confused with, e.g., first inversion triads.) The following concept to be briefly discussed is the pedal tone.

In a simple overview, the CD-ROM in Nelson & Christensen (2006) is both similar and different to that of Benward et al (2000). The Nelson & Christensen (2006) CD-ROM is only a collection of short musical examples that provides the student with an opportunity to *listen* to what they are studying. As the authors state: “In many respects, students can hear concepts prior to their being able to read and understand them. And it is

always worthwhile to relate the aural experience to the actual study of the musical concept at hand” (ibid., xii-xiii). Like the CD-ROM in Benward et al (2000), it is playable with both computer media players and regular CD players.

Nelson and Christensen’s book is clearly organized, very well thought-out, with concepts explained accurately in an almost “quick-n-easy” fashion. As a very strong additional feature, aside from its enclosed CD-ROM, printed within the front jacket is a one-octave keyboard, whose only difference compared to other fundamentals textbooks is that the keyboard’s notes are not labeled. This could be beneficial to the students, because they are forced to remember the note names on the keyboard, but detrimental to those students, who have a harder time memorizing many minute details, so bigger concepts can be built upon the fundamentals. The blank keyboard surely places the textbook ahead of others in the simple fact that a reference keyboard is *included*. Other textbooks include only CD-ROMs, which can limit students’ work in the sole regard that a minority of students do not have access to a computer (at least one, on which they can install learning software).

### **2.15. *Rudiments of Music* by Ottman & Mainous (2004)**

Robert W. Ottman and Frank Mainous’ *Rudiments of Music* (2004) is now in its fourth edition. With regard to number of chapters, it is the longest of the reviewed books as it consists of twenty-three chapters.

Though it lacks a CD-ROM for supplemental instruction, it does include a fold-out keyboard, tucked away in the back of the book. Some of the fold-out keyboards in the textbooks reviewed do not include a grand staff depicting the individual keys’ notation

location on the staff. Others show a grand staff either above or below the keyboard area with vertical dotted lines indicating where a particular key would be notated on the staff. This keyboard, however, does not show a grand staff. Also, unlike most of the other fold-out keyboards, this one does not span four octaves ( $C^2$  to  $C^6$ ). Instead, there is only one staff, placed horizontally in the middle of the black keys, that spans the length of the keyboard. Notation on the staff begins with the keyboard's lowest note: the F below the bass clef. As the keyboard and notation progressively go higher, the treble clef resumes at Middle C and ends with the A on the first ledger line above the treble.

If the keyboard is turned over, it reveals a brief glossary (since there is none in the book itself). Besides listing and defining the most common terms (e.g., “interval,” “key signature,” “measure,” etc.), it provides several depictions. Among the depictions is a C major scale of triads that includes respective chord names above the scale, as well as Roman numeral symbols below the scale. Other diagrams include a list of all the key signatures on a grand staff, a grand staff of each type of note with its respective rest, and a C major scale with all three forms of its relative minor. Ottman and Mainous credit the keyboard: “[It] is exactly the same in size as an actual keyboard, although without the extreme higher and lower pitches. In this format it can easily be slipped behind the keys of the real keyboard” (Ottman & Mainous 2004, xiii).

Serving as a combination text and workbook, Ottman & Mainous (2004) makes it a point to offer the first available opportunity to allow students to practice what they have just learned in a chapter. Contrary to the textbook's previous edition, exercises are no longer saved for the end of the chapter, but are within the chapter text itself. The authors also mention that each chapter is devoted to one of three topics: pitch, time, or harmony.

Additionally, they suggest that the course of instruction ought to follow the chapters in sequence.

Chapters 1 and 2 both discuss pitch. In Chapter 1, the authors explain the staff, treble and bass clefs, the grand staff, ledger lines, and the musical alphabet. Chapter 2 focuses more on the keyboard, black and white key names, intervals, octaves, half- and whole-steps, enharmonic spellings, and accidentals.

Chapter 3, a time chapter, covers the construction of notes, including how they are beamed, their values, relationships to each other, and how to notate rests.

Chapters 4, 5, and 6 all discuss pitch. Chapter 4 explores whole- and half-steps more, discussing their chromatic and diatonic counterparts. Chapter 5 introduces major scales, and explains scale characteristics, introduces all major scales, the relationship of major scales, how to spell them, and explores the notation of fifteen of them on the staff. Chapter 6 concentrates exclusively on scales' scale degree names.

Chapters 7, 8, and 9 further discuss the topic of time. Chapter 7 covers the basics of time: beats, tempo, grouping beats, bar lines, and measures. Chapter 8 explains beat division, simple beats, compound beats, and meter. Chapter 9 focuses on the notation of simple beat, time signatures (both simple and compound), and notation of the compound beat.

Chapters 10 and 11 return to pitch and further discuss major scales. Chapter 10 concentrates on how to play the scales on a keyboard, and how to sing them. Chapter 11 discusses major key signatures, including the Circle of Fifths.

Chapters 12 and 13 go back to time. Chapter 12 introduces the conducting, rhythm, the anacrusis, and rhythmic reading. Chapter 13 covers rhythmic transcription, rhythmic dictation, beams in notation, and rests in notation.

Chapters 14 through 19 conclude the discussion of pitch. Chapters 14, Fifteen, and 16 explore the minor mode. Chapter 14 discusses minor scales, including all three forms, the notation of fifteen minor scales (and each scale in its three forms), how to spell a scale, and the scale's use. Chapter 15 explains the minor scale's scale degree names, how to play the scales on the keyboard, and the singing of the scales. Chapter 16 explores minor key signatures, how their key signatures are derived, a list of minor key signatures on the staff, and the minor Circle of Fifths. Chapters 17, 18, and 19 combine the concepts of major and minor scales and keys. Chapter 17 covers major and minor key relationships including a depiction of the Circle of Fifths for both major and minor keys (together), relative keys, parallel keys, and the solmization of major and minor keys. Chapter 18 introduces major and perfect intervals. Discussion include explanations on how to name the interval, major and perfect intervals in the major scale, intervallic analysis, and simple and compound intervals. Chapter 19 further discusses intervals, including minor, diminished, and augmented intervals, their modifications, the analysis and writing of all intervals, and intervallic inversions.

Chapters 20 through 23 finally introduce harmony. Chapters 20 and 22 discuss harmony in general, while Chapters 21 and 23 concentrate on keyboard harmony. Chapter 20 discusses chords and major triads. Explanations include triads' inversions, their positions, doubling, dissonance and consonance, triad types, and chords in a major key. Chapter 22 covers the minor triad, chords in a minor key, and diminished and

augmented triads. Chapter 21 discusses melodic harmonization, and playing common chord progressions (e.g., I, IV, and V<sup>7</sup>). Chapter 23 is identical to Chapter 21, but concentrates, instead, on the minor mode.

The textbook concludes with six alphabetically listed appendices. Respectively, they cover: (A) acoustics, (B) octave registers, the 8<sup>va</sup>, C clefs, and repeat signs, (C) the medieval modes and other scale forms, (D) keyboard scale fingerings, (E) foreign words and musical terms, and finally (F) answers. The authors justify the inclusion of answers:

“Answers to many of the written exercises are furnished in Appendix F . . . The advantage to the student lies in being able to evaluate immediately whether or not comprehension of the exercise material has been accomplished. It should be obvious that checking answers prematurely is of no value in the educational process.” (Ibid., xiii)

The author of this thesis sees the format of this textbook as a strong one. It is his opinion, however, that the discussion of intervals should have been included in between all the material regarding major and minor keys and scales rather than after it. Further, as helpful as the included fold-out keyboard is, the glossary should remain in the textbook along with the index and the rest of the *text*. Despite these opinions, the organizational layout, language, and frequency of exercises can prove beneficial to students’ and their unending effort in comprehending the fundamentals of music. The more opportunities provided for practice, the sooner students will gain mastery of the fundamentals.

## **2.16. *Harmony in Context* by Roig-Francolí (2003)**

Miguel Roig-Francolí’s *Harmony in Context* (2003) is designed to be a textbook that covers two years of the music theory core curriculum. For the purpose of this thesis, however, the author will only focus on the applicable chapters.

In his preface, the author makes two points. First, he says that the book is intended to maintain a balance between a variety of pedagogical approaches and theoretical approaches in teaching music theory. Secondly, a few basic principles manage the book's style. They include: (1) it is a complete harmony / analysis book intended for undergraduate music majors within the first two years; (2) the "context" part of the title refers to all possible contexts with which music / harmony can work; (3) logical organization, clarity, user-friendly, concise; (4) thoroughness of contents with equal attention given to important areas; (5) broad representation of minority composers, including women. As a reviewer, the author of this thesis is elated to read of such intentions behind for the textbook. The preface clearly defines the author's intentions for the objectives he aims to achieve, and how to present them to his students so the maximum amount of comprehension may reach its greatest potential.

It is the seven introductory chapters that focus on the fundamentals, but more as a review than anything else. This is why they are considered as the introduction for the textbook, and given letter names (instead of numbers) for chapter designation. Excluding the fundamentals chapters, the textbook is made up of thirty chapters all together. Like Gretz (1994), this book provides no fold-out keyboard, or website for referential use. However, it does come with a workbook combined with an anthology. The book also comes with two two-disc CD sets. One set is for use with the workbook / anthology and includes the recordings to all the selections in the anthology. The other set consists of over 200 recordings from the audio examples in the textbook. The anthology provides the sheet music for listening examples provided in the text.

To begin with, Chapter A focuses on pitch: its notation, intervals, the overtone series, and consonant versus dissonant intervals. Chapter B explains rhythm and meter. Here, the author discusses durational symbols, pulse / beat / meter, tempo, both simple and compound meters, metric notation and accent, asymmetrical meter, irregular beat divisions, and irregular rhythmic / metric relationships.

Chapter C talks about tonality via scales, keys, transpositions, and modes. Chapter D introduces species counterpoint (not often seen in fundamentals textbooks, but again, the introduction of the text is meant to be a *review* of the fundamentals). Here, the author discusses the melodic line, first, second, and fourth species counterpoint. Chapter E looks into triads and seventh chords. Chapter F elaborates on harmony by going into harmonic function (including Roman numerals), and figured bass. Finally, Chapter G brings it all together with a discussion of musical style, including discussions of the elements of style, style periods, and “scratches the surface” with discussions of five musical eras: Renaissance, Baroque, Classical, Romantic, and twentieth century. Roig-Francolí (2003) covers the fundamentals in less than 150 pages.

Like Kostka & Payne (2004), this textbook is definitely intended for a full theory curricula. In seven short chapters, all major fundamentals concepts are covered and discussed, but since the fundamentals are the blueprints of music theory, the most significant topics are discussed with greater attention (probably) given to them than to the fundamentals. This supports the idea that the fundamentals must become second nature to music students when going forth with the theory curriculum.

### **2.17. *Rudiments of Music [for Music Majors with CD]* by Soskin (2005)**

Eileen Soskin, in her textbook *Rudiments of Music [for Music Majors with CD]* (2005) makes it a priority to clarify that her textbook is intended for the college-level music major. Her book is designed to give the student the option to work in a classroom or on her / his own.

All six chapters conclude with homework assignments, a practice quiz, answers to the homework assignments, and then a real quiz over chapter materials. One appendix consisting of practice final exams (and the corresponding answers) brings the book to a close. Moreover, a CD-ROM accompanies the book. Upon its insertion, a window opens and the student may click on one of six concepts. The CD-ROM website opens to reveal two windows: the first with the same first six concepts, and the second with five assignment numbers. The student chooses the assignment and is given a few minutes – either two and a half, five, eight, or ten depending on the assignment’s level of difficulty – to answer the questions. The author of this thesis tried an interval assignment, and with all the answers correct, he clicked the “Submit” button to find another window open with a message: “Out of a total of 15 questions, you had 15 correct” and below, a button that said “Try Again.” He tried another assignment, this one consisting of twenty questions. He intentionally answered four questions incorrectly, and was given a similar response: “Out of a total of 20 questions, you had 16 correct.” Also, if the time expires before any answers are submitted, the student receives a message that reads: “Out of a total of [x] questions, you had [x] correct.” Evidently, the CD-ROM is only meant for the practice with no specific feedback given beyond how many answers were answered incorrectly.

There is a noteworthy irony about the software. The textbook consists of six chapters. The CD-ROM, upon its startup, lists all six chapters as well, logically indicating that there are activities available for all six chapters. The irony is that though Chapter 2 is listed in the CD-ROM as a chapter to choose from to practice with, he (the author of this thesis) clicked the Chapter 2 button, only to find a message: “There are no assignments available for this chapter.” It may have been Soskin’s intention to simply offer a minimal amount of consistency with her textbook: not all the chapters need assignments on the CD-ROM, but list all the chapters anyway.

Chapter 1 discusses clefs and note names. The discussions include accidentals, the grand staff, enharmonic equivalents, dynamics, and tempo markings. Chapter 2 explains rhythm, meter, and rhythmic notation. Chapter 3 covers the major scales, scale degrees, patterns, key signatures, and the Circle of Fifths. Chapter 4 introduces intervals: simple intervals, their numbers, types, inversions, identification, how to build them, and the identification of compound intervals. Chapter 5 talks about all three minor scales, their scale degrees, key signatures, and relative major and minor scales. Chapter 6 discusses triads: triads in root-position, the four different types, first and second inversion of triads, identification of all three positions, triads in the major and minor scales, and identifying them in keys.

In her preface, Soskin warns that music majors who have limited strength regarding the knowledge of fundamentals are faced with one of three options: the student can take a remedial theory course, an intensive course before school starts, or enroll in a music theory class despite the lack of a knowledgeable foundation in the fundamentals.

Whatever the case, her textbook aims to remedy that problem, so long as the student is willing to catch up.

### **2.18. *Music First!* by White (2007)**

Gary White's enthusiastically titled *Music First!* (2007) applies a very useful approach to the teaching of the fundamentals. As White explains: "The premise of this book is that intellectual understanding of music should follow direct experience – that **music** should come **first**" (White 2007, vii).

This textbook – comprised of eleven chapters followed by five appendices – also offers an online learning center ([www.mhhe.com/musicfirst5](http://www.mhhe.com/musicfirst5)), a CD-ROM of audio examples, and a fold-out keyboard. Like the fold-out keyboard in other books like Lynn (2007), this keyboard also consists of four octaves ( $C^2$  to  $C^6$ ). All the keys are labeled, and there is a grand staff above the keyboard with notation locations designated. Although it lacks the guitar chord graphics, it gives the enharmonic spellings of the consecutive white keys in addition to their standard names.

An additional feature is the included "scale builder" / "chord builder" card. It is a small, square-shaped card. On one side, one finds the "Scale Builder"; on the reverse side, the "Chord Builder." On each of the four sides, on the scale side, one will find a series of eight arrows pointing towards the edge, and between each, either a "1" or a "½." Below each series of arrows is one of four scale labels (major and all three minors). The directions in the middle of the card read: "To determine the notes in any major or minor scale, align the keynote arrows with the keynote in the letter notation on the back of the Piano Chart. The Consecutive letters of the alphabet above the arrows are the notes, sharp

or flat as indicated, of the scale.”<sup>4</sup> Turn the card over to reveal the “Chord Builder” and use the same letters behind the keyboard, and one of four different chords (major, minor, dominant seventh, fully-diminished seventh) will be revealed. The same arrows are used, but instead of whole- / half-step indicators between them, they have either a “M3” or a “m3” measurement. Similar directions read: “To determine the notes in the chords indicated, align the arrow on the left with the letter name of the chord in the letter notation on the back of the Piano Chart. The arrows then point to the letter names of the notes in the chords and their enharmonic equivalents.” It makes for a very useful tool indeed!

A unique feature of the book is the five interludes (after the even-numbered chapters) that contain musical quotations from living and dead musicians (and other non-musicians) to prompt discussions and critical thinking along the way. Included in each chapter is a varying number of “Quick Checks” that give the student an activity to engage in to promote active learning. Each chapter also closes with four sections: key terms, listening “Using What You Have Learned” and finally assignments, making this textbook a workbook, too.

While Chapters 1 through 4 cover pitch notation, durations, rhythm, and meter, Chapter 5 discusses the keyboard and all its components: the whole- and half-steps, accidentals (including the double sharp and double flat), enharmonic equivalents, and key signatures. Chapter 6 explains major keys and their scales. The discussion includes the tonic, diatonic scales, other major scales, major scale key signatures, the Circle of Fifths, how to determine the key from the key signature, the dominant, and solfeggio.

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<sup>4</sup> “Consecutive” was capitalized in the directions for emphasis, since there are two rows of note names to decipher from. It can lead to minor confusion.

Chapter 7 delves into intervals, scale degrees, interval qualities, how to construct an interval below a given note, and the difference between the augmented fourth and diminished fifth. The chapter also provides a summary of common intervals with enharmonic equivalent indications. Chapter 8 continues and completes the scale / key discussion with minor keys and scales. Discussed here, all three minor scales, minor scale key signatures, the differences between relative and parallel keys, the dominant in minor, more solfeggio (this time, with numbers), and transposition.

Chapter 9 covers chords: harmony, triads, their inversions and open / close positions, pop music chord symbols, diminished / augmented triads, block chords versus arpeggios, and seventh chords (including dominant and minor seventh). Chapter 10 explains the harmonic system in major keys, Roman numeral analysis, primary and secondary chords, the harmonic system as applicable to minor keys, Circle of Fifths progressions, part songs, and the harmonic structure of rounds.

Chapter 11 adds to harmonization and calls on the student to compose. The chapter covers harmonizing melodies, non-harmonic tones, harmonic rhythm, how to play keyboard accompaniments, adding rhythm to accompaniments, musical phrases, melodic contour, cadences, and forms. The discussion of forms does not list the types of forms that exist (e.g. binary and ternary), but rather mentions that numerous well-known songs have multiple themes that are obviously distinctive from each other, and that such patterns can be labeled with an alphabetical system. The five appendices conclude the textbook. The first four elaborate on already-covered materials: (1) interval inversions; (2) pop music chord symbols; (3) guitar chords; (4) playing a keyboard instrument. The

fifth appendix lists answers to a select number of problems in the assignments throughout the text.

White strongly advocates active learning. One way he promotes it is by having students actually perform in class rather than just listen to a recorded performance. The Interludes throughout the book are a different, unique feature, too. They promote critical thinking about why musicians do what they do, what makes music such a unique art form, and so on. The “Scale / Chord Builder” card makes for an excellent visual reference, especially for those students who are not accustomed to picturing a keyboard in their head (primarily, non-pianists). Overall, White (2007) seems to prove itself to be of great value, and makes an honest attempt at making active learning fun.

### **2.19. *Basics of Music: Opus 1* by Zinn & Hogenson (1994)**

Zinn and Hogenson coauthored their book, *Basics of Music: Opus 1* (1994). Their book does not offer any CD-ROM package. Instead, if the student looks at the end of the book, she / he will find an envelope attached containing a foldout piano keyboard. This keyboard is helpful in that it consists of *all* eighty-eight keys that make up a full-size keyboard. The only note name provided on the keyboard is that of Middle C. No other key is labeled with its respective name, and further, no notational reference is given as to where on the grand staff the notes belong. The lack of key labels should not make the learning experience too difficult for students. Rather, it should prove more beneficial in that there is only *one* point of reference: Middle C. Many theory professors will agree that so long as the students have one point of reference, they can find any answer they are looking for. As mentioned in the discussion over Kinney (2005), students who either play

the piano as their primary instrument or who know it sufficiently will usually exceed in learning music theory, compared to students who primarily play a different instrument or lack proficiency on the keyboard. When a student studies piano, one of the first notes she / he learns is the location for Middle C, and the lessons continue from there. With Zinn & Hogenson (1994) offering a foldout keyboard with only a Middle C label provided, it is like giving the students piano lessons while educating them with theory simultaneously. This is usually a very strong pedagogical combination.

Like many fundamentals texts, Zinn & Hogenson (1994) boasts its strengths, and how it could prove (or should prove) to be a panacea for most (if not all) theory pedagogy problems. Starting with a preface and followed by messages to both the student and the professor, Zinn & Hogenson (1994) describes two important aspects for any textbook: (1) design and structure, and (2) organization and approach. In the preface, other important aspects are discussed, such as which concepts are covered, and *especially* important, in what order. In the “To the Student” message, the authors grant assurance to the students in notifying them that through the structure and format of the text, it is designed to “maximize comprehension and to minimize the time you must spend reading and memorizing” (Zinn & Hogenson 1994, xiii). Many students may favor such structure in a textbook because in music theory classes, memorization of information remains a primary concern among them all. Ideally speaking, the student should never *memorize* the material, but rather, *learn* it. Zinn and Hogenson describe the textbook, in its entirety, as “a complete, self-contained teaching package” (ibid., xii). In the “To the Instructor” message, the authors mention the importance of their text, the importance being that the text serves as a compensation for what other texts lack:

“There are many theory fundamentals texts in the field today. *Basics of Music: Opus 1* was inspired by the shortcomings of most of these texts. The authors were dissatisfied not only with the content, scope, and depth of coverage of most texts but also with their presentation and format.” (Ibid., xv)

The textbook is composed of thirteen chapters, followed by six appendices. Each chapter begins with a list of goals to be attained at its completion, and ends with drills and exercises to give the student the opportunity to practice the material discussed. To serve as an additional convenience, every page is perforated so the student may submit their work to the professor. Of all thirteen chapters, only the first is further divided into three Parts. Chapter 1 discusses the properties of sound and basic notation. It gives the student a scientific background on the physics of sound, going into as much depth as the differences in wavelengths between a clarinet and a trumpet<sup>5</sup>. Some examples given illustrate graphs such as those usually seen in high school geometry classes. Part A in Chapter 1 deals with the basics of the basics: basic properties of sound, musical dynamics, and development of music notation. Part B discusses modern standard notation from clefs – both commonly and rarely used – chromatic signs, chromatic and diatonic motion, and so on. Part C discusses the elements of musical duration, discussing such concepts as measures, barlines, notes and their respective rests, stem direction and length, and fermatas.

Chapter 2 deals with rhythm, and begins by introducing such common terminology as beat, pulse, tempo, and, of course, rhythm. Discussions follow through both simple and compound meter and all applicable divisions from regular, to borrowed,

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<sup>5</sup> This angle of discussion is actually quite similar to other textbooks – especially those in this thesis – whose authors feel the necessity to show students the scientific nature that music is comprised of.

to irregular. Chapter 3 discusses meter and various meter signatures, and goes as far as to explain the beaming of rests, and address syncopation.

The next concept to be discussed is that of scales. In this textbook, the coverage of scales is similar to the coverage of other textbooks, at least, in regards to chapter layout. Three of the thirteen total chapters in this text are comprised of scale discussions. Chapter 4 discusses the basics of scale structures including diatonic scales, tetrachords (both major and minor), as well as the chromatic and whole-tone scales. Both the harmonic and melodic forms of minor are also introduced.

Chapter 5 presents the second portion of the scales discussion: major, minor and pentatonic scales. This time, the discussion is in more depth, as it discusses the structures of both relative and parallel scales, including scale degree names and pentatonic scales.

Chapter 6 introduces the ever-important concept of the interval. Angles of this discussion include numerical and quality classifications, perfect, major, minor, diminished, and augmented intervals, the tritone, compound intervals, and interval inversions. Two helpful supplements to this chapter are the very thorough interval chart (providing interval identification via staff placement, rather than whole- and half-step counting procedures), as well as a short list of guidelines for inverting intervals. Such supplemental information will prove most beneficial to the student. In most cases, when students are learning intervals, they learn through the “count the whole-step and half-step” method. This interval chart is more beneficial in that it *shows* students what the intervals look like in regular notation as opposed to forcing the student to *memorize* how many whole- and half-steps comprise the construction of a given interval.

Chapter 7 revisits the major scale and all three forms of minor scale, this time in a little more detail, since no other scales are discussed. Chapter 8 introduces the student to key signatures. First to be discussed is the placement and spacing of flats and sharps (in that order). As part of the explanation, the authors provide an intervallic pattern to serve as a visual checklist for students to be able to verify appropriate accidental placement. Following the placement discussion, sharp and flat major key signatures are discussed (in that order). Then the minor key signatures are mentioned. Before revisiting key signatures in a short review, an explanation of the Circle of Fifths is given, but is preceded by a “line of fifths,” serving the same function, only in a linear aspect.<sup>6</sup>

Chapter 9 covers the basics of triads. Triadic structure is the first concept to be discussed, followed by the four basic qualities of triads. Then the discussion leads to the construction of triads in conjunction with scale degrees. Finally, triadic inversions are discussed. Chapter 10 continues the discussion on triads, but becomes more specific and more detailed in that it discusses diatonic triads. The triads are discussed in major, then in conjunction with Roman numeral identification, followed by the minor (all three forms), and then closes with primary and secondary triads, their relationships, and finally, isolated major and minor triads.

Chapter 11 discusses cadence structures. The manner in which the cadences are discussed revolves around three cadence types: (1) final cadences (i.e., perfect authentic and imperfect authentic, and plagal), (2) non-final cadences (i.e., half and deceptive), and (3) “cadences as determined by melodic demands” (ibid., viii). Chapter 12 deals with the

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<sup>6</sup> In Kinney’s textbook, upon discussing the Circle of Fifths, the concept of the fifth was not consistent in dealing with flat key signatures. Rather, the explanation demonstrated stated “remember that on the circle, the sharp keys ... are counted up in 5ths, and the flat keys .. may be counted up in 4ths” (Kinney 2005, 180).

essential concept of harmonization. The concept is discussed through two main concept points: harmonizing melodies and secondary substitution. Throughout the melodic harmonization discussion, four steps assist the student in familiarizing herself / himself with the process of harmonization: (1) determine the key, (2) determine the cadence points, (3) determine the harmonic rhythm, and (4) sketch in primary triads (*ibid.*, viii).

