A CAPPELLA EAR TRAINING

A METHOD FOR UNDERSTANDING MUSIC THEORY VIA UNACCOMPANIED HARMONY SINGING

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FOREWORD TO STUDENTS EMBARKING ON AET COURSE

You will be aware by now that participating in this course involves two activities that are not normally combined in university subjects, that is, class work involving exercises and written assessments, and performance as an ensemble.

This is a natural manifestation of the philosophy behind the course; that of putting theoretical information to immediate practical use, thereby eliminating the barriers that seem to exist between core music subjects such as theory, aural skills and practical performance skills.

I have found over my years of teaching that students tend to become very assessment focused and often lose sight of the big picture, that is, that the information learnt in these subjects is in fact different aspects of the same thing, music for performance.

More specifically, the practice of a cappella singing promotes the development of an inner sense of tonality and hones the practical understanding of how harmony works by requiring the performer to find notes without the machinery of an instrument, instead, finding the notes with their own internal framework and in relation to notes sung by others.

Singing the inner parts in harmony is the best way to deepen your understanding of the workings of music. You will find that performing in a group without instruments has an impact on your sense of ownership and responsibility for the performance that will have a positive flow-on effect on your performance on your specific instrument, enhancing your listening skills overall.
TEACHERS’ INTRODUCTION TO AET LESSON PLANS

During the first session, it is necessary to get some idea of what kind of voices are in the group. If all the students can’t identify as a soprano, alto, tenor or bass then I find it useful to separate the genders and have them sing a scale, perhaps from G3 and upwards for the females. My experience with the males is that they often have only a vague idea about what their vocal range may be, if any, so I might start with G3 and step down the scale until most of them drop out around G2 or F2, and then go up from G3, hopefully still having some singing at E2.

In initial sessions and perhaps some subsequent ones, I get students to sing notes given from the piano and then drop or raise them an octave. This not only helps them to get to know their range, but being comfortable with an octave change can help them with their ability to check interval recognition in their aural skills classes, for instance, if they hear a minor 7th they might want to transpose the lower note up an octave to see if it then sounds like a major 2nd.

*Exercises from any lesson plan may be performed in any other lesson depending on student efficacy and time restrictions. Exercises become less numerous as course advances to leave time for rehearsal of repertoire.

It is assumed that a teacher embarking on AET has a basic working level of piano, singing, and jazz and pop harmonic knowledge.

Scales

Each session begins with notes sung from a scale written on the white board. I start with major scales and then progress through to various types of minor scale and modes if appropriate. This activity consists of students first singing the scale using numbers then singing the notes as they are pointed to.

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1 2 3 4 5 6 7 1 1 7 6 5 4 3 2 1
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This can be done in various ways – the notes chosen can form diatonic chords, or they can be chosen for the difficulty they present as intervals. For instance, I have often found that leaping to the 6th can present difficulties for students, or leaping down to the 2nd. I encourage them to keep the sound of 1 firmly in their minds and to use it to check other notes – the 2 is a good example of a note that can be found reliably by finding 1 first. I usually find that the students enjoy this exercise and continue to find it challenging as the semester goes on and I seldom dispense with it until the very end of semester, if at all. It is the first step to building the personal sense of tonality, which is one of the main goals of the method.
Another way to use the scale is to have some students drone on the 1 while the rest sing the scale. If they have never experienced part-singing before this is an easy way to start. It can also be useful in the first session to start with a round or some kind of drone song.

Still on the subject of scales, any kind of scale can be sung returning to 1 after each degree. Students often find it helpful to name the intervals as they do this.

I also use this technique with the chromatic scale. Time is spent in every session on the chromatic scale, as I believe it is essential for the sound of a semitone to be absorbed in order to pitch unaccompanied harmony, particularly the more complex harmony used in jazz.

After hearing the students sing a chromatic scale for an octave all together without the piano, I will have them sing it again while I play the scale starting on another note, starting with something happily consonant, like a major 3rd, and progressing through the weeks to more challenging intervals and chords. I may split the group into two or more groups and have them sing it in parts. I split the group in to two and have one group drone on the start note while the others sing the scales. One of the most useful and enjoyable activities is having the students sing a note each of the chromatic scale. It forces them to sing along silently (another useful skill for aural testing) and to transpose the relevant note by an octave if it is not in their range.

Chord Work

Scale work feeds neatly into chord work, as the class is guided into recognizing which chords come from any given scale. Arpeggios are also useful for beginner harmony singing, as different inversions sung together automatically create harmony. Not all students find it easy to sing inversions, especially vocalists, who sometimes regard a root position arpeggio as a very short tune rather than a broken chord, and need a lot of guidance towards always hearing 1 as 1, 3 as 3, etc.
Along with arpeggio singing there are the chord building exercises. Splitting the class into groups and having them sing a 1, 3 and 5 and then adding 7ths thus creating a chord, builds their sense of harmony and their awareness of how any part they may be singing is contributing to the harmony. I often do this with a maximum of four students at a time so I can check on their progress more acutely.

**Chord Progressions & Voice Leading**

The next step on from creating chords is creating chord progressions. I generally start with cadences, having each group singing either the root, 3rd or 5th and figuring out firstly whether their note will change and if it does, what it logically, using small intervals, should change to. I find it is usually best to pick a key so that they can think of particular chords and notes rather than dealing with numbers for this exercise. Of course, the numbers are reinforced as we go. I start with the most common progressions I-IV-V-I, I-vi-ii-V-I or I-vi-iv-V, I-IV-I-V, starting with triads and adding 7ths later. The first repertoire pieces are often examples of tunes that use these progressions.

**Melody Singing**

Part of the assessment is to sing a melody unaccompanied. I look for melodies that use arpeggios or devices such as continually returning to a chord tone, as for example in Rodgers & Hart’s *Bewitched*:

As well exploring the intricacies of the melody, we will sing the root notes while hearing the melody and vice-versa. The chord progression will also be sung as arpeggios. The purpose of this exercise is to encourage the students to hear the harmony mentally as they are singing the melody.

**Repertoire**

A major feature of the A Cappella Ear Training course is the learning of repertoire without using notation. Several of my arrangements are simple and repetitive enough for the students to be taught without recourse to visual representation. I often guide them towards figuring out their own parts by giving them a start note and using voice leading to complete the phrases, having