Serving as the final chapter to the text, Chapter 13 focuses on musical form. The terminology addressed in this chapter includes concepts such as motive structure, repetition, transposition, sequence, retrograde, inversion, retrograde inversion, augmentation and diminution, deletion and embellishment, intervallic expansion and contraction, and fragmentation. After discussing all the major and important terminology, the authors turn the students' attention to putting everything together through discussions of phrase structure, period form, and two- and three-part form.

Concluding the text is the list of Appendices A through F, respectively offering and addressing ear-training exercises, keyboard drills, the harmonic overtone series, reference charts, modal scale structures (which other fundamentals textbooks include in their chapters of scales discussion), and an international array of melodic literature.

To bring attention to the ways in which Zinn & Hogenson (1994) compares and contrasts to other books, it offers the foldout keyboard, a very useful tool for supplemental reference. It lacks a CD-ROM, which, depending on the program's design, may or may not be a necessary tool for educational enrichment. The principal point that the co-authors make regarding their text is that it is designed to bridge any theoretical gaps that other textbooks leave behind. The authors state that their textbook is also a self-contained teaching tool, whose structure, format, and organizational layout require no

additional handouts or supplemental material. In other words, the textbook itself could very well be the course.

In regards to explanation, it holds some similarity to that of Kinney's text. Kinney (2005) was similarly designed to help students find answers fast. His textbook came across, in some ways, as a "quick-n-easy" text through which students did not necessarily have to know how the answer is produced, but rather just need to rely on tips and tricks to get through the test faster. Other authors may prefer the student to be aware of foundational concepts with regard to *how* theoretical elements function. Zinn & Hogenson (1994) is similar to Kinney (2005) with regard to finding answers the "quick-n-easy" way. Ideally, students should be able to have fundamentals answers on the tip of their tongue before being asked the question. When it comes down to it, all students are interested in is a quick and easy way to find answers. Both of these texts – Kinney (2005) and Zinn & Hogenson (1994) – potentially serve that purpose. A student will adhere to formulas they are given in order to find the answers they need to improve their skills. The more consistent and foolproof the formulas are, the better. If there are any exceptions to rules, the less there are, the better. Zinn and Hogenson were determined, through the writing of their text, to maximize comprehension (learning) and minimize memorization. Memorization is used mainly to remember something important, but with the acknowledgement that the information memorized will quickly be forgotten once the time for which it was important has passed. When a student *learns* material, she / he understands every part of it. The student can be asked at any time, and the answer will flow freely and confidently. Part of the learning experience is discussion and interaction between student and professor. This part of academia is most important because many

thought processes are taking place simultaneously. Both student and professor are actively and mentally engaging in activities in which they must evaluate, create, and analyze music. Because of this great necessity of active learning, no answers are provided on the worksheets the textbooks offers. This way the students may submit them to the professor and discuss answers, rather than just submit them. The self-tests at the end of each chapter offer this opportunity for self-evaluation to determine a student's own progress.

## **2.20. Concluding Remarks on the Review of College Textbooks**

Recalling a few conclusions about each textbook, every author presumably has the same goal: to introduce music students (or non-music students) to the basic grammar of music. There are countless variables that coincide and work in conjunction with others for students to achieve their maximum ability to understand the material, especially if it is new for them. Recalling the concept of musical talent versus musical knowledge, it can be safely assumed that many people have some degree of innate musical ability, whether it lies in pitch matching, an ability to find and maintain a tonal center, or actually playing an instrument. A child hearing a song on the radio and playing the notes on a keyboard without any extra help has musical talent. Identifying a song as being written in a minor key is musical knowledge. It is through these textbooks (and through classes, ideally) that professors will try to improve students' musical knowledge so as to help foster whatever innate talent they possess. Once that process of improving musical knowledge begins, then the next step is to decide on a clear approach to explain the rules of notation, whether it be through explaining foundational principles or simply offering "quick-n-

easy” tips and tricks to find the answer fast. The main challenge is that those students taking a theory fundamentals course probably, for the most part, possess very little musical knowledge. They are entering into a world that, in the grand scheme of music theory, is very small, and yet the amount of information to be learned is immense. So, how does a professor, given a textbook, their own professional experience, and an array of different musical backgrounds, help her / his students learn so much material so it becomes second nature?

The biggest challenge with fundamentals pedagogy is simply that the less a student is required to remember, the better. Otherwise, not comprehension, but memorization will result. The problem is that there is so much involved in fundamentals that it is hard to balance the ideal of “less is more.” If a student wishes to be fast at giving an answer to a fundamentals question, quick and easy formulas may be helpful. But for a student to *understand*, foundational information is needed.

To conclude the textbook review, the author of this thesis would like to refer to Appendix A. What is shown is a table listing all discussed textbooks, in alphabetical order by author’s last name. Strictly serving as a summary of comparisons and contrasts, it will offer a visual understanding of how similar and different the textbooks are to and from each other. These findings only further illustrate the point that there is no one perfect way to teach music theory, especially the essentials.

Comparisons and contrasts listed include the use of supplemental material(s) (i.e., keyboards and / or CD-ROMs), quantity of chapters used to address and discuss all topics and concepts, the first concept addressed, the last, the order of concepts, how keys and

intervals are introduced and explained, if the CD-ROM's (if applicable) and / or the book's exercises are passive, active, or both.<sup>7</sup>

To list a few general similarities and differences, the only thing that can be said is that all the authors strive for one goal; a goal already mentioned: making an abstract concept as easily understood and as quickly learned as possible. Not all of them are the same. They just have the same intentions. Of the eighteen textbooks reviewed, only eleven come with supplemental material (i.e., a CD-ROM and / or a fold-out keyboard). Of these eleven textbooks, five of them include both a CD-ROM and a keyboard, while three feature a keyboard, and three only offer a CD-ROM. Of the five textbooks that include both a CD-ROM and a keyboard, only one keyboard does not provide a staff or note names for the keys. Of the three textbooks that only feature a keyboard, only one keyboard has neither notation nor note names on the keys. Of the books with CD-ROMs, only five of them consist, strictly, of listening examples, two contain both interactive exercises and listening examples, and two other are strictly interactive activities.

Of all the eighteen textbooks, sixteen of them are strictly fundamentals books. The other two are theory core curriculum textbooks. All but two of the textbooks are "worktexts" (textbook / workbook combinations). The other two are strictly textbooks, and they come with their own separate workbooks.

Overall, none of these textbooks are identical. If anything, they are, at most, similar. For almost all of them, the first concept discusses is not the same. Most were written to be worked with in a classroom setting. Others can be used for classroom teaching, but are more for self-teaching. Some were written with an approach to teaching

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<sup>7</sup> Passive exercises are those which require little activity or thinking such as identification exercises whereas active exercises require the student to put more effort into her / his answer.

non-music majors who are only taking a fundamentals course to satisfy a fine arts requirement for their respective degree. Others are geared for music majors who need to start from the beginning. Some concepts are saved for discussion – or for brief introductions – in appendices, while those same concepts may not even be discussed, or appear towards the end of the text. Regardless of how these books present, the authors did the best they could with what they knew how to do. Each book represents each author's ideas based on their educational / philosophical beliefs and / or personal experiences. Some were written to sound professional, while others sound more nurturing and friendly. None of these books are perfect, and no book probably ever will be. And even if a book that is to be published is “perfect,” then what is the definition of “perfect”?

## **CHAPTER 3**

### **REVIEW OF SECONDARY LITERATURE**

#### **3.1. Introduction to the Review of Secondary Literature**

There are four components when it comes to researching how beginning music majors learn to understand music theory, especially the fundamentals. They may be viewed from two different perspectives: internal and external. Internal components, in this context, consist of all explanatory and interactive communications between the students and professor. It is what starts and stays in the classroom. External components consist of resources to aid in the functioning of the internal components. When a professor finds a textbook to adopt for the class, that source, that information, is a product of another professional's research and is available to those professors interested in including that material in their own classroom. Additionally, just like every music theory professor might agree that there is no one perfect way to teach music theory, one still needs all the help, insight, and advice she / he can muster in order to develop and maintain a friendly, professional, and productive atmosphere in the classroom. In this regard, secondary literature is very useful. With these non-textbook sources of information, professors may be introduced to new teaching approaches and ideas that have proven successful for other professors in the universal pursuit of making the easiest part of music theory easier to learn (and to teach).

### **3.2. “The Development of Intuitive Musical Understanding: A Natural Experiment” by Bamberger (2003)**

Bamberger describes her students in this music fundamentals class to be the typical first-through fourth-year undergraduate students taking the course to satisfy an arts / humanities graduation requirement. Many of them have no musical training, for the exception of some male students who have taught themselves guitar (Bamberger 2003, 10).

Bamberger takes two students and sets them both up in a computer lab. They both have their respective stations, and, given what they have learned in class, they must “[compose] melodies within the constraints of certain given materials” (ibid., 7). In the process of composing their challenging melodies, they are required to keep logs. As Bamberger explains, “[their] logs trace their composition sketches, decision-making and analysis of progressive modifications” until they finally arrive at their goal: a coherent, tonal melody (ibid., 7).

Both students complete the project at their own pace, and receive immediate sound feedback with every melody-altering decision they make. Though they complete the task satisfactorily, they focus on contrasting targets. They are both given the same five tuneblocks, “one of three brief and structurally salient motives needed to reconstruct the tune” (ibid., 18). Four have five notes, and one has eight. The first student easily identifies the tonic among the tuneblocks. She targets the melody’s “boring” tendencies, and alters the melody by moving around the tuneblocks. She also adjusts some note durations in order to help the melody flow to a close (ibid., 18). The other student has a harder time identifying the tonic, and is primarily concerned with a fourteen-note balance

throughout the melody. After changing a few pitches within some tuneblocks to aid the cadence and repeating a few other tuneblocks, he also completes the project with a very coherent, tonal melody.

The results of the experiment indicate that “typical musically untrained adults are able to produce coherent tonal melodies, even when given tonally and metrically ambiguous melodic materials with which to work,” and moreover, they “are also able to develop ... explicit criteria for their decision-making as they design-in-action” (ibid., 8).

Taking into consideration that these students are enrolled in a music fundamentals course full of non-music majors, many of them, in this environment, being exposed to basic music theory, can succeed by an evidently inherent ability to create tonal music, a fundamental activity. If this ability is indeed inherent, then could this natural ability help those students who have learned to read music through high school theory courses? If so, how much? We know almost anyone can at least find the beat in a piece of music. Already, our bodies are controlled by the pulse of the heart’s natural rhythm. It is in our nature to be *one* with music. But what about the visual part? Can we connect what we feel and hear to what we see and comprehend it as a whole, as an external entity with internal connections?

### **3.3. “The College Music Theory Curriculum: The Synthesis of Traditional and Comprehensive Musicianship Approaches” by Bland (1977)**

Bland’s article is one of great common sense. Simply put, the article discusses what – in his opinion – the ideal theory curriculum should be, and what it should consist of.

To briefly summarize, Bland makes eight important points: (1) Theory curriculum must be constructed considering many aspects such as not exclusively using Bach

chorales in studying harmonic progressions. (2) Students need a curriculum that covers a broad spectrum that can be applicable in any musical situation. (3) Music history can be offered chronologically or otherwise. (4) The theory curriculum should consist of an orientation to [1] the purposes of theory training, [2] interrelation of different areas of musical study, and [3] possible implications for a future career in music. (5) Traditional curriculum design of separate classes over a three-year period may be more practical. (6) More intensive courses should strictly serve to expand on previously learned material. (7) Theory curriculum should maintain a balance between prescriptions for getting from chord to chord and long periods devoted to two- and three-part counterpoint with little emphasis on harmonic progressions. (8) For music educators, theory curriculum should provide the training to view compositions from many viewpoints and levels that the structure of the music itself suggests ideas for teaching that music. (9) The successful theory program provides experience with systematic and consistent methods for assimilating ideas from diverse sources and for adapting theoretical concepts to various musical situations.

Overall, this article seems to discuss what, according to the author, would be the ideal music theory curriculum. With any given curriculum, however, many problems and shortcomings can be found and revealed. Usually such mistakes are inevitable and can be corrected. This synthesized, or rather, hypothetical curriculum “guideline” (so to speak), is only designed to bring out the best in music departments, especially for the students, since the curriculum is developed based on what professors and curriculum coordinators may think is best for the students based on their own professional experience. The ideal

curriculum will be open, cover broad topics, and challenge the student to ready her / him for any future challenges she / he may need to face, confront, and solve.

When students enroll in an academic program, they are investing both their time and money into gaining as much as they can from it. The curriculum's job is, through its design, to address each student's individual needs for professional (and individual) growth and simultaneously offer security that students can get a stable job after satisfactorily fulfilling curricular requirements by preparing them in almost every (if not every) aspect of their chosen area of study.

#### **3.4. “The Rough Guide to Reading Music and Basic Music Theory” by Pinksterboer (2001), Reviewed by Burnham (2002)**

Burnham reviews Pinksterboer's rough fundamentals guide. As she reviews, Burnham observes the book's “user-friendly” writing style. In its simplest form, the book is meant for those who know little to nothing about reading music, or are interested in learning about how to start playing an instrument. The guide also serves useful as a reference for those already familiar with reading music notation.

Overall, Burnham is dissatisfied with the author's approach. While written in chapter format, some chapters address jazz lingo and other forms of ornamentation. Burnham, puzzled over why the author would discuss jargon that is inapplicable to most beginning students, offers some constructive criticism: “[Pinksterboer] would have served the student better by concentrating more on chord construction and the practical application of chords in lead lines, pop music, and simple accompaniment” (Burnham 2002, 100). Still dissatisfied and critical, Burnham observes that one chapter discussing

the writing of music is “too wordy and confusing” for beginners, and that “simple examples and a few instructions” would be sufficient (ibid., 100).

Before concluding her review, she discovers three other discrepancies in the text. First, she notices that some concepts are introduced in an illogical order. Next, she mentions how the author encourages keyboard use despite the fact that some may not know how to use one. Finally, Pinksterboer provides a list of other theory resources to further the student’s training without ever mentioning the ideal resource of a music teacher.

It is clear from Burnham’s professional review that the book may prove insufficient for music students to *rely* on texts to gain comprehension of the fundamentals. After all, the title of the book is a clear indication of the book’s sole purpose: it is a *rough guide*; it is *not* a textbook. Such publications are primarily useful for those who just want to know enough to get by. It is possible indeed, however, that this “guide” is “rough” enough to lack the obvious encouragement to find a music teacher as a resource to formal music education. Burnham’s implied concern lies in the fact that even if students look for shortcuts to comprehension, they should not be shortchanged.

### **3.5. “Teaching Music Theory: The Liberal-Arts College” by Chrisman (1974)**

Richard Chrisman’s article is somewhat autobiographical in that he discusses his experiences as a music theory professor at two different liberal arts colleges. At his first college, he found that, though his students did well in his theory courses, they had become “tonicized” and, consequently, faced challenges in seeing anything beyond harmony in the music they analyzed (Chrisman 1974, 92).

After having noticed the obvious difference in teaching at a large university and a small one (with regard to class size, curriculum implemented, etc.), one of the bigger challenges was the way larger class size affected classroom teaching structure. It is inevitable, under such educational circumstances, to come across a student population whose individual backgrounds are just as diverse as the material that will be covered. Courses became integrated with theory, aural skills, and history. This brought the advantages of aural perception, broad perspectives on Western music, and surface knowledge of compositional problems of various styles. Inevitably, the primary disadvantage to the integrated curriculum was that there was little time to gain facility in any area, particularly counterpoint and tonal harmony (ibid., 94). When a music department has a vast number of students, an adequate number of classes is necessary to accommodate a diversity of musical interests among the students. Chrisman also found that if one faculty is teaching a large number of diverse classes, it may detract from that professor's teaching effectiveness (ibid., 94).

It is not completely valid to suggest that an understaffed faculty or a rough curriculum will shortchange the students hoping to comprehend the material they learn. However, clearly, any university program needs a solid curriculum and experts in their field to teach it. Otherwise, are students comprehending what they are taught?

### **3.6. Formative Research on the Refinement of Web-Based Instructional Design and Development Guidance Systems for Teaching Music Fundamentals at the Pre-College Level – by Chuang (2000)**

Wen-Hao Chuang discusses the growing popularity of Web-Based Instruction (referred to as WBI). Although WBI courses are becoming increasingly available (and popular), little attention is given to how they are developed and / or designed, for the exception of general guidance systems. His primary purpose of research is to “synthesize . . . general WBI design and development guidance systems and then make possible improvements, specifically in the context of creating WBI for teaching music fundamentals at the pre-college level” (Chuang 2000, 31).

For his study, Chuang chose a fundamentals course – Rudiments of Music – offered at Indiana University. The WBI program to be created was an adaptation of the fundamentals course, and was to be called Music Fundamentals Online (referred to as MFO). In a provided table, Chuang lists the topics typically covered within the original course: a total of eleven, including (1) notation, piano layout; (2) half- and whole-steps; (3) major, minor, and perfect intervals; (4) key signatures, relative, parallel, and natural minor scales; (5) harmonic and melodic minor scales; (6) augmented and diminished intervals; (7) triad spelling: major, minor, and diminished; (8) tonic and dominant triads, dominant seventh; (9) identifying and spelling triads by Roman numerals.; (10) chord reduction and keyboard spacing; and (11) melody transcription from memory, alto clef transcription (ibid., 36).

On a few pages of Chuang’s dissertation, he gives the reader screenshots of how MFO looks on the computer monitor. One screenshot lists five objectives, for example:

“To be able to quickly identify pitches notated in the alto and tenor clefs by name and on keyboard” (ibid., 62). Other screenshots show lesson descriptions and activity descriptions (with regard to the alto clef, and whole- and half-steps).

To summarize, putting together an online course requires that many factors be taken into consideration. Among them are the analysis, planning, design, and development of the program. The program, however, has an additional responsibility: it must be everything – the classroom, the textbook, and the professor. Chuang’s dissertation gives a good example about how an online program can best serve the students it was created for: the objectives that are to be met, how they are to be presented, the activities explained and offered, and the explanation of concepts.

### **3.7. “Gender and Musical Instrument Choice: A Phenomenological Investigation”**

**by Conway (2000)**

When high school students decide to be in band, which instrument will they ultimately decide on studying? After having interviewed about eighty-five students, Colleen Conway finds not only the reality that students indeed conform to gender stereotypes and external influences, but also that students are just as aware of the stereotypes’ potential influence of their instrument choice.

During the interviews, Conway found that students’ instrument choice is based on one or more of the following: peer influence, parents’ influence, elementary music teacher influence, the instrument’s role in the band, stereotypical constraints, instrument timbre, visual appeal, and even physical associations (e.g., dainty girls would never play a tuba). Additionally discovered, an obvious male-female-flute controversy existed over

how the flute seems to be explicitly deemed a feminine instrument, and that many male students had a hard time envisioning a male – especially a masculine male – playing the flute. One student reportedly stated: “I, as a guy, would not have played the flute due to verbal taunting from peers” (Conway 2000, 13).

Many music majors who are starting theory courses more than likely have just come from a band or choir program at their high school. These experiences can result in students learning the fundamentals on instruments that may not be of great avail when it comes to being a visual aid to put theory to practice. Visual aids are not necessary, but they can indeed be helpful in the explanation of abstract concepts (e.g. music theory). In this context, the piano / keyboard is the most ideal instrument on which to learn music theory, especially the fundamentals. Students entering the theory core are required (like all other non-pianists) to take piano classes to develop a proficiency with piano. Through this requisite instruction, the students can then implement the use of another resource that can be highly applicable to what they are learning in their classes. The primary reason for non-pianists to take piano classes, obviously, is simply to help them to develop a satisfactory proficiency with an instrument they may rely on, should future situations requiring its use arise. But a strong benefit of gaining piano proficiency can be to aid the student in comprehension of theoretical concepts as well.

As unrelated as this article may seem to the comprehension of fundamentals, students in band are choosing instruments to play. And the reasons for their choice can and / or will vary. For those students who pursue a career in music, their instrumental choice could hinder their progress in a fundamentals class. Also, however, public school music teachers can definitely differ in their teaching methods. Some teachers may be

confusing when explaining theoretical concepts and out to adhere to teaching new repertoire and how to help the student play her / his instrument. Some students may need an instrument that can ensure their progress in fundamentals. Other students may be smart enough to comprehend the concepts simply by listening to the teacher's lecture. In band, students are taught how to play music. In college, they finally learn about *what* they have been playing all along.

### **3.8. "Musical Theory and Practice: The Role of the University" by Evans (1969)**

Peter Evans takes on a very blunt view of certain problems in the British university setting in the context of scholarly development. He addresses a variety of issues from computer notation software (barely coming out at the time, over thirty years ago) all the way to a "gulf" that separates conservatory classes from other university classes. He also mentions how professors teaching such separate classes should not adhere to one form of teaching, but remain as academically and scholarly connected to both teaching worlds as possible.

Evans' views of the issues addressed would probably never be argued against. He simply asserts that music, just like any other field in the university, requires just as much effort and practice (if not more) to make it as great a necessity to humanity as other fields, particularly medicine, religion, and law (according to his review of European academic history). Evans mentions Rev. Sir Frederick Gore Ouseley, an Oxford professor, who, in 1862, decided to improve the system of standards that students had to meet before earning a music degree. Instead of the candidate simply displaying their

training and reputation, Ouseley started requiring a supplemental written exam to scrutinize the candidate's true ability (Evans 1969, 4).

It seems, in Evans' article, that his primary concern is the difference between a university education and a conservatory education. He suggests that universities and conservatories should remove the "gulf" that separates the two settings. His main concern, in this context, is the students' success. He worries that they will be more interested in – to use a play on words – playing than studying. They may be less interested about a composer's intentions, and instead be more interested in playing the notes before them. They forget that scholarly music education is a "balancing act" between research, analysis, and performance. Students are more interested in submitting the counterpoint exercises rather than studying the composer's purpose. Evans suggests an educational connection between the university and the conservatory, all for the enhancement of the scholarly musician. Applying Evans' suggestions to the comprehension of music fundamentals involves being fluent with as many teaching methods as possible to ensure that comprehension will occur. The university world and the conservatory world are not very different, for the exception of intensity and competition. The question then, is, are they being appropriately challenged?

Evans, Wittlich, and Laurillard can all agree: we must stop teaching students *about* music, and instead, teach them how to *be* musicians (Wittlich 1998, 5). Consummate musicians can gain enough experience and practice to enjoy the pleasures that musicianship has to offer. Regardless of what certain aptitudes will allow, all skills are, at first, built upon the mastery of the fundamentals.

### **3.9. “Theory Pedagogy and Basic Musicianship” by Faulconer & Foltz (1990)**

James Faulconer and Roger Foltz are very concerned about the theory curriculum. At the university level, a Bachelors degree should, ideally, take no longer than four years to complete. Yet a few problems with regard to state requirements and course popularity are forcing some universities to stretch their four-year degree plans into five-year plans to satisfy both new, increased requirements, and accommodate students’ interests.

Due to widespread interest for certain music topics (e.g., Schenkerian analysis, set theory, world music, jazz, and popular music) as well as increased requirements for both state certification and university general education classes, where, within the already-established theory curriculum, will these new requirements find a place? A theory program can only fit so many courses in its sequence. Adding to the problem, students, in increasing numbers, are entering college with a very poor foundation on fundamentals comprehension, and consequently, are required to enroll in remedial courses.

Feeling the pressures of academic predicaments, the authors point out that “many [music] programs have actually eliminated some or all of their upper division courses such as counterpoint, analysis, and orchestration” in order to meet the aforementioned increased state certification and general education requirements (Faulconer & Foltz 1990, 85). Consequently, the authors explain that “this has necessitated programs to place this material into freshman and sophomore courses already congested [with core theory courses]” (ibid., 85-86). The authors do not oppose the additions of new topics in the theory curriculum; however, they are weary of the challenges that come from modifying the curriculum to ensure the inclusion of such topics within pre-existing courses, “but not at the expense of development of basic musicianship” (ibid., 86).

The authors go on to list five topics for consideration to ideally resolve curricular issues and challenges: (1) Pressures on music education curricula are forcing music theory curricula to diminish by turning upper division courses into electives at best. (2) Remedial theory courses exist because of incoming students' deficiencies with fundamentals comprehension. If students came better prepared (from high school), then more courses could be offered to accommodate more material. (3) How can an administrator choose which courses to eliminate among the theory core? Are formerly required courses (e.g., counterpoint, form and analysis, and orchestration) no longer necessary, and can they be incorporated into lower-division courses? (4) With CAI's increasing success and popularity (especially for drilling exercises), it could potentially satisfy fundamentals deficiencies among incoming freshman. (5) CAI has expanded to offer hands-on activities that implement practice in composition, arranging, and orchestration (*ibid.*, 87-88)<sup>8</sup>.

Expressing his opinion, the author of this thesis feels that it is no wonder as to why state and general education requirements have increased over the years. New research frequently comes along, and it usually indicates that new approaches need to be made to remedy current problems. The whole purpose is to get the student as capable as possible before starting a career; however heightened requirements cost the institution, the student, and ultimately the state large amounts of money. Nonetheless, these are the inevitable pros and cons of not just higher education, but of education in general.

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<sup>8</sup> To speak from personal experience, the author of this thesis graduated with his Bachelors degree in music education – the longest of three recently-approved music degrees at his university – in four years. However, one course was not offered that other institutions would have included as part of such a degree plan: score arranging / orchestration. Consequently, that curricular deficiency was satisfied by enrolling in a pre-requisite for his current Masters degree in music theory.

**3.10. “Welcome to Theory Camp! More Than Simple Remediation” by Gillespie  
(2000)**

Jeffrey Gillespie’s “Welcome to Theory Camp! More Than Simple Remediation” reveals an evidently useful approach to helping first-time freshmen with mastery of theory fundamentals. There is a potential time disadvantage for students having to take a remedial theory course (offered at only select universities, according to the article) before enrolling in theory core classes. This results in delayed progress by a semester (or even an entire year depending on the remedial course length and depending on whether each core course is offered every semester or only once a year).

Rather than offering off-semester or pre-semester courses, Butler University, offered – with great success – an intensive ten-day theory camp. The camp taught with a team-teaching format in which professors rotated, or classes were taught with two professors: one to lecture, the other to patrol the room and address individual problems. Students became acquainted with professors, former composers, and even had “free days” to sightsee and roam the area on their own. Though the amount of time was very compressed and the amount to learn was intense, students seemed to blossom because of how much care they saw the professors putting into the program. Moreover, the students did not progress unless they were ready to go on. The fundamentals taught included pitch / rhythmic notation (in treble, bass, alto, and tenor clefs), meters, scales, key signatures, intervals, triads, miscellaneous terms / definitions, an introduction to solfège with sight-singing games, basic conducting patterns, and listening to various musical styles to identify meters. The camp ended with a theory relay as a review of all they had learned.

After the program, campers' progress was tracked with student and professor questionnaires over the course of both years of theory core classes. Over time, however, the population of campers and non-campers enrolled in theory classes decreased due to students either changing their major or transferring to other institutions. Results of the questionnaires suggested that campers appeared more confident and secure in their knowledge than non-campers. Also, campers were more motivated and optimistic about class attendance and involvement. Typically, throughout both years of theory classes, campers' and non-campers' average grades revealed only slight differences: 82.98 for campers and 83.10 for non-campers (*ibid.*, 57). The most significant difference in average grades is between campers' average grades at the end of the theory camp and non-campers' grades at the end of their semester-long fundamentals course: 90.57 for campers and 85.58 for non-campers (*ibid.*, 57). Gillespie justifies the difference in averages:

“The higher [average] for campers could be attributed to the intensity of focus for the ten days, the lack of ‘distractions’ from other courses or school activities during that time, or a combination of the two. The lower [average] for the traditional elements course could be influenced by the fact that, unlike camp, the course is spread over an entire semester and is part of a full load of classes for each student.” (*Ibid.*, 56)

If the author of this thesis takes Gillespie's justifications as fact, then the most significant difference – revealed through campers' post-program comments and professor questionnaire results – is that campers were more motivated, had an easier time transitioning into college, and were less intimidated by professors. At the end of the theory core curriculum, grades between campers and non-campers may not differ significantly, but students' approach to class and learning reveals a noticeable difference. Hence, Theory Camp provided students with tools to succeed and motivation to learn.

### 3.11. “Relationships Between Grades in Music Theory for Non-music Majors and Selected Background Variables” by Harrison (1996)

Carole Harrison makes it clear that aptitude tests function on the analysis of multiple variables that ultimately determine and predict the test-taker’s potential success in the study of a certain field. Aptitude tests exist everywhere, and music is no exception; however, this time the focus is on *non*-music majors. Much research investigates variables including musical aptitude, musical experience, and academic ability to see if aptitude tests offer predictive validity regarding one’s potential musical achievement in a theory course. Researchers may conduct numerous tests, but the reality is that “although the results of many of these studies show a significant relationship between the measures of musical aptitude and music achievement, the predictive validities vary greatly” (Harrison 1996, 342).

Harrison’s test included three factors and the analysis of their relationships to determine a non-music major’s prediction of grades in a music theory course. Those three factors were 1) pre-college experience (including private lessons and / or ensemble experience); 2) aptitude according to the Advanced Measures of Music audiation (AMMA); and 3) the student’s sex. An additional objective was to check verify AMMA’s reliability. Harrison explains her findings:

.” . . only the variable representing years of performance experience was a statistically significant predictor of grades in the theory course. This finding is consistent with . . . other researchers, who reported that music experience could be a better predictor of music achievement than musical aptitude when both were included in the investigation.”

(Ibid., 349)

Moreover, Harrison found that musical aptitude and experience had a higher correlation than aptitude and achievement (ibid.).

One's success in a field is seldom, if ever, accurately predictable. There are plenty of professionals that are strong in some areas of their field and weak in others.

Experience is clearly an obvious factor in determining one's predictive success in a music theory course. If a student – music major or not – knows how to read music, she / he will excel beyond those whom are starting from scratch, unless one is apt to comprehend.

### **3.12. “A Comparison of Two Computer-Assisted Instructional Programs in Music Theory” by Hullfish (1972)**

William Hullfish conducted a study “intended to determine whether students using a program whose branching was based on a history of responses [(response-sensitive)] would differ significantly in learning from students using a program whose branching was based on the last response [(response-insensitive)]” (Hullfish 1972, 354). Branching for each program differed. Response-sensitive (RS) was built on a student's musical aptitude test score, total incorrect answers, number of attempts on a single item, the score on a pretest program on intervals, and a request for a branch. Branching for the response-insensitive (RI) program was built on “an incorrect response to any item and the posttest scores for each module” (ibid., 357).

Furthermore, Hullfish formulated three hypotheses: (1) student achievement would be greater with a response-sensitive program, (2) students' attitudes in the response-sensitive program would be generally more positive, and (3) students'

instructional paths will vary between the response-sensitive and response-insensitive programs (ibid., 355).

Upon obtaining the study's results, Hullfish found that his first hypothesis was true. Additionally, students' attitudes did indeed change; prior to participating, students were "indifferent" about CAI programs, and afterwards, they became "very favorable" toward them (ibid., 358). Students felt that despite their favorable response to the CAI programs, "they did not prefer [CAI] to traditional instruction" (ibid., 359).

Fundamentals professors should incorporate whatever technology is available in order to assist in the students' comprehension of the material being discussed in class. With RS programs, that will, according to this study, be very beneficial to the students, because rather than being graded only on their last response, they will be graded on every response they have submitted. Technology is one of many factors / variables that can help or hinder a student's progress in the world of music theory basics.

### **3.13. The Effect of an Instructional Unit of Electronic Music on the Musical Achievement of Students in College Basic Musicianship and Music Theory Classes – by Lehr (1980)**

Lester Eugene Lehr, in his dissertation, conducted an experiment. He wanted to see if students' achievement in music theory would be affected if an instructional unit of electronic music (including a synthesizer, among other instrumental electronic music resources) was used in place of a piano upon instructing two different levels of theory courses (basic musicianship and music theory). The two classes included exercises in auditory discrimination. He formulated six hypotheses. He hypothesized that the

experiment's results would yield no difference – as measured by the pre- and posttest – in (1) total skill scores, (2) notational skill scores, (3) auditory discrimination skill scores, (4) melodic element scores, (5) harmonic element scores, or (6) rhythmic element scores in musical achievement between the control group and the experimental group.

Lehr taught three basic musicianship classes (referred to as Music 2 in the dissertation) at a two-year community college. Of his three Music 2 classes, he chose two of them to participate in his study. He included two music theory classes (referred to as Music 3A in the dissertation) taught by another professor. In total, he had four classes, two of Music 2 and two of Music 3A. Both types of classes were placed evenly in each respective group (i.e., one Music 2 class and one 3A class in the experimental group, and one Music 2 class and one 3A class in a control group). The experimental group consisted of thirty-two students, while the control group consisted of forty, totaling seventy-two test subjects.

The pretest and the posttest each consisted of two different exams. First, the AMAT (Aliferis Music Achievement Test) “contains a questionnaire which elicits information from the students [that is] relative to their musical background prior to their enrollment in class” (Lehr 1980, 12-13) and also “provides a measure of the critical association of auditory-visual stimuli of melody, harmony, and rhythm that represents the musician's ability to correlate sound with notation and notation with sound” (ibid., 15). The ODMTB (Ohio State Diagnostic Music Test Battery) “contains sections of aural identification and notation skills items which test a contrasting group of tasks” (ibid., 15).

To begin the experiment, Lehr and his colleague administered the AMAT and the ODMTB as pretests to both classes in each group. Thereafter, the experimental group

was treated with the electronic music unit which primarily consisted of students receiving aural learning exercises from a keyboard synthesizer rather than a piano. The control group maintained use of the piano for similar exercises. Afterward, Lehr and his colleague administered a quiz to each group. Following the quizzes, the experiment endured for a fourteen week period. The experimental group, like the control group, included one Music 2 class and one Music 3A class. The Music 2 class met twice a week for twenty minutes, and the Music 3A class met once a week for fifty minutes. Finally, the professors administered the AMAT and ODMTB exams again as posttests. The results confirmed that all of Lehr's hypotheses were accepted.

Lehr made two observations: (1) "in several instances . . . students requested that the timbre being used on the synthesizer at that moment for dictation be changed so that the tone quality could be more pleasant and perceptible," and (2) "students were keenly interested in the operation and function of the synthesizer . . . [which suggests] that test results might have . . . improved had each student been allowed to operate the synthesizer equipment and individually apply the knowledge and information presented in the electronic music unit" (ibid., 33).

What Lehr concludes is that using an electronic instrument – in this context a synthesizer – for aural learning purposes does not affect students' achievements just because the stimulus for the original activities and / or exercises has been modified. However, it is indeed thought-provoking that students requested a timbre change to aid aural perception. This could suggest that if the professor had heeded the students' complaints about the timbre, student achievement may have been slightly affected.

### 3.14. “A Different Species of Counterpoint” by London (1998)

In London’s article, he makes a valid point that when students learn a subject, they should not just learn the subject but *use* it the way they have been taught. In the case of music theory, London asserts the importance of the fundamentals as building blocks, since comprehension of the material is a prerequisite for students to apply what they have learned in different ways. If they are taking a music history class, they must not settle for memorizing facts; they should *become* historians. As for those in theory courses, they should not just use their knowledge to identify and analyze, but to synthesize new ideas.

London makes his case in regards to the difficulties students have with taking counterpoint classes. Frequently – if not always – students are only interested in finishing the assignment because there are too many rules to follow. Making a strong effort to get his point across, London insists that if music is supposed to be fun, then students should utilize what they have learned to have fun *with* counterpoint, though not throwing out the rules of counterpoint, but rather, to find the enjoyment in harmonic investigation, of trial and error, to use what is known to find the best solutions. London explains his process:

“The basic idea – the passing dissonance between two consonant intervals – is introduced in class lecture. Students are reminded of the various species of contrapuntal motion ... as well as the prohibition against parallel perfect consonances. They are then given the following assignment: through trial and error, simply list ALL of the possible second species passing motions – both ascending and descending, and both above and below – for any given pair of cantus notes.” (Ibid., 106)

London is aware, again, that students, when working with counterpoint in particular, will become easily stressed and frustrated due to the demands of so many rules, making possible harmonic solutions limited, and hence, a struggle to find. At least

through his method, the students learn to use what they know in a way that requires them to think theoretically and *apply* what they have learned instead of just having to work with rules. Taking music theory fundamentals into consideration, it is understood that theory is very mathematical. Further, concepts build on each other and bring the student to higher levels of thinking by forcing them to apply what they have already learned to arrive at the necessary solutions. The fundamentals of music theory are no different; a student can label the chord progression in a figured bass exercise by recalling her / his knowledge of intervals and inversions. A modal scale can be identified with the use and knowledge of whole-step and half-step patterns. The bottom line is, if students want to gain more from fundamentals, they should find ways to have fun *with* fundamentals. If students can find an enjoyable challenge in the work they do, it will promote motivation to not only learn the concept, but gain interest in learning.

### **3.15. Comparison of Three Approaches to Teaching Music Fundamentals on**

#### **Achievement of Beginning Band Students – by MacMillan (1986)**

According to Barbara Elaine Johnston MacMillan (1986), the comprehension of music theory fundamentals starts long before students enter college. Many students start their musical training as early as elementary school, but more frequently, in middle school (sixth, seventh, and eighth grade) by joining either band or choir, and through such activities as learning how to read music. MacMillan investigated how three different seventh grade band classes scored in fundamentals achievement.

The subjects were sixty-five students in two schools in Alberta, Canada. Each of the three classes, averaging twenty-two or twenty-three students, was taught a total of

twenty-eight lessons from *Practical Theory* (Feldstein 1982) over a three to four month period. The author states in her introduction: “The material chosen was Feldstein’s *Practical Theory* as it was recommended in the pilot curriculum for Alberta’s instrumental program, 1985” (MacMillan 1986, 2). MacMillan explains her testing process:

“A pretest designed to measure students’ preknowledge of music fundamentals was administered. The lecture approach group studied Feldstein’s first twenty-eight lesson concepts. The subjects in the other two groups were individually assigned twenty-eight lessons according to their pretest results. At the end of the three to four month treatment period, a posttest, an extended version of the pretest, was given. Five months after the end of the program, the posttest was readministered to test for retention.” (Ibid., ii-iii)

The pretest – nine pages long, consisting of forty-three questions – covered notation, meter (simple and compound), key signatures, intervals, triad construction and inversion, dynamics, scales, seventh chords, Roman numeral analysis, harmonic inference, and non-chordtones. For the most part, questions were passive, requiring the student to only identify. The posttest / retention test – seventeen pages long, consisting of ninety questions – was only similar to the pretest by the concepts that were covered. In contrast, the posttest / retention test questions were mostly active, requiring the students to do such things as draw symbols, notate, and even compose based on a given harmony.

Each class was subject to a different teaching approach: “(a) Group, utilizing the lecture method with accompanying overhead transparency material and student exercises, (b) Individual, using a self-directed text-workbook, and (c) Individual, using computer-assisted instruction,” also known as CAI (ibid., 5). MacMillan measured achievement (i.e., cognitive growth) based on the comprehension of three variables, and designated

them: N (notation, dynamic and tempo symbols), V (note / rest values and time signatures), and S (scales and intervals). She administered a questionnaire (to collect data about each student's personal and musical background), and a survey (to collect self-concept data, and learning style preferences). Further, she formulated four hypotheses: (1) the posttest would reveal no significant differences in achievement – with regard to N, V, or S – between students taught by the three instructional approaches; (2) the retention test would reveal no significant differences in achievement – with regard to N, V, or S – between students taught by the three instructional approaches; (3) there would be no significant relationship between achievement and students' self-concept questionnaires; and (4) there would be no significant relationship between achievement and students' self-concept / learning style preference surveys (ibid., 7).

Once the results had been calculated, MacMillan found that only the fourth hypothesis was rejected. The self-concept / learning style preference survey consisted of nine questions, with the last four referring to students' learning preferences. The first of those four questions stated, "I like teachers to keep students quiet" (ibid., 82).

Among her findings, MacMillan noted that the results confirmed previous research that suggested that neither CAI nor individual instruction are necessarily better alone than other teaching approaches. This suggests, still, that an eclectic teaching approach might be best for students.

When it comes to education, too many factors may influence a student's success. In college, this is particularly important, since students are being trained for lifelong careers in music. If they are to retain the information they have learned, a diversity of

teaching approaches may be best. This way, the retention may be stronger because the student is not only remembering what she / he learned, but *how* it was learned.

### **3.16. “The Evaluation and Design of an Undergraduate Music Theory Placement Exam” by Murphy (1999)**

Theory placement exams require tedious planning, development, analysis, formulation, and revisions in order to serve their ideal purpose: predictive validity. Barbara Murphy explains the current problem among many undergraduate music majors. Students should have the background necessary to “relate musical sound to notation and terminology both quickly and accurately enough to undertake basic musicianship studies” (Murphy 1999, 41).

The problem, herein, lies in that those who apply come from diverse musical backgrounds. For some, their background was exposure through band or choir with no explanation of concepts.<sup>9</sup> Others are familiar with clefs, and can play what they are told without knowing *what* they are playing. Fewer students have a theory background from schools or camps and may be moderately knowledgeable (ibid.).

Murphy discusses two different placement exams: one developed by James Colman (a doctoral student at Michigan State University in 1990) and an adaptive computer test developed by Timothy Smith called “Ready or Not” (RON). Colman’s exam had three goals: (1) replace assumption with statistical data regarding potential success; (2) be a solid predictive variable over the student’s success; (3) promote more productive advising based on the student’s needs (ibid., 42-43). Smith’s exam was designed to “weed out” weak students by first giving them more difficult questions, and

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<sup>9</sup> The author of this thesis was such a student upon entering college.

record their mastery over certain subjects. With regard to student placement, such exams should be modified as needed to make them as accurate as they are intended to be. The first exam was apparently never revised (*ibid.*, 44). The second exam's flaw was that if the student is weak / strong in one area, the student is weak / strong in *all* areas. That is not always the case (*ibid.*, 44-45, 57).

Placement exams are very important for the placement into / out of fundamentals classes. Students do not want to be in a remedial theory class if they can possibly avoid it, unless they know they need the background. These exams have to be very carefully designed. Depending on how the student performs, she / he may be struggling to keep up knowing only enough to get by, or be bored and feel unchallenged or unmotivated to learn. This fine line between failure and success for the student can make or break the student's ability to persevere and succeed in the class. In this author's professional opinion, success is indeed possible without comprehension, but comprehension is ideal for success.

### **3.17. "The College Music Society Music Theory Undergraduate Core Curriculum Survey – 2000" by Nelson (2002)**

In Richard B. Nelson's article, he discusses a survey for which he served as coordinator for the College Music Society (CMS). The primary purpose of this comprehensive survey was to get a general idea of all the different curricula offered at various collegiate institutions. The survey was posted online on the Cleveland Institute of Music website, and advertised via CMS communications (i.e., mailings and list-serves).

Despite the survey's comprehensive overview of universities' complete music theory curricula, the author of this thesis will take into consideration only the part of the survey that applies to the fundamentals. Though 248 institutions responded, not all institutions answered all the questions. Nelson summarizes the findings with regard to the fundamentals curricula:

“Fundamentals are covered or reviewed during the first term of music theory instruction at nearly all colleges, most often for two, three, or four weeks. Topics included are sight singing (116 schools), dictations (108 schools) and keyboard (87 schools). In about half of the responding schools, there is a separate remedial course in fundamentals for music majors who have had little background in music theory. This course usually is not for credit and does not count toward the music degree. Such a course results in an out-of-phase music theory sequence at 60 institutions. Summer remedial theory courses are offered at 43 schools. Textbooks which were mentioned the most are Duckworth's *A Creative Approach to Music Fundamentals* and Ottman's *Rudiments of Music*.” (Nelson 2002, 62)

Clearly, there are plenty of curricular differences that exist among different schools across the country. Also taking into consideration that this survey was administered six years ago (according to its title), the curricular situations at these institutions more than likely have changed for the better, if any improvement was needed. Most problems with curricula, though, usually have to do with lack funding designated to support course offerings. Without the funds, qualified faculty cannot be hired to teach the needed classes.<sup>10</sup>

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<sup>10</sup> This is the case at the thesis author's undergraduate university. Faculty were over-worked and, consequently, some courses could not be offered, or were assigned to professors who were not officially qualified to teach them.

Besides receiving information about the format of each university's curriculum, universities submitted information regarding the textbooks they used, all of which have been reviewed in this thesis: (1) Duckworth's *A Creative Approach to Music Fundamentals*, reported by seven institutions, (2) Henry's *Fundamentals of Music*, reported by four, (3) Hill's *Study Outline and Workbook in the Elements of Music*, reported by four, (4) Lynn's *Introductory Musicianship*, reported by four, (5) Nelson and Christensen's *Foundations of Music*, reported by four, (6) Ottman and Mainous' *Rudiments of Music*, reported by seven, and (7) White's *Music First!*, reported by four (ibid., 74-75).

Regardless of what should be done to improve curricular problems, Nelson does not pass judgment on the fundamentals curricula offered – or its discrepancies – at the institutions who participated in the survey. Improvement of theory curricula is a constant work in progress that can take years to perfect, if there even is such a thing as a “perfect” curriculum.

### **3.18. “What Do Students Learn When We Teach Music?” by Pitts (2003)**

Pitts' article does not directly deal with the basics of music theory. Consequently, the title consists of a slight ambiguity to the message it is really conveying. The article pays more attention to the environment created and maintained at the university level, and more specifically, at the University of Sheffield in the United Kingdom. Interestingly, the article focuses on a “hidden curriculum” within the music department at the university. The author created an open-answer questionnaire consisting of only three questions. The

first two concerned university atmosphere in general with regard to student-professor relationship harmony. The third addresses the music department itself.

In brief, the article suggests the likely inevitable friction that politics causes when mixed with academics. Students may at times, according to the results of the questionnaire, feel that there is a cliquy feeling among some students, or even between some professors, and in rare cases, even between professors and students. Such environments are to be expected. But consequently, the meaning of the article's title becomes clearer: what else are students learning *besides* music? Really, these questionnaire results are applicable to any department in any university. But it is easier to get such results from a music department, because often, it is the department of fine arts that consist of the smallest student-faculty ratio.

How can all this affect students' learning of the fundamentals of music theory? The author suggests that the environment maintained within the department can influence students' level of comfort either in class, while being tutored, or even the chances that they will even approach the professor if help is needed. If students feel alienated by a clique-like environment, it may deter them from utilizing additional help made available to them. Ideally, that should never happen. Students *pay* to go to college. They are *paying* for help if they need it. Many are coming away from home. If their study environment is distracting, it can become detrimental to the student's progress. Students do not just attend college to get a degree. They go to leave home to learn to think for themselves, to learn to be responsible, self-resourceful, self-reliant, and so forth. It is a difficult transition to make alone. So the more help the work environment can provide to make their transition smoother, the better off the student will be.

### **3.19. A Theoretical Basis for the Teaching of Music Theory to Music Majors at the Undergraduate College Level – by Roehmann (1968)**

Franz Ludwig Roehmann's dissertation focuses on the education of college level music majors. In his dissertation, he investigates the role that music theory plays in music as an expressive art. Further, he builds his educational and theoretical foundation on two other perspectives: the role that the psychology of learning and educational objectives have on music theory. Although his thoughts are communicated well, it is the opinion of the author of this thesis that Roehmann's dissertation is too verbose.

With regard to studying music theory's role as part of the expressive art of music, he finds that music has only a symbolic significance. In other words, music connects with human beings in a symbolic way. Music, according to Roehman's findings, has no emotion. Whatever meanings music has for humanity, humans have given music the meaning, the ability to move us emotionally that we insist it does. What ends up happening is that we, as humans, find symbolism and connections to how we might feel. To listeners, a drive of bass may signify a raw power of sorts while a bright, delicate *tremolo* of strings could signify the sun rising at the start of a new day. Through Roehmann's findings, he asserts that music is nothing more than an organization of sounds. Yet, because of the complex beings we are, we allow such sounds to evoke feelings within us, which therefore bring us to label music as sad, happy, dark, bright, angry, cheerful, and so on. This applies to music theory in that good composers know what melodic lines, harmonies, and chord progressions to use to evoke such emotions.

Next, Roehmann discusses the psychology of learning and how it applies to music theory. As many educators – and psychologists in particular – know, there are multiple types of learning. One type of learning Roehmann discusses is stimulus-response. He states: “Surely the beginning music theory student cannot grapple successfully with musical matters until he is able to discriminate between the various symbols of musical notation (stimuli) and respond to them knowingly (response).” (Roehmann 1968, 67.) With repetition, the stimuli will not change, but the student’s response will. Roehmann also mentions that teaching students does not necessarily affect their behaviors. For example, in many cases, a student will not learn to love classical music if it is only played from a CD recording in a music theory classroom to give students an example of a new theoretical concept. Instead, students may only *acquire* a passion for classical music if, by witnessing their peers in related instrumental ensembles speak of their passion for it, they conform to social pressures, thereby, then, instilling a passion for both the music and the theoretical concepts behind it.

Finally, Roehmann discusses the roles of educational objectives. First, he discusses their derivation, explaining that educational objectives are usually, on a general level, “derived from the needs and desires of a society” and that their functionality is “determined by the degree to which they are reasonable and practical in educational situations” (ibid., 103). Among Roehmann’s other comments, he states that it seems that though educational objectives are established for every class (as they should be), they are seldom heeded, as if they are only there to serve as a curricular requirement. In other words, the professor should only need to list objectives (because she / he has to), not necessarily abide by them.

The author of this thesis agrees with Roehmann on all grounds of his theories. Music has no meaning, but the meaning we give to it. Music cannot compose itself. We create it, and with every creation, a piece of our heart, mind, spirit, and soul becomes part of our creation. We have the intelligence to manipulate something and convey a feeling of our own through that creation, which, hence, gives music its inherently artistic quality. Also, because it takes a human to create music, music is consequently as diverse as humanity itself, which also explains the diversity of learning psychologies that exist. Some are as basic as “monkey see, monkey do,” while others are more complex, such as learning behaviors based on social conformity. Lastly, music departments at institutions of higher education share a universal goal: achieve consummate musicianship. The objectives that are formulated with every course offered are there for a purpose: it is the hope of the professor that the students she / he teaches will achieve those objectives; however, those objectives may not be as strictly heeded to as they ought to be.

If fluent knowledge of music theory can help a composer to convey what is desired in a composition, then not only will the composer find symbolism in the musical result, but also in the theory that yielded the result. Similarly, if students wish to gain acceptance by conforming to social pressures, they may, then, acquire a passion for the comprehension of music theory. Further, if a student finds intrigue in theoretical symbolism and engages in behaviors to act on that intrigue, it could very well give the student the motivation to achieve educational objectives, thus achieving consummate musicianship.

### **3.20. “How Much and How Little Has Changed? Evolution in Theory Teaching” by Rogers (2000)**

Michael Rogers is a reputable music theorist and educator, whose publications and experience have earned him a level of authority that frequently provides a chance to be outspoken of his own mind. In this article, Rogers reflects and reviews the evolution of how theory used to be taught, how it is taught today, and how it may be taught in the future.

Over the decades, musicologists, theorists, and educators have drawn conclusions based on what needs to be taught the most, or emphasized the most. What is most important? Rogers even goes as far as to declare that musicians have a “fetish” for pitch. His conclusions and assertions are drawn not only from his own experience, but from those experiences of other writers and educators.

In the past, Rogers reveals that one writer “identifies the physics of music, tonal materials, rules of style, analysis, and theoretical techniques as being of special significance” in teaching music theory (Rogers 2000, 111). A professor may attempt to combine two separate subjects, but if the professor attempts to do so, it is even more imperative that the two subjects are related, so they may be conceptually connected.

Presently, the importance of ear-training has become close to, if not, paramount. Beyond that, Rogers says that “the reasons for inclusion in choosing the music we study are obvious: (a) the expansion of the human mind and heart from exposure to multi-faceted compositional procedures and expressive evocations, (b) increased understanding of one’s more familiar repertoires through comparison and contrast with the “other,” and (c) the thrill of discovering some really cool new pieces” (ibid., 113). He recalls that at

one point, upon its development, ear-training software was designed ideally “to reduce the need for aural skills classes” (ibid., p. 114).

Coming ahead of us in the future, explaining the relationship between analysis and performance is making its way through the curriculum and will be integrated into our teachings. Regardless of how much of this musical relationship may have crept into curricular teaching, according to Rogers, it has not infiltrated sufficiently (ibid., p. 115). The same way there may be no perfect way to teach music theory, and the same way there are various and numerous sources of secondary literature that discuss teaching approaches that yielded successful results, as this article demonstrates, everything changes, and no one way is perfect. Rogers concludes his article quite bluntly: “I am reminded of a question raised in philosopher Robert Pirsig’s classic book, *Zen and the Art of Motorcycle Maintenance* (2005), about how to paint a perfect picture. His answer: ‘First, make yourself perfect and then just paint naturally.’ In a similar vein I might paraphrase by asking ‘How does one become an ideal theory teacher?’ First, make yourself musical and then just teach naturally” (ibid., 116).

What can be drawn from such conclusions? The reality is that as society changes, new methods for teaching are explored, and many will yield results that may shift former focuses of education to different focuses. As our thinking evolves, so can teaching methods, techniques, strategies, etc. Part of the beauty of education, in the first place, is that we never stop learning, teaching, studying, and researching. The article may have little to do with the essentials of music theory, but a clear message is that methods to teach the subject matter may change and / or evolve and yet conquer the same educational goal from a different approach.

**3.21. “Teaching Approaches to Music Theory in the United States: Towards a Stronger Undergraduate Core Curriculum” by Schüler (2005)**

Nico Schüler, in his article, addresses the issue of curricular problems that evidently keep growing, mainly because they are not corrected as aggressively as they probably should be. He argues his point of view by touching on different perspectives.

He points out that most students who decide they want to be music majors are usually incapable – by higher learning standards – of reaching specific goals. Their incapacity to succeed in a college level course does not necessarily reflect on the students’ intelligence. Rather, they usually come from communities that lack strong musical curricula in their schools. Many communities do not have adequate music programs (and only a few of those that have music programs actually teach music theory). Some schools have no music programs at all. Despite students’ inadequate origins in music education, their situation does not deter them from declaring themselves as music majors. Inevitably, their inadequacies may require them to take remedial courses until they present improved skills, increased knowledge, and finally, can hold their own in the more rigorous music core classes. Once they arrive at the core curriculum level, however, another problem begins.

Schüler explains that most incoming freshman have misconceptions about classwork. They might expect, for instance, that everything will be taught in class, and that reading chapters outside of class will be unnecessary. They might expect tests to be announced with enough time to study for them. This assumption on their part creates the problem that, especially for those in aural learning classes, students cannot “study” to

improve skills that depend on consistent development. They might also have the pre-set notion that homework is intended strictly for grading, when in the collegiate music world, homework is meant to develop skills through practice, primarily. Schüler asserts that a music curriculum's policies, for example, must be strictly enforced. The more students witness – and experience – the need for academic aggression in order to pass a class (by actually reaching specific goals), the sooner they will realize that being a music major is more than a declaration of the student's favorite past-time, and will put in a sincere effort to apply themselves in order to succeed.

Schüler mentions that some professors are also at fault since they might, out of compassion for the student's drive (despite their actual ability), pass the student to a more advanced course when the student has not satisfactorily reached course objectives that *must* be met before the student can progress to anything further. Schüler also addresses the issue of enforcing correlation between aural learning courses and written theory courses, so students can experience, first-hand, how theory relates to practice, and how practice relates to theory. Schüler suggests that professors observe each other – preferably unannounced – and through such observations, can work together to implement course objectives in order to ideally produce adequately prepared musicians, trained in all necessary areas, to increase their chances of success and job placement in the real world.

Schüler's observations are very important, necessary, and should not be overlooked. His suggestions to improve the situation are, very logically, most beneficial. His observations and recommendations on how to create a solution out of an ever-growing problem require the active participation of all involved in implementing a

successful music curriculum. It requires more than sitting in a room with colleagues, trying to reach a consensus about curricular decisions. It requires the unity, professionalism, and care – the very core that initially placed all those professors in that meeting room – to make an artistic practice a way of life. If students wish to call themselves music majors, they must assimilate upon entering the world of consummate musicianship.

### **3.22. “Music Theory and Learning in the Digital Age” by Wittlich (1998)**

Gary Wittlich’s (1998) article focuses on how new technology can assist the teaching of music theory. While he does not suggest an alternative to the traditional classroom setting, he rather indicates how technology can *enhance* the learning experience in music theory. Wittlich addresses and stresses the enhancement of not only the classroom experience, but, in particular, the materials / concepts taught by the involvement of technology.

Wittlich discusses Diana Laurillard’s book *Rethinking University Teaching: A Framework for the Effective Use of Educational Technology* (Laurillard, 1993) and briefly outlines her ideas about knowledge acquisition, the learning process, and what could be universally considered as an appropriate learning environment, especially within higher education. Laurillard distinguishes first-order and second-order acquisition. First-order acquisition involves knowledge gained by one’s direct experience. Second-order acquisition is knowledge acquired through learning of someone else’s direct experiences. Commonly, students start learning through second-order acquisition and apply what they have learned through first-order acquisition. Wittlich also explains Laurillard’s

“mathemagenic” activities (Wittlich 1998, 5), which are activities that are implemented to help students not only relate theory to practice, but practice to theory. Wittlich continues to discuss the ideal classroom atmosphere that Laurillard so strongly advocates: it is one to be discursive, adaptive, interactive, and reflective. More importantly, everything is mutually agreed upon: goals, how they are achieved, individual needs are met, and feedback should be provided as deemed necessary.

Finally, Wittlich describes six different types of computer software that has been, is being, and / or can be used: (1) Computer-Assisted Instruction (CAI) – a stimulus is given, the student submits a response and receives feedback. (2) Intelligent Tutoring Systems (ITS) – similar to CAI; it provides feedback with reasoning. (3) Hypertext / Hypermedia – this technology goes beyond print media’s abilities in teaching. (4) Computer-Supported Collaborative Learning (CSCL) – ideal for group learning activities. (5) Experiential Simulation – self-explanatory; it is a classroom version of virtual reality. (6) Computer-Based Tools (Computer-Aided Design / Visualization) – this can visually present music’s temporal relationships (ibid., 7-10).

Now, textbooks often include some sort of technology for assisted instruction. In the realm of music fundamentals, when a classroom is discursive, adaptive, interactive, reflective, and involves whatever media necessary to enhance the classroom experience, it yields a rare – and possibly ideal – classroom situation, in which learning leads to comprehension of the subject matter. Potentially, fundamentals textbooks could benefit from each type of the aforementioned technologies. Equally important, however, a CAI program must

be as user-friendly as it is intelligent. This is equally applicable to the traditional classroom setting. Fundamentals students will not succeed because their professor is brilliant; the professor must know *how* to teach and promote the most productive learning environment possible. This way, students are not being taught *about* music; they are taught how to *be* musicians (ibid., 5).

### **3.23. “A Study of Gaston’s Test of Musicality as Applied to College Students” by Yoder (1972)**

While Gaston’s *Test of Musicality* is valuable for distinguishing music majors from non-majors, it is uncertain about whether it can measure musical aptitude or potential (Yoder 1972, 494).

Vance Yoder describes his study of the test: “The aim was to provide normative data for [college and university students], to study the reliability and validity of the test, and to measure significant differences in the scores of various college and university subgroups” (ibid., 491). Overall, the test consisted of a thirty-minute LP and a three-page answer sheet for the students. The first page requested that the student list her / his musical background, if any. The more a student’s background was musically involved, the more points she / he earned. The last two pages consisted of nearly twenty questions split into four sections: (1) if a certain pitch is present in a chord, (2) if the melody heard is different than the melody printed, (3) if the final note of an incomplete melody ought to be lower or higher than the penultimate note, and (4) noticing any pitch / rhythmic differences in a repeated melody (ibid., 491).

Results indicated the following: Section 4 scores *and* total test scores were related to music majors' *music* GPAs; Section 4 scores were related to the music majors' *academic* GPAs; music majors scored higher than non-music majors; university non-music majors scored higher than college non-music majors; freshman music majors scored lower than sophomores, juniors, and seniors; among non-music majors, their musical background score related to their total test score (ibid., 492-494).

Like many non-music majors, those who take fundamentals courses will do so, most likely, just to satisfy a graduation requirement. Beginning theory students could definitely take Gaston's test and give professors a vague idea as to how they will do in the class. The test simply seems to predict the obvious: statistically speaking, non-music majors in a fundamentals class have a greater chance of performing poorly. However, Gaston's research is flawed, too: just because a student is not a music major does not automatically mean she / he will fail a fundamentals class, but the chances of failure are statistically higher. That is where aptitude is applicable; however, as stated earlier, Gaston's test serves more to measure potential achievement rather than musical aptitude.

### **3.24. "Cooperative Learning in Music Theory Classrooms" by Zbikowski & Long (1994)**

In "Cooperative Learning in Music Theory Classrooms," Lawrence M. Zbikowski and Charles K. Long draw a conclusion that is not the most conventional: the current classroom situation (lecturing, note-taking, example-playing, and question-taking) may not be the best way to learn. As the title simply suggests, the authors recommend cooperative learning among the students themselves. Due to the inevitable fact that those

students whose theory skills are less than their peers who grasp the concepts faster and more securely, the authors are aware of the type of monitoring that must exist while students are assisting each other to find solutions to questions given. One common problem is “free riding.” To prevent this, the authors assert that if students help each other, it is equally important to make all students aware that they are individually accountable for all they do.

A five-point structure exists to maintain this environment as a positive and a productive one: (1) positive interdependence, (2) face-to-face promotive interaction, (3) individual accountability, (4) social skills, and (5) group processing. With this use of structure, other needs are met or acknowledged such as weak students being grouped with strong students, and the promotion of social diversity.

This may prove as successful as the authors insist it is; however, many first-time freshmen may not feel comfortable having to tutor a peer, or even being tutored. Weak students may lack confidence in the strong student’s teaching ability, favoring, instead, to work with a professional with teaching experience (i.e., the professor). What this approach of cooperative learning may do is simply lower the level of intimidation a student might feel in asking the professor questions, but worse, the students may not want to have to ask a stronger student the same question, fearing that the stronger student may lose patience with the weaker. Again, like any other teaching approach, as strong, logical, and successful as this one may seem, it may possess just as many flaws.

### **3.25. Concluding Remarks on the Review of Secondary Literature**

The world of scholarly thinking highly encourages – if not requires – that scholars never stop learning. Scholars are on a continuous journey of knowledge with a hunger to learn new things, explore new ideas, run experiments, conduct new studies (especially if they have never been done before), and not only apply what they have gained through their explorations, but write about it and communicate their activities to other scholars. The world of secondary literature is a world of satisfying – and in many cases, deepening – one’s intellectual appetite.

When scholars write about their research studies, and their work gets published in renowned – either nationally or internationally – journals, the time and energy they invested in exploring new ideas is shared with others. Those interested in their work may even go further by using other scholars’ published materials as a source for their own research. The world of secondary literature is a continuous cycle of sharing knowledge. And every step of the process is always benefiting someone: either the scholars themselves, their colleagues, or in particular, her / his students. Making other scholars’ works part of one’s own original work is a very strong way to make one’s new work that much more substantial.

## **CHAPTER 4**

### **INTERVIEWS WITH PROFESSORS AND DISCUSSIONS OF THEIR APPROACHES**

#### **4.1. Introduction to the Interviews**

The comprehension of music theory may be influenced by several factors: textbooks used, approaches suggested in secondary literature or other research-based publications, and the way the professor teaches the class. It could be assumed that when music educators publish a textbook, their presentational order of concepts – and how they are discussed in the text – may reflect on how the educator would teach her / his own class. Once the textbook is published and adopted, it is left to the discretion of the professor instructing the class to decide how closely she / he will adhere to the book. Will the textbook teach the class, or will the professor? In this chapter, the author of this thesis (hereafter referred to as “the author”) discusses interviews he conducted with four professors, each who teach / taught Essential Musicianship (hereafter referred to as EM), the fundamental theory course at Texas State University-San Marcos (Texas State). To preserve anonymity, the interviewees will be referred to as A, B, C, and D respectively.

## 4.2. Description of the Interviews and the Questionnaire

The interview consisted of two parts: (1) an oral interview, and (2) a written questionnaire. In the oral interview, the author asked each professor a number of pre-written questions, inquiring about both their professional experiences and professional opinions based upon those experiences. The same set of questions was asked of each professor. The interviews were recorded on a digital voice recorder. The questionnaire used was the same questionnaire administered to the students (See Chapter 5 and Appendix B). The professors answered the questionnaire the same way the students did: answering according to their own opinion. This will provide insight into how similarly and / or differently these professors think about the certain issues. Questions were asked as follows:

- How long have you been teaching music theory?
- Have you taught an identical or similar fundamentals course at a different institution? If so, for how long?
- Currently, the theory area is using Lynn's *Introductory Musicianship* (2007). Have you used this book before you started teaching this course at Texas State? Have you used a book you thought was better? If so, how was it better?
- Do you go by the book, or modify how you teach it as you see fit?

- In the public school setting, teachers are prepared to teach one lesson several different ways in order to accommodate different learning styles. Do you follow this approach?<sup>11</sup>
- Do you notice a significant relationship between students' grades in class and their primary instrument?
- When introducing a concept, do you adhere to the textbook's explanation or use your own?
- Do you like using a textbook or prefer to make your own materials?

### 4.3. The Interviews

To begin discussing the professors' responses, the author will go question by question. For each question, the respective four answers will be listed individually. This pattern will be used again for the discussion of the professors' responses to the questionnaire.

- **How long have you been teaching music theory?**
  - **A:** Ten years.
  - **B:** Thirty-six years.
  - **C:** Nine years.
  - **D:** Five years.
- **Have you taught an identical or similar fundamentals class at a different institution? If so, for how long?**
  - **A:** Texas State is the only institution where he taught fundamentals.
  - **B:** Taught a similar course for thirty years at an institution in Scotland.

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<sup>11</sup> This question was inspired by the author's undergraduate field experience, teaching music at an elementary school. Being prepared to teach the same lesson different ways was highly encouraged to accommodate students' inevitably different learning styles.

- **C:** Taught a similar course at Michigan State University for one year.
- **D:** Texas State is the only institution where he taught fundamentals.
- **Currently, the theory area is using Lynn's *Introductory Musicianship* (2007).<sup>12</sup> Have you used this book before you started teaching this course at Texas State? Have you used a book you thought was better? If so, how was it better?**
  - **A:** Finds the book to be average; finds that having to skip between rudiments of music, e.g., fitting in rhythmic exercises, destroys the momentum; prefers to go through all fundamentals first, and if time permits, return to rhythmic activities.
  - **B:** Never used the book in the past; used it to teach EM during his first semester teaching it at Texas State.
  - **C:** Used an earlier edition of the book at Michigan State University; finds latest edition to be improved, despite the lack of correction of a few persistent problems; improvements include misprint corrections and more worksheets for exercises that did not have worksheets before.
  - **D:** Likes the book and its supplemental material; thinks exercises for all chapters are comprehensive, except for later chapters; thinks some concepts – RN and figured bass – are not explained well.
- **Do you go by the book, or modify how you teach it as you see fit?**
  - **A:** Modifies.

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<sup>12</sup> The latest edition of Lynn (2007) is the edition reviewed in this thesis. Interviewees' comments may only apply to earlier editions.

- **B:** Goes by the book.
- **C:** Goes in sequence with the book, but explains the concepts his own way; uses varying explanations for each topic; also makes use of additional worksheets in sequence.
- **D:** Deviates from the book; likes to supplement the book's explanations with his own.

- **In the public school setting, teachers are prepared to teach one lesson several different ways in order to accommodate different learning styles.**

**Do you follow this approach?**

- **A:** Somewhat; agrees that there are various types of psychological make-ups in students.
- **B:** Yes; agrees that different students have different ways of learning; different approaches work better for different students.
- **C:** Yes; uses different explanations for different concepts.
- **D:** No; asserts to students, during first lecture, that no one may leave until everyone understands the concepts explained; does not adapt to learning styles; adapts to students asking him questions.

- **Do you notice a significant relationship between students' grades and their primary instrument?**

- **A:** Yes; pianists tend to excel while vocalists tend to struggle the most; thinks that interest – not brains – may influence success; singers just want to sing, not spend time learning theory.
- **B:** Believes a link exists between pianists and success in music theory.

- **C:** Generally, pianists do better, learn faster; other instrumentalists are usually slower; encourages keyboard use; guitar students do well if they practice.
  - **D:** Knows that non-keyboardists struggle; pianists have a keyboard in their mind all the time, and therefore struggle less; work may get done faster, but not necessarily better with keyboardists.
- **When introducing a concept, do you adhere to the textbook's explanation or prefer to use your own?**
- **A:** It varies; likes to combine the book's explanations with additional approaches he uses.
  - **B:** Paraphrases the book's explanations in his own words.
  - **C:** Goes in sequence with the book, but uses his own explanations.
  - **D:** If, to him, the book explains the concept well, he will adhere to the book. Otherwise, he will include any explanation he deems important.
- **Do you like using a textbook or prefer to make your own materials?**
- **A:** Likes the exercises available in the book; does not care to create original material.
  - **B:** Makes his own materials to maintain control over the teaching and learning process.
  - **C:** Likes using the textbook; develops his own materials to compensate for textbooks' inevitable lack of flexibility.
  - **D:** Prefers to stick with the book. Supplements only if he feels it to be necessary.

Clearly, for the most part, all four professors agree on a lot of issues. For instance, they all support the idea that keyboard students generally do better in theory than other instrumentalists. Despite everything they agree upon, some differences do exist. For example, Professor A prefers not to create original material, while Professor B feels that the use of original material allows him some control over the learning / teaching process. Other observations the professors made were indeed noteworthy: Professor D felt that though most of the book's concept explanations are comprehensive, other concepts are not explained thoroughly enough, including Roman numerals and figured bass. Professor C mentioned that despite the corrections of some problems, other problems still exist within the text that have yet to be corrected.

#### **4.4. The Questionnaire**

The second part of the interview involved the professors responding to the questionnaire that was originally created for the students (whose responses will be analyzed in the next chapter). As previously stated, the professors' responses reflect their individual opinions. The questionnaire is divided into six sections. Questions involve ranking difficulty of general and specific concepts, selecting preferred introductory order of certain concepts, and questions of agreement about certain issues and hypothetical situations. Because this chapter discusses the responses of only four professors, more details regarding the questionnaire's questions (e.g., why certain concepts were listed, and why certain questions were asked) will be discussed in the next chapter involving student responses. A concise description of each section follows.

Section 1 lists five concepts: (1) Intervals, (2) Major Scales, (3) Minor Scales, (4) Key Signatures, and (5) Church Modes. The questionnaire asks that they be ranked in the order they think they should be taught. Section 2 involves the same concepts, but instructs to rank them in order of difficulty on a five-point scale (1 being the easiest). Section 3 consists of the questions of agreement. Section 4 lists nine general concepts: (1) Notation, (2) Rhythm and Meter, (3) Scales, (4) Key Signatures, (5) Intervals, (6) Spellings of Triads and Seventh Chords, (7) Inversion Symbols, (8) Figured Bass, and (9) Roman numerals. Each concept's level of difficulty is to be ranked on a five-point scale. Section 5 is the same as Section 4, except that it involves seven specific concepts: (1) Enharmonic Keys, (2) Parallel Keys, (3) Relative Keys, (4) Major Scales, (5) Minor Scales, (6) Simple Intervals, and (7) Compound Intervals. Section 6 inquires about the individual's primary (and secondary, if applicable) instrument, if their primary instrument aids them in their comprehension of music theory, their gender, and finally, their major / minor classification. Since this chapter is only concerned with responses from music professors, the last question will be omitted from discussion.

**Section 1, Concept Order: Intervals.** Professors A and C ranked them as fifth, and B and D ranked them as fourth. The mean value was 4.50.

**Major Scales.** Professors A and C ranked them as second, and B and D ranked them as first. The mean value was 1.50.

**Minor Scales.** Professors A and C ranked them as third, and B and D ranked them as second. The mean value was 2.50.

**Key Signatures.** Professors A and C ranked them as first, and B and D ranked them as third. The mean value was 2.00.

**Church Modes.** Professors A and C ranked them as fourth, and B and D ranked them as fifth. The mean value was 4.50.

Concept	Mean value
Major Scales	1.50
Key Signatures	2.00
Minor Scales	2.50
Intervals	4.50
Church Modes	4.50

**Table 1 – Concept Order, Professors**

Through this pattern of ranking concepts in the order which the professors believe they should be taught, it is interesting to see that Professors A and C ranked the concepts identically, as did Professors B and D. Though the differing professors' scores are only different by one point, it does not suggest that their differences are that significant.

**Section 2, Concept Difficulty: Intervals.** Professor A ranked them as 5, B ranked them as 3, C ranked them as 2, and D ranked them as 4. The mean value was 3.50.

**Major Scales.** All the professors ranked them as 1.

**Minor Scales.** Professor A ranked them as 3, B ranked them as 2, C ranked them as 4, and D ranked them as 2. The mean value was 2.75.

**Key Signatures.** Professor A ranked them as 2, B ranked them as 4, C ranked them as 3, and D ranked them as 3. The mean value was 3.00.

**Church Modes.** All the professors ranked them as 5.

Concept	Mean value
Major Scales	1.00
Minor Scales	2.75
Key Signatures	3.00
Intervals	3.50
Church Modes	5.00

**Table 2 – Concept Difficulty, Professors**

Here, opinions differ more, but in two areas – major scales and church modes – they completely agree that major scales are the easiest, and church modes are the hardest of the listed concepts.

**Section 3, Scale Order: Should major and minor scales be taught one after the other, or separated by different topics?** All professors agree they should be taught one after the other.

**Intensive Course: If an intensive fundamentals course was offered as a summer camp program, would you be interested in taking it?** All professors said “Yes.”

**Cooperative Learning: Would you feel comfortable with students tutoring other students in class as a form of cooperative learning?** Professor A said “Undecided,” B and C said “Yes,” and D said “No.”

**Online Course Preference: If given the option, would you prefer to take this course online?** Professor A said “Undecided,” B and C said “Yes,” and D said “No.”

**“Board Work” Helpfulness: Do you find “board work” helpful?** Professors A and C said “Yes,” and B and D said “No.”

**Circle of Fifths Usefulness: Does the concept of the Circle of Fifths clarify your comprehension of key signatures?** All professors said “Yes.”

**Keyboard Use: Do you picture a keyboard or draw one when working on assignments or tests?** Professor A said he does neither, B said he draws a keyboard, and C and D said they picture a one in their head.

The professors agreed unanimously with only three of the seven questions. They disagreed on the others.

**Section 4, General Concept Difficulty: Notation.** Professors A and C ranked them as 1, B ranked them as 2, and D ranked them as 3. The mean value was 1.75.

**Rhythm and Meter.** Professor A ranked them as 1, B ranked them as 3, C ranked them as 5, and D ranked them as 2. The mean value was 2.75.

**Scales.** Professor A ranked them as 1, B and D ranked them as 3, and C ranked them as 4. The mean value was 3.00.

**Key Signatures.** Professors A and C ranked them as 2, and B and D ranked them as 4. The mean value was 3.00.

**Intervals.** Professors A, B, and D ranked them as 3, and C ranked them as 2. The mean value was 2.75.

**Spellings of Triads and Seventh Chords.** Professors A and D ranked them as 5, and B and C ranked them as 3. The mean value was 4.00.

**Inversion Symbols.** Professor A ranked them as 5, and B, C, and D ranked them as 3. The mean value was 3.50.

**Figured Bass.** Professors A, B, and C ranked it as 5, and D ranked it as 3. The mean value was 4.50.

**Roman Numerals.** Professor A ranked them as 5, B ranked them as 3, C ranked them as 4, and D ranked them as 2. The mean value was 3.50.

<b>Concept</b>	<b>Mean value</b>
Notation	1.75
Rhythm and Meter	2.75
Intervals	2.75
Scales	3.00
Key Signatures	3.00
Inversion Symbols	3.50
Roman Numerals	3.50
Triads and Seventh Chords	4.00
Figured Bass	4.50

**Table 3 – General Concept Difficulty, Professors**

The most interesting observation in this section is that neither of the professors agreed unanimously on the level of difficulty of any concept. Professor A was more prone to ranking in the extreme range (1 or 5) while Professor B's rankings were seldom lower or higher than 3. Professors C and D seemed to be more similar in their rankings as they seemed to balance their voting between extreme rankings and mid-range rankings.

**Section 5, Specific Concept Difficulty: Enharmonic Keys.** Professors B and D ranked them as 3, A ranked them as 1, and C ranked them as 5. The mean value was 3.00.

**Parallel Keys.** Professor A ranked them as 1, while B, C, and D ranked them as 3. The mean value was 2.50.

**Relative Keys.** Professors B and D ranked them as 2, A ranked them as 1, and C ranked them as 2. The mean value was 1.75.

**Major Scales.** All professors ranked them as 1.

**Minor Scales.** Professors A and B ranked them as 2, C ranked them as 4, and D ranked them as 1. The mean value was 2.25.

**Simple Intervals.** Professor A ranked them as 3, B and C ranked them as 2, and D ranked them as 1. The mean value was 2.00.

**Compound Intervals.** Professors A, B, and C ranked them as 3, and D ranked them as 2. The mean value was 2.75.

<b>Concept</b>	<b>Mean value</b>
Major Scales	1.00
Relative Keys	1.75
Simple Intervals	2.00
Minor Scales	2.25
Parallel Keys	2.50
Compound Intervals	2.75
Enharmonic Keys	3.00

**Table 4 – Specific Concept Difficulty, Professors**

Clearly, it seems that of all these concepts, listed so far, the major scale is the only concept that all professors unanimously agree is the easiest concept. For others (parallel keys and compound intervals), ranks were almost unanimous, while the ranks for rest were completely different.

**Section 6, What is your primary instrument?** All professors listed piano.

**Does your primary instrument serve your progress in music theory positively, neutrally, or negatively?** All professors said “Positively.”

**What is your secondary instrument if you have one?** Professor A listed clarinet, B listed cello, C listed voice, and D did not list a secondary instrument.

**What is your gender?** All professors are male.

The professors have sixty years worth of teaching experience in music theory between them. They have different educational backgrounds due to their previous teaching experiences before coming to Texas State, especially Professor B, whose earlier experiences include teaching music in Scotland. They have a different view of teaching in

varying areas. For example, when the author asked if they modify their approaches to accommodate different learning styles, three agreed, except Professor D, who requires that students ask enough questions in order to comprehend the subject matter before leaving the classroom. Professor A mentioned that students' lack of progress in music theory does not necessarily have to do with a lack of intelligence, but rather, a lack of interest in comprehending the subject matter.

#### **4.5. Concluding Remarks on the Interviews and Questionnaire Results**

All four music professors are experts in their field. They have different teaching experiences and have varying – sometimes different, sometimes similar – views of teaching approaches in general. When it comes to concept difficulty, responses were both similar and different.

Needless to say, these professors' responses cannot speak for *all* music theory professors. However, just because these answers are limited to opinions of only four professors does not in any way nullify the validity of their opinions. Their responses, presumably, are based solely on what they each have learned and experienced as both music students and educators. Further, it will be interesting to see how greatly the professors' responses to the questionnaire will differ from those responses of the entire student population. Though the similarities and differences between professor and student responses will be discussed in Chapter 6 of this thesis, the author highly encourages the reader to gain a familiarity of the students' responses before deciding to compare.

It is professors like these who are the types to publish a music theory textbook or worktext. As diverse as the college textbooks proved to be in their approach to teaching

the fundamentals, so, too, were these professors' responses as diverse. Their responses, especially after having reviewed so many textbooks (despite the numerous published), provoke the author to think about how these professors might put together their own textbooks.

## CHAPTER 5

### A STUDENT QUESTIONNAIRE: ANALYSIS AND RESULTS

#### **5.1. Introduction to the Questionnaire**

As the title of this thesis suggests, the author is intending to focus on, arguably, the most important aspect of education: the student's comprehension of the subject matter. In this chapter, the author will discuss the analysis of a brief basic music theory questionnaire administered to three levels of music theory classes: Essential Musicianship, Music Theory I, and Music Theory IV.

It serves well to administer the questionnaire to more than just the targeted class (i.e., Essential Musicianship). The students' answers in the Essential Musicianship (EM) class are important, because they are students in the class upon which this thesis is based. Music Theory I (Theory I) students' answers will be of great value, because they are applying what they have learned in the first level theory course, with the general expectation that they have satisfactorily acquired both the speed and accuracy needed in the core theory classes. Music Theory IV (Theory IV) students' answers will be just as helpful in hindsight of their experiences as music majors. Upon completing Theory IV (assuming that all those who enrolled pass the class), they will have passed the most rigorous of undergraduate theory classes; having academically survived, they can look back in retrospect of what they have already learned and respond as more mature music majors.

## 5.2. Description of the Questionnaire

The questionnaire consisted of thirty-nine questions and was administered to a population of seventy-five students in the EM, Theory I, and Theory IV classes. The questionnaire, with regard to the laws on human subject research, involved minimal risk, and therefore, was exempt from approval from the Institutional Review Board. The most personal questions inquired about the participant's gender, primary instrument, secondary instrument (if applicable), and her / his classification (i.e., if she / he is a music major, minor, plans to become either, or is neither). This population consisted of twenty-nine females, forty-six males, forty-seven music majors, seventeen music minors, five who planned to become a music major, one who planned to become a music minor, and five who claimed to be neither. The author and his advisor created the questionnaire. A sufficient amount of copies was made to distribute it to the six classes. Students recorded their answers directly on the questionnaire, and, later, the author transcribed all the responses to scantron sheets. They were submitted to the Testing Center, scanned, and the statistical values were calculated with the software SPSS.

The author, with his advisor, considered issues observed in fundamentals textbooks, such as the order of general concepts. The author also took certain issues into consideration from the secondary literature reviewed. Other ideas for questions were inspired by both the author's and his advisor's learning and teaching experiences in music theory, as well as other miscellaneous – but still important – questions.<sup>13</sup>

The first five questions dealt with placing five concepts, by disparity on a five-point scale, in the order the students felt the concepts should be taught. The concepts

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<sup>13</sup> See the entire questionnaire with its original questions in Appendix B.

chosen for this portion were: (1) intervals, (2) major scales, (3) minor scales, (4) key signatures, and (5) church modes. These five were chosen for two reasons: (a) they varied the most in presentational order among the reviewed textbooks, and (b) though they are individual concepts, they are completely interrelated, almost requiring to be taught simultaneously. The following section asked about the same five concepts, but this time, students were instructed to rank them, again on a five-point scale, in order of difficulty.

The next question asked students if they felt that scales (i.e., major and minor) should be taught consecutively or if they should be separated by a different concept. This question resulted from the observation that the reviewed textbooks presented scales either consecutively or separately.

The next five questions involved the students answering either “Yes,” “Undecided,” or “No.” The first of these asked if students would be interested in an intensive fundamentals course offered as a summer camp, to avoid having to take remedial theory during a long semester. Gillespie (2000) enthusiastically advocated this idea, emphasizing its success. The next question was a result of reviewing Zbikowski & Long (1994) and their approach to cooperative learning in the classroom. Would students be interested in learning from their peers in addition to receiving instruction from the professor? Next, taking into consideration the fact that we live in a digital era, students were asked if they would be interested in taking a fundamentals course online, rather than in the classroom. Another question referred to the common classroom practice of “board work,” in which each student goes to an individual part of the blackboard to solve a specific problem as dictated. The question asked if students found this to be a useful method of applying what was learned. The last of these “Yes / Undecided / No” questions

inquired about the Circle of Fifths, and if the concept was useful in clarifying students' comprehension of key signatures.

Many of the reviewed textbooks included a keyboard for reference (fold-out or otherwise). Some textbooks had no such reference material. As a result, the next question asked if students either imagined a keyboard in their head, if they drew one on the assignment / test paper itself for reference, or if they did nothing to aid their work.

The next section of questions involved, again, students rating – on a five-point scale – the difficulty of certain concepts. Each concept was given its respective scale (1 = easiest; 5 = hardest). They did this twice: once with general concepts, and again with specific concepts. The general concepts included (1) notation, (2) rhythm and meter, (3) scales, (4) key signatures, (5) intervals, (6) spelling triads and seventh chords, (7) inversion symbols, (8) figured bass, and (9) Roman numerals. The specific concepts were (1) enharmonic keys, (2) parallel keys, (3) relative keys, (4) major scales, (5) minor scales, (6) simple intervals, and (7) compound intervals.

Finally, students were asked to indicate their primary instrument, their secondary instrument (if applicable), if they felt their primary instrument aided their comprehension of music theory (either positively, neutrally, or negatively), their gender, and, finally, their status in the school of music (i.e., a music major, minor, plan to become either, or are neither).

### **5.3. Introduction to the Analysis of the Questionnaire**

The answers to the questionnaire were analyzed from five different perspectives (e.g., responses according to gender, theory class, primary instrument, and classification.). The

first perspective to be analyzed will be that of the population as a whole, including, where appropriate, mean values to responses, their standard deviations, and frequency of responses. The analysis for the whole population will be discussed in the order of the questions asked on the questionnaire. Each analysis thereafter will be discussed by section, and only significant information will be discussed. Graphs / tables will be included where needed to serve as visual aids to the analyses and discussions. For the first analysis, the entire population, a restatement of the original question will be included, along with a referential title. Afterward, all other analyses will only include the referential title. The reader will find the questionnaire in Appendix B.

#### **5.4. Questionnaire Analysis According to the Entire Population**

To begin with, the author will discuss the questionnaire results according to the entire population – seventy-five students.

In Section 1 of the questionnaire, consisting of five questions, instructed students to place five concepts in the order in which they thought the concepts should be taught. The five concepts were (1) intervals, (2) major scales, (3) minor scales, (4) key signatures, and (5) church modes.

**Section 1, Concept Order: Intervals.** Twenty students (26.7%) ranked them as first, seven (9.3%) ranked them as second, three (4%) ranked them as third, thirty-six (48%) ranked them as fourth, and nine (12%) ranked them as fifth. The mean value for the ranking was 3.09, with a standard deviation of 1.463. The smaller the standard deviation, the greater the consistency of responses to one answer.

**Major Scales.** Seventeen students (22.7%) marked “major scales” as first, thirty-four (45.3) ranked them as second, twenty-one (28%) ranked them as third, two (2.7%) ranked them as fourth, and one (1.3%) ranked them as fifth. The mean value was 2.15, with a standard deviation of 0.849.

**Minor Scales.** No one ranked them as first. Fifteen students (20%) ranked them as second, thirty-four (45.3%) ranked them as third, twenty-two (29.3%) ranked them as fourth, and four (5.35) ranked them as fifth. The mean value was 3.20, with a standard deviation of 0.822.

**Key Signatures.** Thirty-eight students (50.7%) ranked them as first, seventeen (22.7%) ranked them as second, fifteen (20%) ranked them as third, and five (6.7%) ranked them as fourth. The mean value was 1.83, with a standard deviation of 0.978.

**Church Modes.** No one ranked them as first. Two students (2.7%) ranked them as second, two (2.7%) ranked them as third, ten (13.3%) ranked them as fourth, and sixty-one (81.3%) ranked them as fifth. The mean value was 4.73, with a standard deviation of 0.644.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Key Signatures	1.83	0.978
Major Scales	2.15	0.849
Intervals	3.09	1.463
Minor Scales	3.20	0.822
Church Modes	4.73	0.644

**Table 5 – Concept Order, Entire Population**

The table above summarizes the analysis of the first five questions’ results, ranked by their respective mean values. Overall, the concepts with the lowest and highest

mean values were key signatures and church modes, respectively. The majority of students, approximately 50%, believe that key signatures, of all the given concepts, should be the first to be taught, while the vast majority of the students, 81%, think church modes should be the last concept to be taught. The standard deviation for church modes, .644, was the lowest of the five concepts, thus indicating a more unanimous agreement of the concept's preferred presentational order: last. What the author finds to be more interesting, is how many students prefer key signatures, instead of the major scale, to be taught first. Major scales, based on their mean value, ranked second. Minor scales and intervals came closely tied at 3.20 and 3.09, respectively. Intervals had the highest standard deviation at 1.463. This indicates that this concept had, by far, a variety of responses with regard to when the concept should be taught. According to the ranking, though, nearly half of the students (48%) ranked Intervals as fourth, just over a quarter of the students (26%) ranked them as the first concept to be taught.

Section Two involved the same five concepts, but this time, asked the students to rank them in order of difficulty.

**Section 2, Concept Difficulty: Intervals.** Eleven students (14.7%) ranked them as 1 (easiest), seven (9.3%) ranked them as 2, fourteen (18.7%) ranked them as 3, twenty-nine (38.7%) ranked them as 4, and fourteen (18.7%) ranked them as 5 (most difficult). The mean value was 3.37, with a standard deviation of 1.303.

**Major Scales.** Twenty-five students (33.3%) ranked them as 1, thirty-nine (52%) ranked them as 2, seven (9.3%) ranked them as 4, and four (5.3%) ranked them as 5. The mean value was 1.92, with a standard deviation of 0.955.

**Minor Scales.** Three students (4%) ranked them as 1, twenty (26.7%) ranked them as 2, thirty-two (42.7%) ranked them as 3, and twenty (26.7%) ranked them as 4. The mean value was 2.92, with a standard deviation of 0.834.

**Key Signatures.** Forty students (53.3%) ranked them as 1, eight (10.7%) ranked them as 2, sixteen (21.3) ranked them as 3, eight (10.7%) ranked them as 4, and three (4%) ranked them as 5. The mean value was 2.01, with a standard deviation of 1.247.

**Church Modes.** One student (1.3%) ranked them as 1, two (2.7%) ranked them as 2, five (6.7%) ranked them as 3, sixteen (21.3%) ranked them as 4, and fifty-one (68%) ranked them as 5. The mean value was 4.52, with a standard deviation of 0.844.

Concept	Mean value	Standard deviation
Major Scales	1.92	0.955
Key Signatures	2.02	1.247
Minor Scales	2.92	0.834
Intervals	3.37	1.303
Church Modes	4.52	0.844

**Table 6 – Concept Difficulty, Entire Population**

According to the first section of questions, students ranked key signatures as the first concept to be taught, with a mean value of 1.83. Major scales followed closely with a mean of 2.15. According to concept difficulty, however, these two concepts are switched, but the means values are closer together. Major scales have a mean value of 1.92, with key signatures following at 2.01. So, according to this (by looking at the mean values), students think that key signatures should be the first concept to be taught (followed by major scales), yet, they think they are the second easiest concept (after major scales). Intervals were ranked with a mean value of 3.09 with regard to

presentation order, and were ranked with a mean value of 3.37 with regard to difficulty. As in the first section, intervals maintained the highest standard deviation at 1.303. Minor scales had been ranked, in the first section, after intervals with a mean value of 3.20. Their level of difficulty was ranked at 2.92, and this time had the lowest standard deviation at 0.834. According to the mean values, intervals should be taught first, but minor scales are easier. Church modes maintain the highest mean value, 4.52, indicating its rank as the most difficult concept.

Section 3 involved seven questions, each addressing a different issue (three of which were based on ideas inspired by some of the secondary literature reviewed). Depending on the question, answers were limited to two or three responses each. Students were asked to choose one of the (either two or three) offered responses.

**Section 3, Scale Order: Should major and minor scales be taught one after the other, or separated by different topics?** The author felt this question to be important, since eight of the eighteen textbooks he reviewed had scales presented separately. Most of the time, these textbooks presented major scales first, then intervals, and finally minor scales. According to this answer, students overwhelmingly (82.7%) said scales should be taught consecutively, while fewer (16%) students preferred that they ought to be taught separated by different topics.<sup>14</sup> A mean value of 1.16 (on a 2-point scale) resulted. One student did not answer this question.

**Intensive Course: If an intensive fundamentals course was offered as a summer camp program, would you be interested in taking it?** The author reviewed an article by Gillespie (2000) that advocated an intensive fundamentals course that students

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<sup>14</sup> It should be noted that these students, while attending Texas State, have been taught the scales as the majority prefer.

could attend as a summer camp, rather than spending a whole semester learning the basics. Gillespie enthusiastically carried on about the program's success, and even mentioned some student commentary about how the program was so helpful to them. For this questionnaire, more than half of the students (57.3%) replied with a "Yes," while others (18.7%) were "Undecided," and nearly a quarter (24%) said "No." The mean value reported was 1.67 (based on a 3-point scale).

**Cooperative Learning: Would you feel comfortable with students tutoring other students in class as a form of cooperative learning?** Zbikowski & Long (1994) had suggested the teaching approach of getting students to also rely on each other's help to learn, in addition to being taught by the professor. When students were asked on the questionnaire if they would be comfortable with peer tutoring, more than half (65.3%) said "Yes," while few (13.3%) were "Undecided," and nearly a quarter (21.3%) said "No." The mean value was 1.56 (based on a 3-point scale).

**Online Course Preference: If given the option, would you prefer to take this course online?** According to Chuang (2000), the fact that we now live in a digital age has created the opportunity for students to register for, and participate in, courses (or even programs) online. When students were asked if they would be interested in taking the fundamentals course online, rather than in the traditional classroom setting, only a few (20%) said "Yes," even less (13.7%) were "Undecided," and many (77.3%) said "No." One student even commented on his questionnaire: "This course should not be taught online!" The mean value reported was 2.57 (on a 3-point scale).

**"Board Work" Usefulness: Do you find "board work" helpful?** It is a common practice for professors, if they so choose, to have students go up to the

blackboard, and have the students apply what they have just learned by being given a problem and using the newly-learned method to solve it. This way, once a concept is introduced, students must apply its practice immediately to facilitate comprehension. While nearly three-quarters (74.7%) of the students said “Yes,” few (12%) were “Undecided,” and an equal number (12%) said “No.” Here, the mean value was 1.36 (on a 3-point scale). One student did not respond.

**Circle of Fifths Helpfulness: Does the Circle of Fifths clarify your comprehension of key signatures?** Many students, upon first learning key signatures – and particularly if they do not play the piano – will be “lost” when learning about them. In most cases, understanding the Circle of Fifths, with its mathematical consistency, will improve students’ comprehension of key signatures. When asked if this was the case, over three-quarters (77.3%) said “Yes,” few (8%) were “Undecided,” and only some (11.7%) said “No.” A mean value of 1.37 (on a 3-point scale) was reported.

**Keyboard Use: Do you picture a keyboard or draw one when working on assignments or tests?** A lot of textbooks today, including seven of the seventeen reviewed in this thesis, provide students with a referential keyboard. In most cases, it is a fold-out keyboard. When completing assignments or tests, referring to the keyboard will help the student in answering accurately. The keyboard provides a visually coherent physical representation of the musical spectrum. Therefore, if a student has any level of proficiency, answers are virtually revealed with its use. If there is no keyboard available, students have the option to either draw one on their paper, or picture it in their head. According to their responses, nearly one third of the students (29.3%) reported picturing a keyboard, and less than half (40%) said they drew one, while close to one third (30.7%)

said they did neither. One of the students who mentioned drawing a keyboard commented: “This way, you will never mess up!”

Section 4 was similar to Section 2 in that students were asked to rate concept difficulty. This section, however, listed nine general concepts and students were to rate each of them on a scale of 1 (easiest) to 5 (most difficult). The concepts included: (1) notation, (2) rhythm and meter, (3) scales, (4) key signatures, (5) intervals, (6) triad and seventh chord spellings, (7), inversion symbols, (8) figured bass, and (9) Roman numerals.

**Section 4, General Concept Rating: Notation.** Thirty-five students (46.7%) ranked it as 1, twenty (26.7) ranked it as 2, eighteen (24%) ranked it as 3, one (1.3%) ranked it as 4, and one (1.3%) ranked it as 5. The mean value was 1.84, with a standard deviation of 0.931.

**Rhythm and Meter.** Sixteen students (21.3%) ranked them as 1, twenty-four (32%) ranked them as 2, three (25.3%) ranked them as nineteen, twelve (16%) ranked them as 4, and four (5.3%) ranked them as 5. The mean value was 2.52, with a standard deviation of 1.155.

**Scales.** Twenty-seven students (34.7%) ranked them as 1, twenty-nine (38.7%) ranked them as 2, seventeen (22.7%) ranked them as 3, two (2.7%) ranked them as 4, and one (1.3%) ranked them as 5. The mean value was 1.97, with a standard deviation of 0.900.

**Key Signatures.** Thirty-three students (44%) ranked them as 1, twenty-five (33.3%) ranked them as 2, twelve (16%) ranked them as 3, three (4%) ranked them as 4,

and one (1.3%) ranked them as 5. One student (1.3%) did not answer this question. The mean value was 1.84 (equal to notation), with a standard deviation of 0.937.

**Intervals.** Fifteen students (20%) ranked them as 1, twenty-four (32%) ranked them as 2, twenty-one (28%) ranked them as 3, fourteen (18.7%) ranked them as 4, and one (1.3%) ranked them as 5. The mean value was 2.49, with a standard deviation of 1.057.

**Spellings of Triads and Seventh Chords.** Ten students (13.3%) ranked them as 1, seventeen (22.7%) ranked them as 2, twenty-seven (36%) ranked them as 3, sixteen (21.3%) ranked them as 4, and five (6.7%) ranked them as 5. The mean value was 2.85, with a standard deviation of 1.111.

**Inversion Symbols.** Six students (8%) ranked them as 1, eighteen (24%) ranked them as 2, thirty-five (46.7%) ranked them as 3, nine (12%) ranked them as 4, and seven (9.3%) ranked them as 5. The mean value was 2.91, with a standard deviation of 1.029.

**Figured Bass.** Four students (5.3%) ranked them as 1, thirteen (17.3%) ranked them as 2, twenty-two (29.3%) ranked them as 3, twenty-one (28%) ranked them as 4, and fifteen (20%) ranked them as 5. The mean value was 3.40, with a standard deviation of 1.151.

**Roman Numerals.** Six students (85%) ranked them as 1, eighteen (24%) ranked them as 2, twenty-five (33.3%) ranked them as 3, twenty (26.7%) ranked them as 4, and six (8%) ranked them as 5. The mean value was 3.03, with a standard deviation of 1.078.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Notation	1.84	0.931
Key Signatures	1.84	0.937
Scales	1.97	0.900
Intervals	2.49	1.057
Rhythm and Meter	2.52	1.155
Triads and Seventh Chords	2.85	1.111
Inversion Symbols	2.91	1.029
Roman Numerals	3.03	1.078
Figured Bass	3.40	1.151

**Table 7 – General Concept Difficulty, Entire Population**

It is clear, according to the mean values, that among these nine general fundamental concepts, figured bass was ranked as the most difficult concept. It is worthwhile to point out that rhythm and meter has the highest standard deviation (1.155), practically tied with figured bass (1.151).<sup>15</sup> Rhythm and meter's mean value, 2.52, is not as high as that of figured bass, 3.40 (the highest mean value). So though there is a significant difference in the mean value but no significant difference in standard deviation, this just shows that these two concepts both had a lack of consistency in their ranking.

Two concepts share a mean value of 1.84: notation and key signatures. Moreover, their standard deviations are among the lowest (0.931 and 0.937, respectively). In ranking difficulty, key signatures are, for the most part, consistent in their results by maintaining the lowest mean value. Their equally low mean values, coupled with their low standard deviations, show that these concepts yielded a greater consistency of responses from the whole population. In this section, though, it is also important to point out that scales are listed (and ranked) as one concept itself, contrary to both types of scales (major and

<sup>15</sup> Statistically speaking, this difference is insignificant.

minor) being listed in Section 2. So, this does cause a small level of uncertainty on how the types of scales would have ranked among the rest of the concepts listed in Section 4. Also notable, scales have a slightly higher mean value (1.97) than key signatures (1.84). This further confirms that – assuming students were primarily thinking of major scales – students find, according to mean values, key signatures to be easier than scales.

The spellings of triads and seventh chords usually go hand-in-hand with their inversion symbols. According to this section, the population found the concepts to be nearly equally difficult with mean values of 2.85 and 2.91, respectively. In his own personal experience, the author of this thesis has had more difficulty gaining mastery of figured bass than of Roman numerals (RN). Ironically, this is not the case according to these concepts' mean values in the questionnaire. The population responded giving RN and figured bass the two highest mean values of the section: 3.03 and 3.40, respectively. Their standard deviations are not very different either, at 1.078 and 1.151, respectively. Despite these concepts' mean values being so high, their standard deviations were high enough to indicate the lack of consistent responses.

Section 5 concentrates on three concepts that have already been ranked: keys, scales, and intervals. Section 5 returns to the same specificity in dealing with scales (i.e., major and minor). With regard to keys and intervals, however, the sections inquires about these concepts in a more detailed way. Overall, Section 5 asks students to rank the difficulty, again on a 1 to 5 scale, of: (1) enharmonic keys, (2) parallel keys, (3) relative keys, (4) major scales, (5) minor scales, (6) simple intervals, and (7) compound intervals.

**Section 5, Specific Concept Rating: Enharmonic Keys.** Eight students (10.7%) ranked them as 1, twenty (26.7%) ranked them as 2, thirty-three (44%) students ranked

them as 3, ten (13.3%) ranked them as 4, and four (5.3%) ranked them as 5. The mean value was 2.76, with a standard deviation of 0.998.

**Parallel Keys.** Nineteen students (25.3%) ranked them as 1, twenty-one (28%) ranked them as 2, twenty-six (34.7%) ranked them as 3, seven (9.3%) ranked them as 4, and two (2.7%) ranked them as 5. The mean value was 2.36, with a standard deviation of 1.048.

**Relative Keys.** Seventeen students (22.7%) ranked them as 1, twenty-three (30.7%) ranked them as 2, twenty-six (34.7%) ranked them as 3, seven (9.3%) ranked them as 4, and two (2.7%) ranked them as 5. The mean value was 2.39, with a standard deviation of 1.025.

**Major Scales.** Fifty-two students (69.3%) ranked them as 1, nineteen (25.3%) ranked them as 2, and four (5.3%) ranked them as 3. There were no rankings of 4 or 5. The mean value was 1.36, with a standard deviation of 0.584.

**Minor Scales.** Twenty-four students (32%) ranked them as 1, thirty-five (46.7%) ranked them as 2, fourteen (18.7%) ranked them as 3, and two (2.7%) ranked them as 4. There was no ranking of 5. The mean value was 1.92, with a standard deviation of 0.784.

**Simple Intervals.** Twenty-three students (30.7%) ranked them as 1, twenty-eight (37.3%) ranked them as 2, twenty (26.7%) ranked them as 3, and four (5.3%) ranked them as 4. There was no ranking of 5. The mean value was 2.07, with a standard deviation of 0.890.

**Compound Intervals.** Three students (4%) ranked them as 1, sixteen (21.3%) ranked them as 2, twenty-six (34.7%) ranked them as 3, twenty-five (33.3%) ranked them

as 4, and five (6.7%) ranked them as 5. The mean value was 3.17, with a standard deviation of 0.978.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.36	0.584
Minor Scales	1.92	0.784
Simple Intervals	2.07	0.890
Parallel Keys	2.36	1.048
Relative Keys	2.39	1.025
Enharmonic Keys	2.76	0.998
Compound Intervals	3.17	0.978

**Table 8 – Specific Concept Difficulty, Entire Population**

It is not surprising that none of these concepts reached an average of 4 or 5 in their ranking. Neither keys, nor scales, nor intervals were ranked as being that difficult in the other sections of the questionnaire. Nevertheless, the specificity (i.e., what kinds of keys, what kinds of intervals, what kind of scales) that is revealed through this section yields interesting information. Particularly with regard to the keys, there is only a minute difference – statistically insignificant – in mean values between parallel and relative keys.

With regard to intervals, there is a notable difference in mean values (simple intervals at 2.07 and compound intervals at 3.17). Their standard deviations, however, are neither the lowest nor the highest within this section. Major scales were ranked as the easiest concept (mean value 1.36) and had the smallest standard deviation (0.584), indicating, clearly, that of all these specific concepts, major scales are ranked as the easiest, nearly unanimously. As to be expected, minor scales were found to be the second easiest concept (mean value 1.92), followed by simple intervals (mean value 2.07).

The author found thought-provoking that this section reveals a pattern of consistency in the ranking: the higher the mean value, the higher the standard deviation. The consistency of the pattern breaks, however, after the first four concepts consistent with the pattern. The pattern, listed in order of mean value, is as follows: (1) major scales, 1.36 / 0.584, (2) minor scales, 1.92 / 0.784, (3) simple intervals, 2.07 / 0.890, (4) compound intervals, 3.17 / 0.978, (5) parallel keys, 2.36 / 1.048, (6) relative keys, 2.39 / 1.025, and (7) enharmonic keys, 2.76 / 0.998. This shows, at least in this questionnaire, that some specific concepts may be predictably easier than others, and yet, this pattern also shows that where some seem to have a unanimous ranking, the standard deviation indicates that students' opinions will never be consistent, however.

Section 6, the final section on the questionnaire, inquired about the students' more personal information. In this section, they were asked to list their primary instrument, their secondary instrument (if applicable), if, overall, their primary instrument served their progress in music theory effectively, their gender, and their academic classification (i.e., if they are a music major, music minor, planning to become a music major, planning to become a music minor, or are neither), and finally, which theory class they were enrolled in (e.g., EM, Theory I, or Theory IV). This final question was not listed on the questionnaire. Instead, the professor and class name in which the questionnaire was administered, was recorded and included in the data.

Instruments (primary and secondary) were divided into six categories: (1) keyboard, (2) wind (including woodwind and brass), (3) voice, (4) guitar (electric, acoustic, and bass), (5), percussion, and (6) strings. One inconsistency may be discovered due to one student listing two instruments as her / his primary instrument. Although

seventy-five students submitted a questionnaire, seventy-six primary instruments were reported.

**Section 6, What is your primary instrument?** A two students (2.7%) reported the keyboard as their primary instrument, twenty-seven (36%) reported wind, nineteen (25.3%) reported voice, nineteen (25.3%) reported guitar, four (5.3%) reported percussion, and five (6.7%) reported strings.

**Does your primary instrument serve your progress in music theory positively, neutrally, or negatively?** Students were to choose one of these three options for this question indicating if their primary instrument helped them comprehend theory, did nothing for them, or made it difficult and harder to understand. Forty-four students (58.7%) said “positively” while twenty-nine (29.7%) said “neutrally,” and only two (2.7%) said “negatively.” The mean value was 1.44, This question attempts to confirm many suggestions and studies that some instruments – primarily keyboard – assist the student with the comprehension of the fundamentals.

**What is your secondary instrument if you have one?** Here, eighteen students (24%) reported keyboard as their secondary instrument, ten (13.3%) reported wind, three (4%) reported voice, eight (10.7%) reported guitar, two (2.7%) reported percussion, and strings were not reported as a secondary instrument.

**What is your gender?** This study consisted of seventy-five participants, twenty-nine (38.7%) of which were female and forty-six (61.3%) of which were male.

**Academic Classification.** Forty-seven (62.7%) of students classified themselves as music majors, seventeen (22.7%) said they were music minors, five (6.7%) said they

were planning to become music majors, one (1.3%) reported becoming a music minor, and five (6.7%) said they were neither.

**In which music theory class are you enrolled?** Twenty-nine (38.7%) were EM students, thirty-nine (52.1%) were in Theory I, and seven (9.3%) were in Theory IV.

Considering that these last few pages discussed the responses to the student questionnaire according to the entire population, a few predictions about answers can be made based on current music educators' learning and teaching experiences. However, what must be realized, especially when hypothesizing, is that the prediction pattern may lose consistency at any given moment. But we must realize, as educators, that our thinking is seldom matched, especially by those who we instruct. It may take months, years, even a lifetime for one's thinking to influence another's.

Following this analysis will be more of the same analysis, yet taken from answers according to sub-groups within the entire population. Only significant information will be discussed.

### **5.5. Questionnaire Analysis According to Primary Instruments**

The student's primary instrument may be – as the author has argued – one of the factors that affect students' comprehension of music theory. For instance, as discussed in Chapter 4, all four professors mentioned that they believe that pianists tend to excel, while other instrumentalists – particularly vocalists – tend to struggle. For this questionnaire, of all the students who responded, two reported the piano as their primary instrument, twenty-seven reported woodwind or brass (hereafter referred to as wind),

nineteen were vocalists, nineteen play guitar (acoustic, electric, or bass), four are percussionists, and five are string players.<sup>16</sup>

On the questionnaire, one of the questions (as mentioned at the beginning of this chapter) asks if the student's primary instrument serves her / his progress in music theory positively, neutrally, or negatively. In other words, does playing the guitar, for example, help her / him to understand theoretical concepts more easily, does it make any difference in her / his theoretical comprehension at all, or does it just make her / his work in theory more difficult? Discussion of the results of this question will be included in this analysis of the questionnaire.

For **Section 1**, only two instrumentalists – guitarists and percussionists – tended to agree on **Concept Order**: major scales first, key signatures second, minor scales third, intervals fourth, and church modes fifth. Instrumentalists' responses varied, although every instrumentalist agreed that church modes should be last. The most notable difference is the pianists' response: major scales first, minor scales second, intervals third, key signatures fourth, and church modes fifth. String players also responded differently: key signatures first, intervals second, major scales third, minor scales fourth, and church modes fifth. The difference between wind players and vocalists was simply that wind players, on average, preferred intervals to be taught between scales, while vocalists preferred the scales back to back.

In **Section 2**, when ranking **Concept Difficulty**, string and wind players thought alike – key signatures ranked as 1, major scales as 2, minor scales as 3, intervals as 4, church modes as 5 – as did vocalists and guitarists: major scales ranked as 1, key

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<sup>16</sup> As a statistical discrepancy, one student listed two primary instruments, which explains why these totals add up to seventy-six, instead of seventy-five.

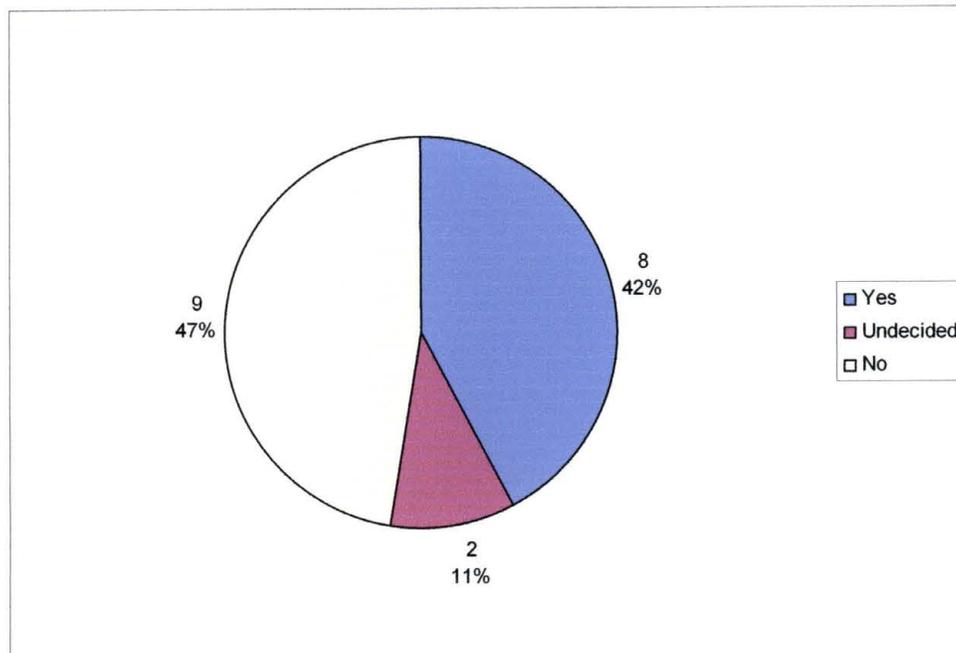
signatures as 2, minor scales as 3, intervals as 4, church modes as 5. Though pianists' and percussionists' rankings are similar, their responses are notable because they differ from the rest of the instrumentalists (and the population!). Percussions ranked major scales as 1, minor scales as 2, key signatures as 3, church modes as 4, and intervals as 5. Pianists differed only slightly in that key signatures were ranked as 2, and minor scales as 3. Among the statistical results discussed so far, rankings of church modes have been consistent: it has been the concept to be taught last, and ranked as the most difficult. The only other exception, however, was the ranking of the student who planned to minor in music.

Results in **Scale Order** for **Section 3** revealed a nearly unanimous agreement that scales should be taught one after the other. Only less than a quarter of wind students, vocalists, guitarists, and string players disagreed with the majority.

With the idea of an **Intensive Course**, the vast majority of the instrumentalists took an interest in the idea. The biggest difference was that of vocalists (understandably); more than half of them were either indecisive or against the idea. Guitarists shared a similar view, except more were indecisive than against the idea.

When responding to the idea of **Cooperative Learning**, the majority of students were comfortable with the idea. More students, however, opposed it, rather than being undecided.

The idea of taking the fundamentals as an **Online Course** was not supported well. Guitarists, percussionists, and string players were unanimous in their opposition of the idea. Pianists unanimously agreed, the vast majority of wind players disagreed, as did nearly half of the vocalists. A graph depicting the vocalists' opinion is below in Figure 1.



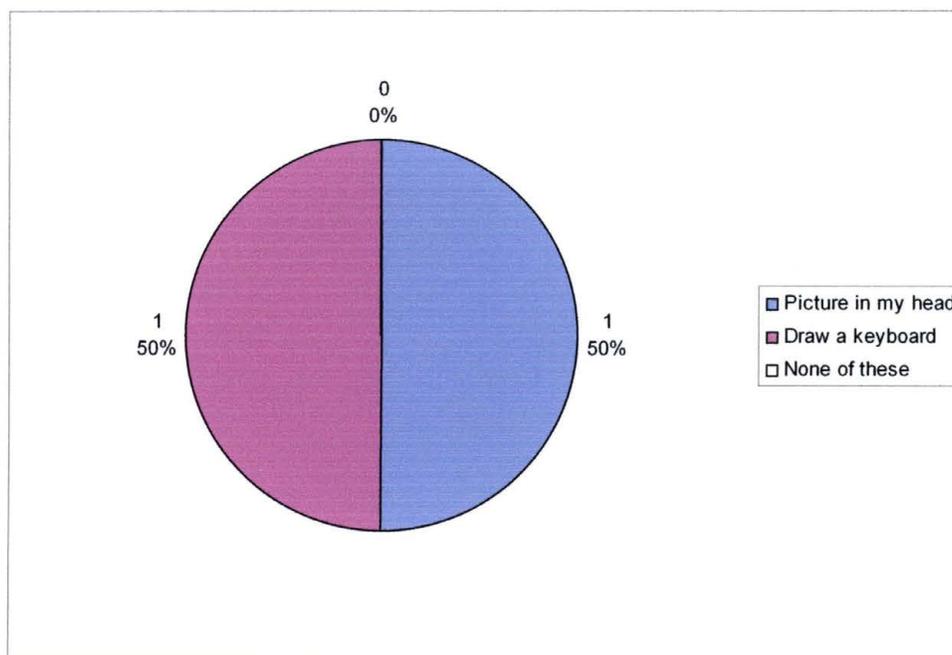
**Figure 1 – Online Course Preference, Vocalists**

The author decided to include this graph, among others, because he found that more vocalists than he would expect even entertained the idea of an online course.

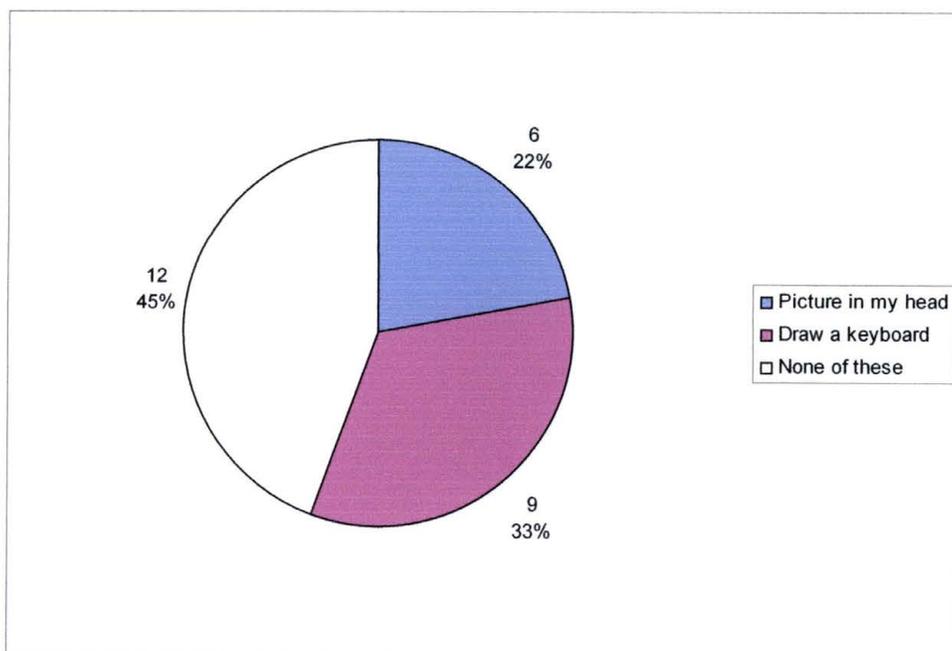
Percussionists and string players unanimously agreed upon the usefulness of **“Board Work.”** For the exception of pianists, who either agreed or were indecisive about its usefulness, the vast majority of the other instrumentalists also agreed that “board work” is very useful.

This time, when asked about the helpfulness of the **Circle of Fifths** to aid comprehension of key signatures, pianists, much to no surprise, unanimously agreed. For the exception of percussionists and string players (who were more indecisive and / or disagreed), the vast majority of the other instrumentalists also confirmed of the way the Circle of Fifths can clarify the concept of key signatures.

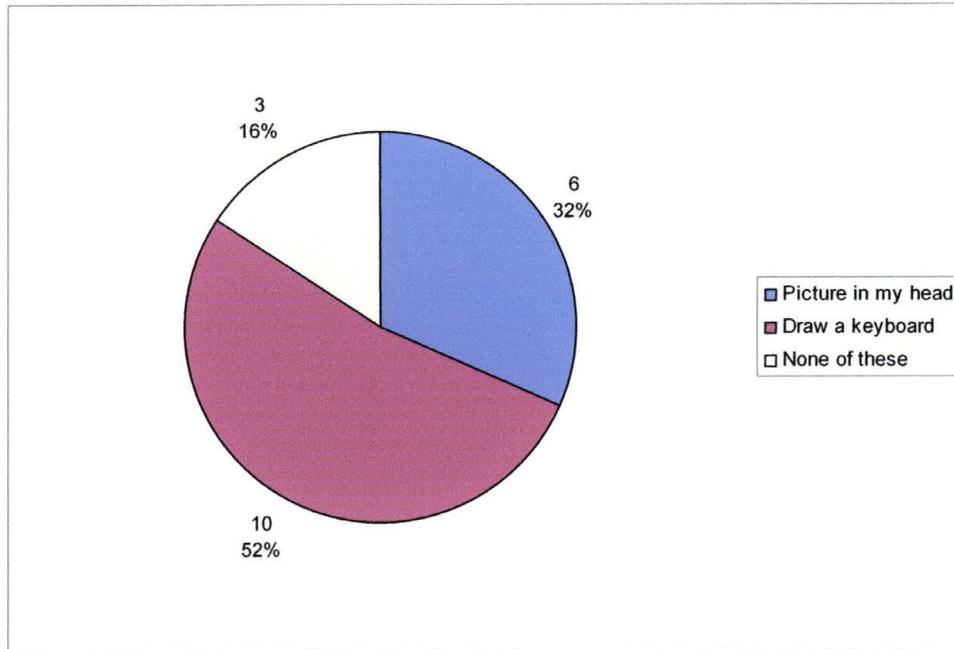
Answers varied between all the instrumentalists when asked how they involve **Keyboard Use** when working on assignments or tests. The author will include their responses below in the following graphs.



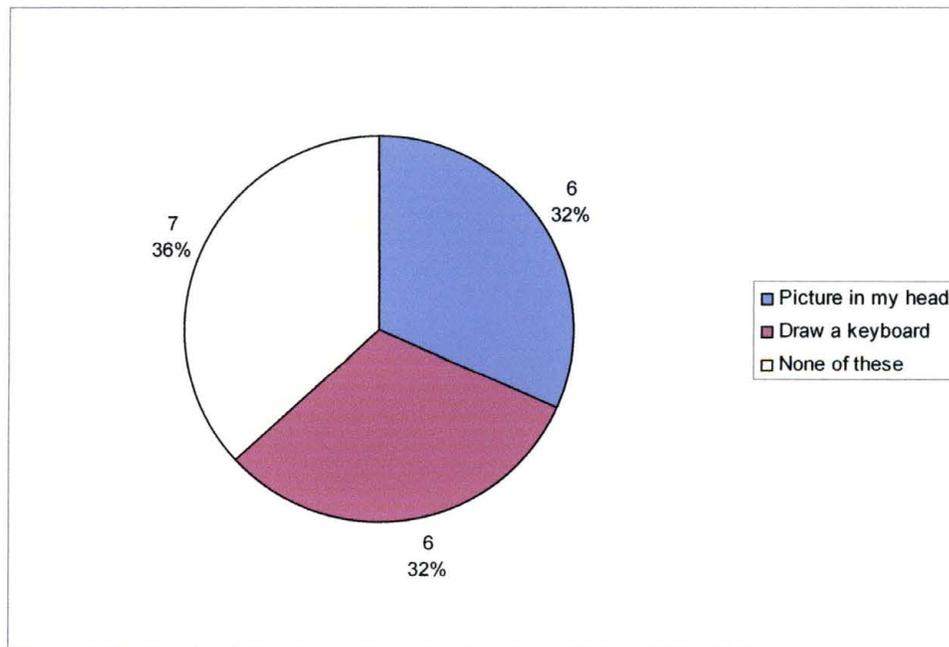
**Figure 2 – Keyboard Use, Pianists**



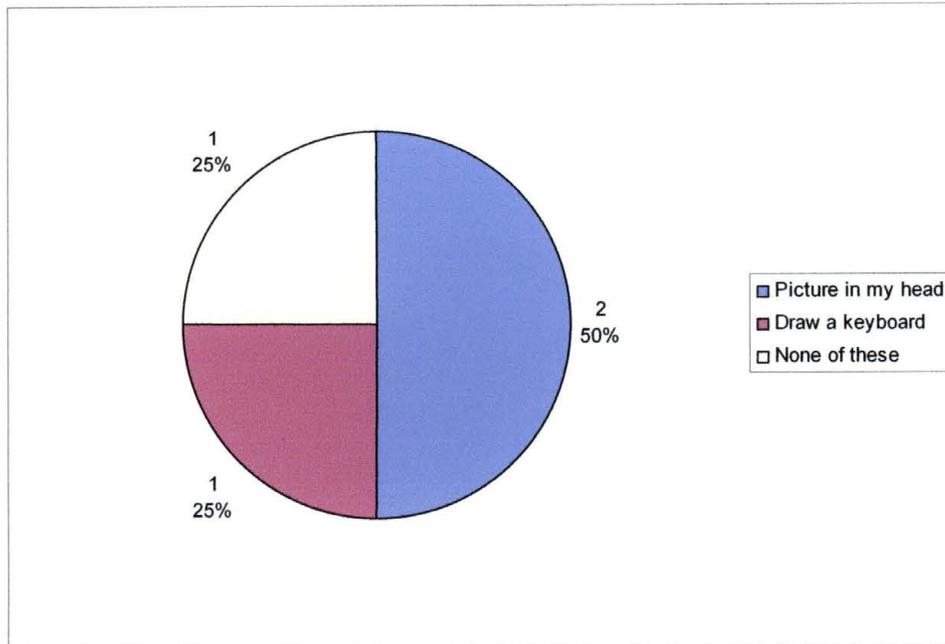
**Figure 3 – Keyboard Use, Wind Players**



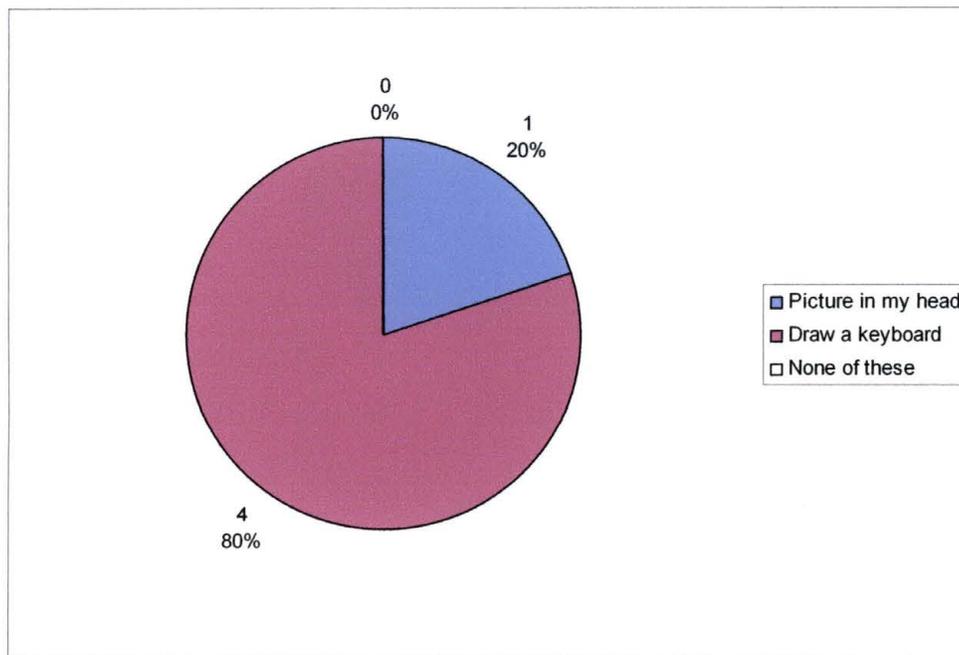
**Figure 4 – Keyboard Use, Vocalists**



**Figure 5 – Keyboard Use, Guitarists**



**Figure 6 – Keyboard Use, Percussionists**



**Figure 7 – Keyboard Use, String Players**

It can be assumed, for guitarists, that they may not picture the piano, but rather the guitar, when seeking referential assistance on assignments or tests. The fact that most of the

vocalists draw a keyboard is of no surprise to the author; they cannot see their instrument, so “seeing” a keyboard would probably prove most beneficial.

Instrumentalists’ answers differed in **Section 4** when ranking **General Concept Difficulty**. Depending on the population of the instrumental group (e.g., only two students reported being pianists), a few concepts may have identical mean values and / or standard deviations. All instrumentalists’ responses are summarized in the tables below.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Notation	1.00	0.000
Key Signatures	1.50	0.707
Triads and Seventh Chords	2.50	0.707
Inversion Symbols	2.50	0.707
Scales	2.50	2.121
Intervals	2.50	2.121
Roman Numerals	3.00	1.414
Rhythm and Meter	3.50	0.707
Figured Bass	4.00	1.414

**Table 9 – General Concept Difficulty, Pianists**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Key Signatures	1.37	0.688
Notation	1.56	0.698
Scales	1.70	0.775
Rhythm and Meter	1.93	0.730
Intervals	2.33	0.920
Triads and Seventh Chords	2.52	1.051
Figured Bass	3.59	1.118
Inversion Symbols	2.76	1.018
Roman Numerals	2.96	1.018

**Table 10 – General Concept Difficulty, Wind Players**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Notation	1.68	0.820
Key Signatures	2.00	0.970
Scales	2.26	1.098
Rhythm and Meter	2.42	1.017
Intervals	2.42	1.121
Inversion Symbols	2.68	1.003
Triads and Seventh Chords	2.89	1.049
Roman Numerals	3.00	1.291
Figured Bass	3.21	1.182

**Table 11 – General Concept Difficulty, Vocalists**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Scales	2.05	0.780
Notation	2.26	0.991
Key Signatures	2.37	1.065
Intervals	2.74	0.933
Inversion Symbols	3.11	1.150
Roman Numerals	3.16	1.015
Triads and Seventh Chords	3.21	1.084
Figured Bass	3.32	1.108
Rhythm and Meter	3.37	1.212

**Table 12 – General Concept Difficulty, Guitarists**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Rhythm and Meter	2.00	1.414
Scales	2.25	0.500
Key Signatures	2.25	0.500
Notation	2.25	0.957
Inversion Symbols	3.00	0.816
Roman Numerals	3.00	0.816
Intervals	3.50	0.732
Figured Bass	3.50	1.291
Triads and Seventh Chords	4.00	1.414

**Table 13 – General Concept Difficulty, Percussionists**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Key Signatures	1.60	0.548
Scales	1.80	0.837
Intervals	2.00	0.707
Notation	2.20	1.643
Triads and Seventh Chords	2.40	0.894
Inversion Symbols	2.60	1.140
Roman Numerals	2.80	1.304
Figured Bass	3.20	1.483
Rhythm and Meter	3.40	1.517

**Table 14 – General Concept Difficulty, String Players**

As much as the concepts' rating varied in difficulty, it reaffirmed to the author how differently various instrumentalists think. For instance, string players ranked rhythm and meter as the most difficult concept, while percussionists ranked it as the easiest. Moreover, triads and seventh chords received the lowest ranking among the pianists. Similarly, string players also ranked triads and seventh chords higher than most instrumentalists. since they, besides pianists, are the only other instrumentalists capable of playing more than one pitch simultaneously (for the exception of pitched percussion instruments).

**Section 5** asked students to rank **Specific Concept Difficulty**. Like the General Concept Difficulty rankings, these varied, although not as much. Again, the tables below summarize the concepts' rankings.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.50	0.707
Simple Intervals	1.50	0.707
Minor Scales	2.00	1.414
Parallel Keys	2.50	0.707
Relative Keys	2.50	0.707
Enharmonic Keys	2.50	0.707
Compound Intervals	2.50	0.707

**Table 15 – Specific Concept Difficulty, Pianists**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.26	0.526
Minor Scales	1.85	0.718
Simple Intervals	1.96	0.854
Parallel Keys	2.19	1.075
Relative Keys	2.37	1.043
Enharmonic Keys	2.52	1.087
Compound Intervals	3.04	1.055

**Table 16 – Specific Concept Difficulty, Wind Players**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.37	0.597
Simple Intervals	1.79	0.787
Minor Scales	1.89	0.809
Relative Keys	2.47	1.073
Parallel Keys	2.68	1.003
Enharmonic Keys	3.00	0.816
Compound Intervals	3.16	0.958

**Table 17 – Specific Concept Difficulty, Vocalists**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.47	0.697
Minor Scales	2.05	0.848
Parallel Keys	2.21	1.134
Relative Keys	2.37	1.065
Simple Intervals	2.47	0.964
Enharmonic Keys	2.68	1.057
Compound Intervals	3.37	0.831

**Table 18 – Specific Concept Difficulty, Guitarists**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.25	0.500
Minor Scales	1.50	1.000
Parallel Keys	2.25	1.258
Relative Keys	2.25	1.258
Simple Intervals	2.50	1.291
Enharmonic Keys	3.25	0.500
Compound Intervals	3.50	1.291

**Table 19 – Specific Concept Difficulty, Percussionists**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.40	0.548
Simple Intervals	2.20	0.447
Relative Keys	2.20	0.837
Minor Scales	2.40	0.548
Parallel Keys	2.60	0.548
Enharmonic Keys	3.00	1.225
Compound Intervals	3.20	1.095

**Table 20 – Specific Concept Difficulty, String Players**

It was not much of a surprise to the author to find that the pianists ranked several concepts identically (despite the fact that only two students were pianists and could have very easily responded similarly anyway), particularly key relationships. The author, who is a pianist himself, would probably have ranked those concepts very similarly – if not

identically – as well. It was also unanimous, according to these responses, that major scales are the easiest, while compound intervals are the most difficult of the concepts listed. There may be two (although very possibly more) reasons why certain concepts were ranked the way they were. Instrumentalists tend to think one way. But because of the irrefutable fact that everyone is different and learns differently, responses can reflect both factors. When instrumentalists practice on their instrument regularly, they might to find some concepts much easier (or much harder) than others. But when it comes to individual students, there is little guarantee that any external factor will help maintain levels of comprehension consistently.

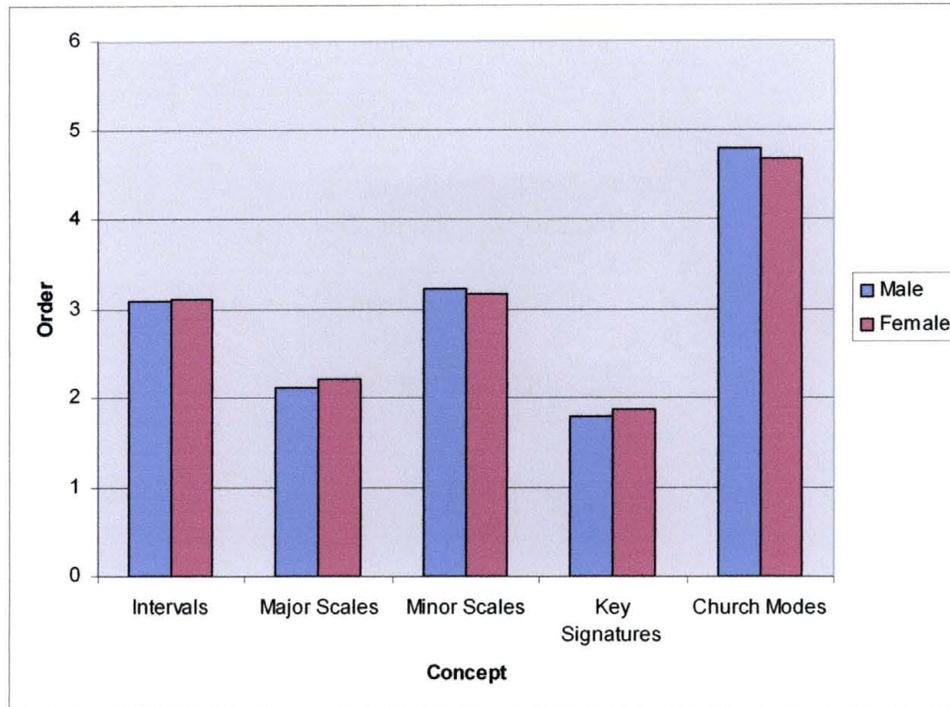
Finally, in **Section 6**, students were asked if their instrument serves their progress in music theory “positively, neutrally, or negatively.” Does their instrument make theory easier to understand, does it have little effect on their comprehension, or is it of no avail whatsoever? When asked if their instrument is of any avail, 60% of the instrumentalists – pianists, wind players, guitarists, and string players – reported that their instrument does help them out. As expected, pianists unanimously reported “positively,” as did the majority (63%) of the wind players, guitarists (73.7%), and string players (60%). Contrary to the author’s prediction, however, the majority (57.9%) of vocalists claimed their instrument helped them “neutrally” rather than “negatively.” The rest of the vocalists (42.1%) claimed it helped them “positively.” As for the percussionists, half of them reported a neutral effect, while the other half was evenly divided between responses of positive and negative help.

One might expect that certain predictions about instrumentalists’ opinions would prove to be true, but those predictions can easily be proven false by, again, the simple

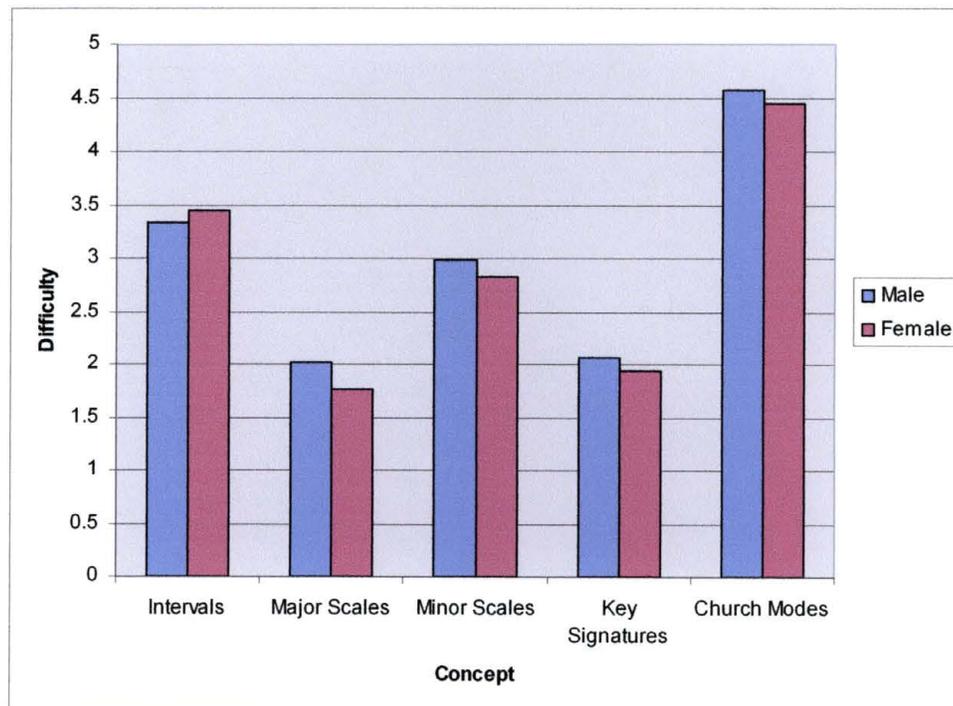
fact that everyone thinks differently, in one way or another. The only thing that is predictable, if anything, is just the tendency of one direction over another. Pianists *tend* to do better in music theory. Vocalists *tend* to struggle. The author expected, for example, that vocalists would have reported that their instrument helps them “negatively” when, in contrast, most only reported that it helped them “neutrally.”

### **5.6. Questionnaire Analysis According to Gender**

Twenty-nine females and forty-six males participated. For females and males, there was no significant difference in responses between **Sections 1 and 2 (Concept Order and Concept Difficulty)**. Females’ and males’ responses, according to their mean value, both indicated that they agreed about concept order and difficulty. Concept order was ranked as follows: key signatures first, major scales second, intervals third, minor scales fourth, and church modes fifth. For concept difficulty, major scales were ranked as 1, key signatures as 2, minor scales as 3, intervals as 4, and church modes as 5. A visual summary of these results is provided below in Figures 8 and 9.



**Figure 8 – Concept Order, Gender Comparison**

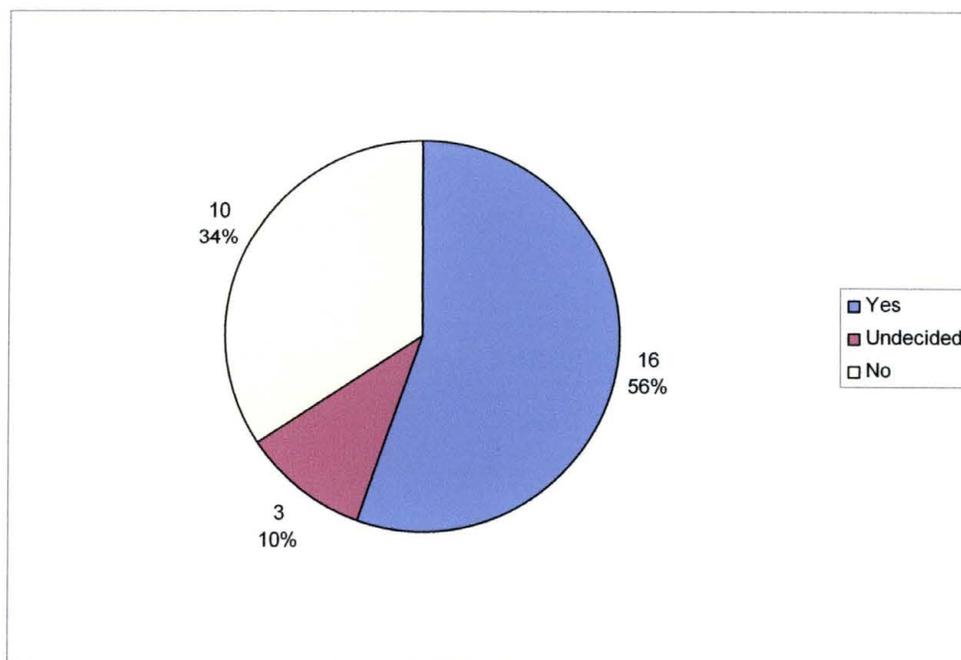


**Figure 9 – Concept Difficulty, Gender Comparison**

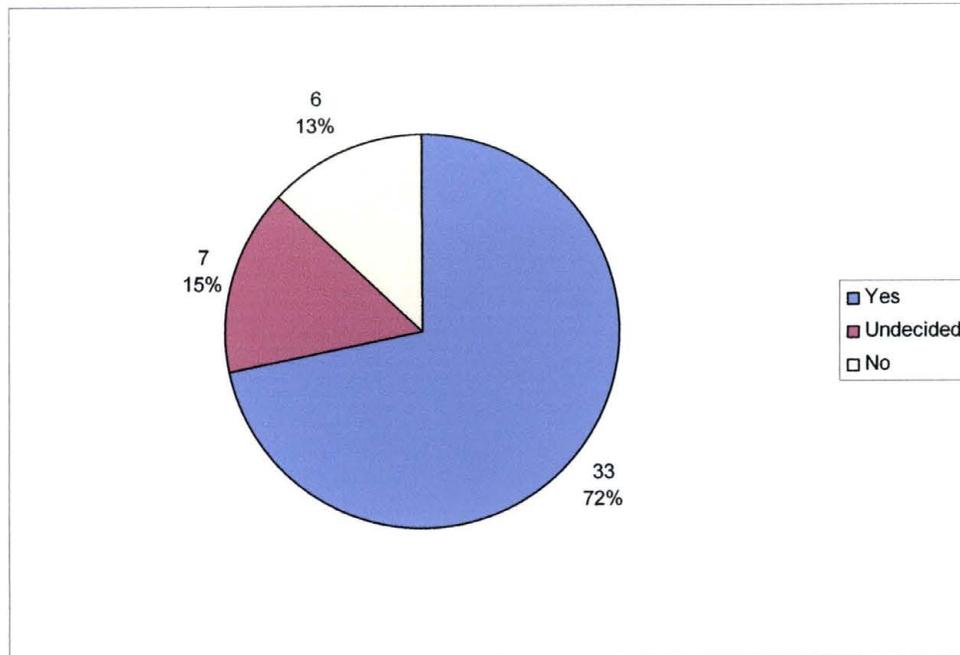
In **Concept Order**, the mean values for intervals and minor scales were much closer together than the other concepts. In **Concept Difficulty**, the males' responses are even closer between major scales and key signatures. They are practically tied.

In **Section 3**, the author noticed more similarities between the genders. The majority of both genders reported that (1) scales should be taught one after the other, (2) they were interested in an intensive fundamentals course, (3) they were very opposed to an online fundamentals course, (4) they found “board work” to be very beneficial, and (5) the Circle of Fifths clarified the concept of key signatures.

In **Section 3**, the author only found two significant differences. With regard to **Cooperative Learning**, males were considerably more comfortable with the idea than females. Nearly three-quarters (72%) of males said “Yes,” while only a little more than half of the females (56%) said “Yes.” See Figures 10 and 11 for visual differences.

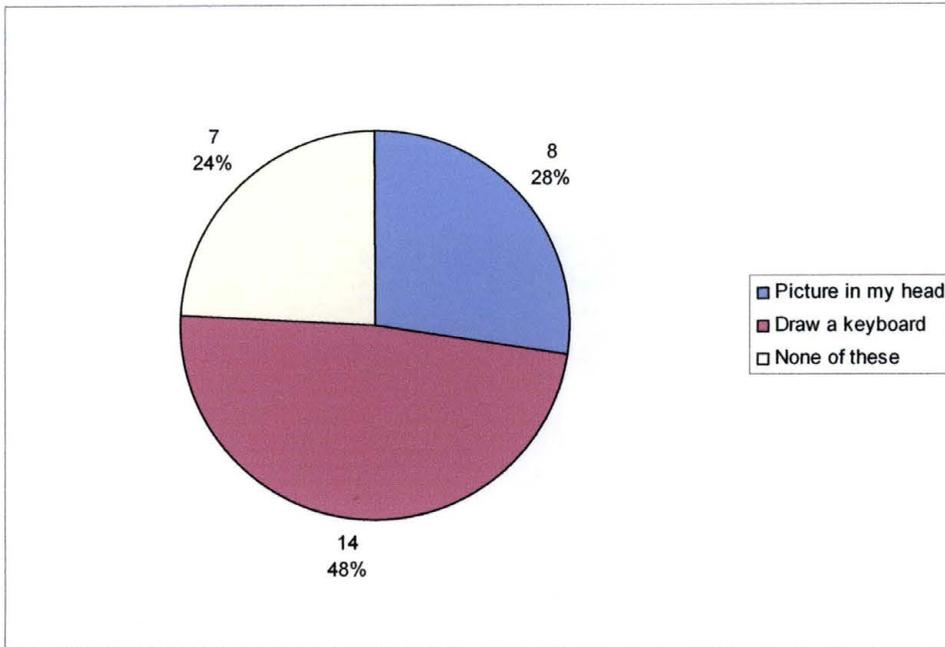


**Figure 10 – Cooperative Learning, Female**

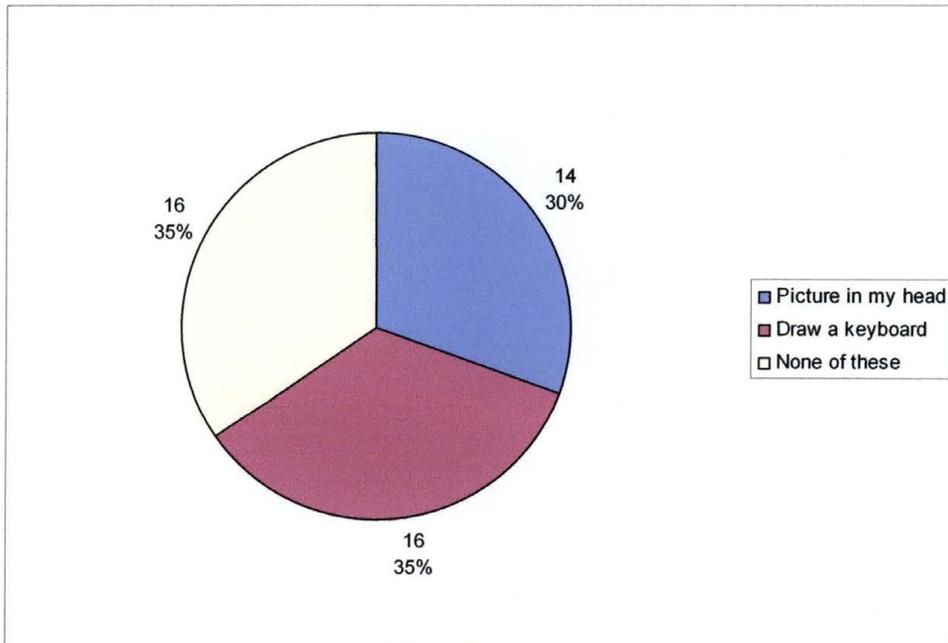


**Figure 11 – Cooperative Learning, Male**

Another area of significant difference was with **Keyboard Use** on assignments / tests. Nearly half of the females (48%) reported drawing a keyboard. The other two options – imagining a keyboard and doing neither – were close together at 28% and 24% respectively. See Figure 12. This indicates that females are more comfortable working with concrete referential material. This probably has to do with the expectation that most females are vocalists, whom, according to the professors interviewed in Chapter 4, tend to struggle the most with theory in general. Males, on the other hand, were very evenly divided between the three choices (imagining a keyboard at 30%, drawing a keyboard at 35%, and neither at 35%). See Figure 13.



**Figure 12 – Keyboard Use, Female**



**Figure 13 – Keyboard Use, Male**

In **Section 4**, there were some notable differences in rankings with **General Concept Difficulty**. According to mean values, females ranked these general concepts differently than males. A summary of the results is provided in Tables 21 and 22.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Key Signatures	1.64	0.870
Notation	1.79	1.048
Scales	1.93	1.100
Intervals	2.24	0.951
Rhythm and Meter	2.55	1.183
Triads and Seventh Chords	2.59	0.825
Inversion Symbols	2.76	0.988
Roman Numerals	3.03	1.239
Figured Bass	3.28	1.192

**Table 21 – General Concept Difficulty, Females**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Notation	1.87	0.859
Key Signatures	1.96	0.965
Scales	2.00	0.760
Rhythm and Meter	2.50	1.150
Interval Symbols	2.65	1.100
Inversions	3.00	1.054
Roman Numerals	3.02	0.977
Triads and Seventh Chords	3.02	1.238
Figured Bass	3.48	1.130

**Table 22 – General Concept Difficulty, Males**

Females found key signatures to be the easiest, while males found notation to be the easiest. In fact, the only rankings that were the same for both were the rankings for scales and figured bass. Results differed more for all other concepts.

In **Section 5**, results also differed with regard to **Specific Concept Difficulty**.

Tables 23 and 24 provide a summary below.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.34	0.553
Simple Intervals	1.83	0.805
Minor Scales	1.90	0.772
Relative Keys	2.31	1.004
Parallel Keys	2.38	0.979
Enharmonic Keys	2.72	0.996
Compound Intervals	2.97	0.981

**Table 23 – Specific Concept Difficulty, Females**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.37	0.610
Minor Scales	1.93	0.800
Simple Intervals	2.22	0.917
Compound Intervals	3.30	0.963
Parallel Keys	2.35	1.100
Relative Keys	2.43	1.047
Enharmonic Keys	2.78	1.009

**Table 24 – Specific Concept Difficulty, Males**

If compared to females' and males' rankings of general concept difficulty, both sections had two concepts that were ranked the same. For the general concepts, they were scales and figured bass. For the specific concepts, the two that were ranked the same were major scales and parallel keys.

The author mentioned that the five concepts chosen for Section 1 and 2 were chosen because they varied the most in presentational order among the reviewed textbooks. Yet, when discussing the results of their order and difficulty ranking by the

two genders, the rankings were identical, for both order and difficulty. Yet here, results between concept difficulty rankings differ more. In this case, the rankings differ for two reasons: (1) not all of the same rankings that were involved in Sections 1 and 2 are listed in Sections 4 and 5, and (2) more concepts are listed here. These two factors would inevitably affect concept ranking. Because not all of the same concepts were involved in the rankings of Sections 4 and 5, it can only be assumed – not proven – that those concepts (e.g., church modes) that were ranked as the most difficult would be ranked the same among the concepts listed in Sections Four and Five.

Females and males are indeed different in their thinking. Science alone has proven that many times. Despite the natural fact that women and men do think differently, however, there is still plenty of proof (including some of these results) that they also think similarly. Hence, their comprehension of the basics can both compare and contrast.

### **5.7. Questionnaire Analysis According to Academic Classifications**

For this particular analysis, it is important to remember that the quantity of students in each classification varies. Of the seventy-five students who responded to the questionnaire, forty-nine classified themselves as music majors, seventeen as music minors, five planned on becoming a music major, one planned on becoming a music minor, and five were neither music majors nor minors.

In **Section 1, Concept Order**, it was the music majors and those who planned to be music majors that thought alike. They both ranked key signatures first, major scales second, intervals third, minor scales fourth, and church modes fifth. Similarly, music

minors and those who claimed to be neither a music major nor music minor, ranked the concepts' order similarly, with major scales first, key signatures second, minor scales third, intervals fourth, and church modes fifth. The one student who classified himself as planning to become a music minor had the greatest difference in rankings (especially with church modes): major scales first, minor scales second, key signatures third, *church modes fourth*, and intervals fifth. Because this one student classified himself in the questionnaire as planning to become a music minor, it must be taken into consideration, like the rest of those who responded, that other students who may be in a similar situation with academic classification, may think differently than he does.

In **Section 2, Concept Difficulty**, this time, it was the music minors, those planning to major in music, and those who were neither who reported similar responses. They ranked major scales as 1, key signatures as 2, minor scales as 3, intervals as 4, and church modes as 5. The music majors were different in that they simply ranked key signatures as 1, and major scales as 2. The other three rankings were identical to the rest. The student planning to minor in music ranked concept difficulty very differently: major scales as 1, minor scales as 2, key signatures as 3, church modes as 4, and intervals as 5.

Like the last two sections, **Section 3** had unanimous and non-unanimous responses. The majority of all classifications agreed that, with **Scale Order**, the scales should be taught consecutively. Also, every classification was very comfortable with the idea of **Cooperative Learning**. Very few said "Undecided" or "No." The majority of all the students also responded similarly with their opposition to enrolling in an **Online Course**. The majority of the students found that the **Circle of Fifths** did clarify their comprehension of key signatures, as well. For the exception of the student planning to

minor in music, who disagreed, the majority of the other students reported that “**Board Work**” was indeed very useful. Responses about an **Intensive Course**, were mixed, however. The majority of music majors and minors were interested in the course. On the other hand, those planning to major in music were split: 20% were interested, 40% were “Undecided,” and the remaining 40% opposed the idea. The student planning to minor in music was opposed, and the majority of those who were neither a music major nor minor also opposed. **Keyboard Use** was probably, of the questions in this section, one of the questions with the lowest consistency of responses. For music majors, 30% reported that they imagined a keyboard, while 38% said they drew one, and 32% did neither. Nearly half (48%) of music minors said they drew a keyboard, while few (18%) imagined one, and over one third (35%) reported doing neither. Those planning to major in music were divided, with 40% saying they imagined a keyboard, 40% saying they drew one, and 20% saying they did neither. The student planning to minor in music reported doing neither, and those who are neither majors nor minors were less divided in their rankings: 60% said they imagined a keyboard, while less than half (40%) said they drew one.

**Section 4** was divided among all the students when ranking **General Concept Difficulty**. The student planning to minor in music gave responses that need not be listed in a table. He ranked notation and scales equally as 1, key signatures, intervals, inversions, figured bass, and RN equally as 2, and only rhythm and meter as well as the spellings of triads and seventh chords equally as 3. As for the other students, Tables 25 through 28 below summarize the differences in responses by mean values.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Notation	1.51	0.688
Key Signatures	1.65	0.924
Scales	1.85	0.859
Rhythm and Meter	2.13	0.969
Intervals	2.26	1.010
Triads and Seventh Chords	2.62	1.134
Inversion Symbols	2.83	1.007
Roman Numerals	2.98	1.132
Figured Bass	3.34	1.185

**Table 25 – General Concept Difficulty, Music Majors**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Notation	2.24	0.970
Key Signatures	2.29	0.920
Scales	2.41	1.004
Intervals	2.88	1.111
Triads and Seventh Chords	3.06	1.088
Inversion Symbols	3.06	1.249
Roman Numerals	3.13	1.015
Rhythm and Meter	3.35	1.222
Figured Bass	3.41	1.121

**Table 26 – General Concept Difficulty, Music Minors**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Scales	1.60	0.894
Key Signatures	1.80	1.095
Intervals	3.20	0.837
Inversion Symbols	3.20	1.095
Notation	3.20	1.095
Rhythm and Meter	3.50	0.894
Roman Numerals	3.40	1.140
Triads and Seventh Chords	3.60	0.548
Figured Bass	3.80	1.304

**Table 27 – General Concept Difficulty, Becoming Majors**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Key Signatures	2.00	0.701
Scales	2.20	0.447
Notation	2.40	0.874
Rhythm and Meter	2.40	1.140
Roman Numerals	2.80	0.837
Intervals	2.80	1.095
Inversion Symbols	3.00	0.000
Triads and Seventh Chords	3.60	0.894
Figured Bass	3.80	0.837

**Table 28 – General Concept Difficulty, Neither Major Nor Minor**

The only consistency between responses is that, of these four different classifications, they all agree on figured bass being the most difficult concept.

As with Section 4, in **Section 5**, the student planning to minor in music gave responses that need not be graphed: parallel keys, relative keys, major scales, and minor scales were all equally ranked as 1, simple intervals were ranked as 2, and both enharmonic keys and compound intervals were ranked as 3. Similar rankings existed only between the music majors and minors. They ranked major scales as 1, minor scales as 2, simple intervals as 3, parallel keys as 4, relative keys as 5, enharmonic keys as 6, and compound intervals as 7. Those planning to major in music gave similar rankings as the music majors and minors, with only two exceptions: relative keys were ranked as 3, and simple intervals were ranked as 5. Those who claimed to be neither majors nor minors ranked the concepts differently. See Table 29.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.40	0.548
Minor Scales	1.80	0.837
Relative Keys	2.40	0.548
Simple Intervals	2.40	0.894
Enharmonic Keys	2.40	1.140
Parallel Keys	2.40	1.140
Compound Intervals	3.80	0.447

**Table 29 – Specific Concept Difficulty, Neither Major Nor Minor**

In this section, compound intervals was the concept most consistently ranked as the most difficult. Although the student planning to minor in music ranked compound intervals as a 3, a 3 was still his highest ranking. As to be expected, major scales was consistently ranked as the easiest concept, followed, just as consistently, by minor scales. The other concepts' scores, obviously, were not as consistently ranked.

### **5.8. Questionnaire Analysis According to Theory Classes**

The questionnaire, as previously mentioned at the beginning of this chapter, was administered to three different levels of theory classes: Essential Musicianship, Theory I, and Theory IV. Of the three class levels, EM consisted of two different sections (taught by two different professors), while Theory I consisted of three sections.

Upon analyzing the questionnaire results, the responses from the EM students will be analyzed in three ways: (1) according to all EM students, (2) according to Professor B's students, and (3) according to Professor C's students. The professors B and C mentioned here are the same ones whose interviews were discussed in Chapter 4.

Although Theory I was taught by three different professors, the class will be considered

as one group. This yields five analyses: (1) all EM students, (2) Professor B's EM students, (3) Professor C's EM students, (4) Theory I students, and (5) Theory IV students.

In **Section 1**, the author found that all the EM students ranked **Concept Order** identically: major scales first, key signatures second, minor scales third, intervals fourth, and church modes fifth. Though different than the EM students' rankings, Theory I and Theory IV students ranked the order identically as well: key signatures first, major scales second, intervals third, minor scales fourth, and church modes fifth. Regardless of the differences, all three levels agree that church modes should be the last concept to be taught.

Remaining consistent in **Section 2**, all the EM students ranked the **Concept Difficulty** identically. But there is an additional consistency: the rankings are the same from Section 1: major scales first, key signatures second, minor scales third, intervals fourth, and church modes fifth. On the other hand, the Theory I and IV students' rankings of the concept difficulty was neither identical to each other, nor to the previous section. Theory I students ranked key signatures as 1, major scales as 2, minor scales as 3, intervals as 4, and church modes as 5. Theory IV students ranked major scales as 1, minor scales as 2, key signatures as 3, intervals as 4, and church modes as 5. The ranking of church modes as the last / most difficult concept has been consistent throughout the analyses (with the exception of the student who was planning to become a music minor).

**Section 3** started with asking students about **Scale Order**. For these students, the majority (at least 70%) prefers that scales be taught one after the other. When asked about taking an **Intensive Course**, approximately half of all the EM students expressed interest,

while more than one third opposed, and few were undecided. The Theory I and IV students were also, for the most part, interested in an intensive course. However, unlike the EM students, more were undecided, and less were opposed to the idea.

With regard to the idea of **Cooperative Learning**, the majority of all theory students were comfortable with the idea. On average, with the EM students, nearly three-quarters (75%) were comfortable with the idea. However, between Professor B's and C's students, more of B's students (83%) were comfortable with the idea than C's students (55%). Though the other theory students tended to be more comfortable with cooperative learning, close to one third (28%) of Theory I students were not interested, while a similar percentage (29%) of Theory IV students were undecided; no Theory IV students opposed the idea.

If given the option to take an **Online Course**, the majority of almost all the classes opposed the idea of an online course. Only in Professor C's EM class, more than half (55%) of the students were interested in an online course, although more than one third (36%) opposed it.

When asked if "**board work**" was useful, all classes gave a nearly unanimous response of agreement, for the exception of Professor B's students. Less than half (47%) agreed, more than one third (35%) were undecided, and others (18%) disagreed.

With the exception of Professor C's EM students and the Theory IV students, students were nearly unanimously in agreement to the helpfulness of the **Circle of Fifths** to aid in key signature comprehension. Just over half (55%) of Professor C's students agreed, while more than a quarter (27%) were undecided. Theory IV students were also

divided: almost half (43%) agreed, almost half (43%) disagreed, and a few (14%) were undecided.

As for **Keyboard Use**, all the classes were just about evenly divided between drawing one and imagining one. One notable difference was Professor C's students and Theory I students: nearly half (45.5%) of Professor C's students reported drawing one; less than half (41%) of Theory I students said they did neither.

As expected, in **Section 4**, all three classes ranked **General Concept Difficulty** differently. Ranked by mean values, each class ranking is summarized in Tables 30 through 34.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Notation	1.90	0.976
Key Signatures	2.21	1.082
Scales	2.28	0.797
Intervals	2.76	1.057
Rhythm and Meter	2.90	1.145
Inversion Symbols	3.07	0.961
Roman Numerals	3.31	0.891
Triads and Seventh Chords	3.45	0.910
Figured Bass	3.66	1.010

**Table 30 – General Concept Difficulty, All EM Students**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Notation	1.78	0.878
Scales	2.22	0.548
Key Signatures	2.39	1.145
Rhythm and Meter	2.72	1.179
Intervals	2.83	1.043
Inversion Symbols	3.11	1.079
Roman Numerals	3.49	0.922
Triads and Seventh Chords	3.50	1.043
Figured Bass	3.72	1.018

**Table 31 – General Concept Difficulty, Professor B's Students**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Key Signatures	1.91	0.944
Notation	2.9	1.136
Scales	2.36	1.120
Intervals	2.64	1.120
Inversion Symbols	3.00	0.775
Roman Numerals	3.09	0.831
Rhythm and Meter	3.18	1.079
Triads and Seventh Chords	3.36	0.674
Figured Bass	3.55	1.036

**Table 32 – General Concept Difficulty, Professor C’s Students**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Key Signatures	1.54	0.756
Notation	1.79	0.951
Scales	1.79	0.957
Intervals	2.23	0.902
Rhythm and Meter	2.36	1.158
Triads and Seventh Chords	2.38	1.016
Inversion Symbols	2.74	1.069
Roman Numerals	2.85	1.226
Figured Bass	3.18	1.211

**Table 33 – General Concept Difficulty, Theory I Students**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Scales	1.71	0.756
Notation	1.86	0.690
Rhythm and meter	1.86	0.690
Key Signatures	2.00	0.632
Roman Numerals	2.86	0.690
Intervals	2.86	1.574
Triads and Seventh Chords	3.00	1.291
Inversion Symbols	3.14	1.069
Figured Bass	3.57	1.272

**Table 34 – General Concept Difficulty, Theory IV Students**

The author continues to find that despite the various rankings, figured bass is consistently the last concept.

Finally, in **Section 5, Specific Concept Difficulty** was ranked. And again, all the classes ranked the concepts differently. Tables 35 through 39 summarize the results by mean values.

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Relative Keys	1.14	0.628
Major Scales	1.90	0.817
Parallel keys	2.07	1.067
Minor Scales	2.28	0.922
Enharmonic Keys	2.70	1.057
Simple Intervals	3.28	0.922
Compound Intervals	3.45	0.870

**Table 35 – Specific Concept Difficulty, All EM Students**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.33	0.594
Minor Scales	1.78	0.808
Relative Keys	1.94	0.998
Parallel Keys	1.94	1.056
Simple Intervals	2.21	0.958
Enharmonic Keys	3.06	1.110
Compound Intervals	3.33	1.029

**Table 36 – Specific Concept Difficulty, Professor B's Students**

<b>Concept</b>	<b>Mean value</b>	<b>Standard deviation</b>
Major Scales	1.55	0.688
Minor Scales	2.09	0.831
Enharmonic Keys	2.27	0.786
Simple Intervals	2.27	0.905
Parallel Keys	2.27	1.104
Relative keys	2.45	1.128
Compound Intervals	3.18	0.751

**Table 37 – Specific Concept Difficulty, Professor C's Students**

Concept	Mean value	Standard deviation
Major Scales	1.33	0.577
Simple Intervals	1.87	0.732
Minor Scales	2.05	0.759
Relative keys	2.59	1.019
Parallel Keys	2.64	1.013
Enharmonic Keys	2.74	1.019
Compound Intervals	3.10	0.946

**Table 38 – Specific Concept Difficulty, Theory I Students**

Concept	Mean value	Standard deviation
Major Scales	1.29	0.488
Minor Scales	1.29	0.488
Parallel Keys	2.00	0.816
Relative keys	2.29	0.756
Simple Intervals	2.29	1.380
Enharmonic Keys	2.86	0.690
Compound Intervals	3.71	1.254

**Table 39 – Specific Concept Difficulty, Theory IV Students**

Again, as different as the rankings were for the other concepts, compound intervals remains the concept ranked as the most difficult.

### **5.9. Concluding Remarks on the Student Questionnaire Results**

Between the groups of students, it may have been hypothesized that the targeted class (EM students) would yield similar results throughout the questionnaire. However, this chapter proves several things. It proves that despite what class the students are enrolled in, despite which professor is lecturing, despite students' instruments, and despite their

genders, so long as there is a variety of students, each with their individual background, the only thing that is predictable is the a lack of predictability.

There will never be a consistency of responses despite what kind of students *tends* to respond a certain way. Indeed, keyboardists may struggle less than other instrumentalists, however, as Professor D pointed in out the oral interview in Chapter 4, keyboardists may fill in the answers to an assignment or test faster, but just because they might be faster does not mean they are more accurate. Answers may be *similar*, but it is highly unlikely that they will be the same. Despite the lack of certainties that exist among how students will respond, the only certainty is the possibility that certain students – depending on what instrument they play or what class they are in – will *tend* to respond in a particular way. What cuts away from the promise of tendency or predictability is the inevitable fact that since everybody is different, so, too, are our learning styles.

## CHAPTER 6

### SUMMARY AND CONCLUSIONS

Although the author has explored four factors that may influence music majors' comprehension of basic music theory, it would be interesting to see the differences in opinion between students and professors responses in the context of concept order and difficulty. The following tables display how the entire population of students' responses compared to those of the professors. In these tables, though concepts are listed according to their reported mean values, the mean values will be omitted, because of the significant differences in the number of those who responded to the questionnaire: four professors and seventy-five students. Concepts are listed as first to last and easiest to most difficult, depending on the question.

<b>Professors</b>	<b>Students</b>
Major Scales	Key Signatures
Key Signatures	Major Scales
Minor Scales	Intervals
Intervals	Minor Scales
Church Modes	Church Modes

**Table 40 – Concept Order, Professors and Students**

<b>Professors</b>	<b>Students</b>
Major Scales	Major Scales
Minor Scales	Key Signatures
Key Signatures	Minor Scales
Intervals	Intervals
Church Modes	Church Modes

**Table 41 – Concept Difficulty, Professors and Students**

<b>Professors</b>	<b>Students</b>
Notation	Notation
Rhythm and Meter	Key Signatures
Intervals	Scales
Scales	Intervals
Key Signatures	Rhythm and Meter
Inversion Symbols	Triads and Seventh Chords
Roman Numerals	Inversion Symbols
Triads and Seventh Chords	Roman Numerals
Figured Bass	Figured Bass

**Table 42 – General Concept Difficulty, Professors and Students**

<b>Professors</b>	<b>Students</b>
Major Scales	Major Scales
Relative Keys	Minor Scales
Simple Intervals	Simple Intervals
Minor Scales	Parallel Keys
Parallel Keys	Relative Keys
Compound Intervals	Enharmonic Keys
Enharmonic Keys	Compound Intervals

**Table 43 – Specific Concept Difficulty, Professors and Students**

Clearly, for a few exceptions, opinions between students and professors differ greatly. Of the sixteen different concepts listed, eight managed to be ranked the same, on average. The fact that half of the concepts were ranked the same could suggest that professors will have a tendency to think differently than their students because of all the experience they have acquired through constant practice. However, it does not change the fact that this just further proves how different professors and students are in their thinking. And further, the author agrees with what these results suggest.

It is difficult to use a survey as a method to explore the comprehension of the fundamentals, especially when there are so many factors to consider: number of students, their primary instrument (and secondary instrument, if applicable), their classification, and so on. All this proves, so far, is that overall, music theory cannot be taught perfectly. Seldom – if at all – will all students agree on which concepts are the most difficult, the easiest, or which should be taught in a certain order. There is no way of telling. All we as music educators can do is do what we think is best given what has already been done and suggested, and work with our students, based on what they know how to do.

So long as there are numerous music educators attempting to improve music education, so, too, will there be that many more textbooks, each offering a different approach, all with the attempt to make one abstract subject as easily understood as possible. All we can do is our best, and we must expect the same of our students. Just like there is no one perfect way to teach, there is, much less, no one perfect way to teach music theory.

**APPENDIX A**

**TEXTBOOK COMPARISON TABLES**

<b>AUTHOR(S)</b>	BENWARD / JACKSON / JACKSON (2000)	DAMSCHRODER (2006)	DUCKWORTH (2007)	GRETZ (1994)	HARDER / STEINKE (2006)	HENKE (2003)
<b>Additional Features</b>	CD-ROM (2 disc set)	CD-ROM, keyboard	CD-ROM, keyboard	None	CD-ROM	None
<b>Keyboard Detail</b>	N/A	4 8ves, note labels, grand staff	4 8ves, note labels, grand staff, guitar chords	N/A	N/A	N/A
<b>No. of Chapters</b>	30 (divided into 4 Parts)	12 (divided into 2 Parts)	14	13	11	10
<b>1<sup>st</sup> Concept</b>	Properties of Sound	Pitch and its notation	Rhythm	The musical alphabet	Time and sound	Sound
<b>Last Concept</b>	Chord symbols and their application to jazz, blues and pop	Meters with half-note beats	Musical form	2-part and 3-part form	Augmented triads	Common chord progressions
<b>CD-ROM Features</b>	Both discs: Listening examples	Listening examples	Listening examples, and interactive activities	N/A	Listening examples	N/A
<b>Key Explanations</b>	W/h-steps; Circle; list of keys	W/h-steps; keys disbursed throughout book	List of keys, their names; Circle	List of keys, Circle	Tips, step-by-step approach; no Circle	List of key, Circle
<b>Passive or Active Exercises?</b>	CD: passive Book: both	CD: passive Book: both	CD: both Book: both	Both	Both	Both
<b>Interval explanation</b>	Scales and w/h-steps	Scales	Scales and w/h-steps	Scales and w/h-steps	Step-by-step	W/h-steps, list of intervals
<b>Order Of Concepts</b>	“Raw materials”, tonality, scales, keys, intervals, triads, rhythm and meter Melody Harmony	Intervals, scales, triads (mixed with pitch / rhythm) Chords and progressions	Notation, rhythm, pitch, Major scales, keys, intervals, Minor keys, scales, other scales, triads, tonality, songwriting	Notation, accidentals, rhythm, major scales Key signs, minor keys, compound meters, intervals Chords, inversions, 7 <sup>th</sup> chords, musical structure / form	Time and sound, pitch notation, time classification note / rest values Time signs, intervals, scales, key signs, triads	Notation, rhythm, major scales, minor scales, intervals Triads, seventh chords, harmony, melody

**TEXTBOOK COMPARISON TABLE**

<b>AUTHOR(S)</b>	<b>HENRY (1999)</b>	<b>HILL ET AL (2005)</b>	<b>KINNEY (2005)</b>	<b>KOLOSICK / SIMON (1998)</b>	<b>KOSTKA / PAYNE (2004)</b>	<b>LYNN (2007)</b>
<b>Additional Features</b>	None	Keyboard	CD-ROM	3½" floppy disk for Macintosh	None	CD-ROM, keyboard
<b>Keyboard Detail</b>	N/A	4 8ves, note labels, grand staff	N/A	N/A	N/A	4 8ves, note labels, grand staff, guitar chords
<b>No. of Chapters</b>	12 (divided into 5 Parts)	10	9	14	28 (first 4 discuss fundamentals)	10
<b>1<sup>st</sup> Concept</b>	Notation of rhythm	Pitch notation	The musical alphabet	White keys of the keyboard	Keyboard and 8ve registers	Staves and clefs
<b>Last Concept</b>	Cadences	Setting text to music	Transposition: reading pitches in the tenor clef	Writing for choirs	Diatonic 7 <sup>th</sup> chords in minor	Figured bass
<b>CD-ROM Features</b>	N/A	N/A	Aural and written exercises	N/A	N/A	Written exercises
<b>Key Explanations</b>	List of keys, no Circle	List of keys, Circle	Step-by-step procedures; Circle	List of keys, no Circle	List of keys; Circle; 3 minor types	W/h steps; Circle; list with scales
<b>Passive or Active Exercises?</b>	Both	Both	CD: both Book: both	Both	Both	CD: both Book: both
<b>Interval explanation</b>	Spatial explanation	Scales and w/h-steps	W/h-steps	W/h-steps	Scales	Scales and w/h-steps
<b>Order Of Concepts</b>	Rhythm notation, pitch notation, keyboard Simple meters, compound meters, major scales / keys, intervals, minor scales / keys Triads, inversions, harmony	Pitch notation, scales / keys, rhythm notation, meter Reading rhythm, intervals, chords, melody / harmony, composition	Music tools, rhythm / meter, scales Keys, modes, intervals, triads. Harmonic function of chords Transposition	White keys on the keyboard, notation, rhythm / simple meter, MIDI, Major / minor / keys, scales / keys, intervals, compound and asymmetrical meter, triads, 7 <sup>th</sup> chords, chord function, voice leading	Elements of pitch Rhythmic elements Triads and 7 <sup>th</sup> chords Major / minor diatonic chords	Notation, rhy / mel exercises – easy Scales / keys / modes, intervals, rhy / mel exercises – intermed. Chords, rhy / mel exercises – hard Transposition, progressions / harmony

TEXTBOOK COMPARISON TABLE, continued

<b>AUTHOR(S)</b>	NELSON / CHRISTENSEN (2006)	OTTOMAN / MAINOUS (2004)	ROIG-FRANCOLÍ (2003)	SOSKIN (2005)	WHITE (2007)	ZINN / HOGENSON (1994)
<b>Additional Features</b>	CD-ROM, keyboard	Keyboard	None	CD-ROM	CD-ROM, keyboard, chord / scale builder card	Keyboard
<b>Keyboard Detail</b>	1 8ve, no labels or notation	3 8ves and M3, key labels, notation	N/A	N/A	4 8ves, note labels, grand staff	All 8ves, only middle C labeled
<b>No. of Chapters</b>	13	23	30 (first 7 discuss fundamentals)	6	11	13
<b>1<sup>st</sup> Concept</b>	Pitch and timbre	Pitch	Notation of pitch	Letter names	Middle C	Properties of sound
<b>Last Concept</b>	Other chords: sixth chords	Chord progressions using I, iv, and V <sup>7</sup>	Twentieth century style	Identifying triads in keys	Form	2-part and 3-part form
<b>CD-ROM Features</b>	Listening examples	N/A	N/A	Written activities	Listening examples	N/A
<b>Key Explanations</b>	W/h-steps; Circle; list of keys	List of keys, Circle	List of keys, Circle	W/h-steps, Circle	List of keys, Circle	"Line" of 5 <sup>ths</sup> ; list of keys; Circle
<b>Passive or Active Exercises?</b>	CD: passive Book: both	Both	Both	CD: both Book: both	CD: passive Book: both	Both
<b>Interval explanation</b>	Scales and w/h-steps	Scales degree relationships	W/h-steps	W/h-steps	Scales, list of intervals	Scales and w/h-steps
<b>Order Of Concepts</b>	Properties of sound, notation, simple meter Scales, compound meter, minor scales, other scales Intervals, chords / harmony, form Score reading	Pitch notation, the keyboard, note construction and value, major scales, beats, simple / compound meter, major key signatures, minor scales, minor keys, intervals, triads, keyboard harmony	Notation / intervals, rhythm / meter Scales / keys, transposition, species counterpoint Triads / 7 <sup>th</sup> chords, labeling chords, musical style	Note names / clefs, rhythm / meter Major scales, intervals Minor scales, triads	Pitch, rhythm, simple meter, compound meter Keyboard, major scales / keys, intervals Minor scales / keys, chords, harmonic system, harmonizing, composition	Properties of sound, rhythm, meter, Scale structures, major / minor / pent. Intervals, more scales, keys, triads Tonality, cadences, form, harmony

**TEXTBOOK COMPARISON TABLE, concluded**

## **APPENDIX B**

### **THE QUESTIONNAIRE**

### STUDENT QUESTIONNAIRE for ESSENTIAL MUSICIANSHIP

Please place the following concepts in the order that you think they should be taught

(e.g., 1 = first, 2 = second, and so on).

- Intervals
- Major scales
- Minor scales
- Key signatures
- Church modes

With the same five concepts, how would you rank them in order of difficulty

(e.g., 1 = easiest; 5 = hardest)?

- Intervals
- Major scales
- Minor scales
- Key signatures
- Church modes

Should major and minor scales be taught one after the other, or separated by different topics (e.g., major scales – intervals – minor scales)?

Circle one: One after the other / Separated

If an intensive fundamentals course was offered during the summer semester (summer camp), would you be interested in taking it, as opposed to taking Essential Musicianship during either the Fall or Spring semesters?

Circle one: Yes / Undecided / No

Would you feel comfortable with students tutoring other students in class as a form of cooperative learning in the classroom, rather than relying only on the professor to teach?

Circle one: Yes / Undecided / No

If given the option, would you prefer to take this course online, rather than in the traditional classroom setting? Circle one: Yes / Undecided / No

When the professor engages the class in “board work” – in which each student goes to an individual part of the blackboard and solves the problem as dictated – do you find this a useful method of applying what it learned?

Circle one: Yes / Undecided / No

Does the concept of the Circle of Fifths clarify your comprehension of key signatures?

Circle one: Yes / Undecided / No

Do you picture a keyboard in your head to help you with assignments or tests, or do you prefer to draw one?

Circle one: Picture in my Head / Draw a Keyboard / None of these

**Rate the difficulty of the following general concepts (1 = easiest; 5 = most difficult):**

Notation (treble, bass, and C-clefs):	1	2	3	4	5
Rhythm and Meter:	1	2	3	4	5
Scales:	1	2	3	4	5
Key Signatures:	1	2	3	4	5
Intervals:	1	2	3	4	5
Spellings of Triads and 7 <sup>th</sup> Chords:	1	2	3	4	5
Inversion Symbols:	1	2	3	4	5
Figured Bass:	1	2	3	4	5
Roman Numerals:	1	2	3	4	5

**Rate the difficulty of the following specific concepts (1 = easiest; 5 = most difficult):**

Enharmonic Keys:	1	2	3	4	5
Parallel Keys:	1	2	3	4	5
Relative Keys:	1	2	3	4	5
Major Scales:	1	2	3	4	5
Minor Scales:	1	2	3	4	5
Simple Intervals (up to an 8ve):	1	2	3	4	5
Compound Intervals (larger than an 8ve):	1	2	3	4	5

What is your primary instrument? \_\_\_\_\_

Does your primary instrument serve your progress in music theory positively, neutrally, or negatively? (Circle one) Positively / Neutrally / Negatively

What is your secondary instrument if you have one? \_\_\_\_\_

What is your gender: Female / Male

Are you (circle one):

- (a) Music Major
- (b) Music Minor
- (c) Plan to Become a Music Major
- (d) Plan to Become a Music Minor
- (e) Neither

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## VITA

James Harvey Hickey was born in Laredo, Texas, on October 21, 1981. The youngest of four children to John and Conchita Hickey, he was enrolled in private Catholic school for both grade school and high school in his hometown, beginning with Mary Help of Christians. Upon graduating in 1996, he attended St. Augustine High School and graduated 18<sup>th</sup> in his class in 2000. He attended Texas A&M International University (TAMIU), also in Laredo, and graduated *Summa Cum Laude* with a Bachelor of Music degree with All-Level Certification in 2004. He pursued a Master of Music degree in music theory at Texas State University-San Marcos and graduated in 2006.

Among his credits, he presented a poster summarizing his thesis at a poster session with the College Music Society. He published three reviews in the *South Central Music Bulletin*, a peer-reviewed journal. Before earning his Bachelors degree, he placed first in the Arts and Literature Division of the annual TAMIU Undergraduate Conference, where he presented a paper discussing the elementary music education methods of Carl Orff and Zoltán Kodály. He is also an active member of the Texas Music Educators Association and the South Central Chapter of the College Music Society.

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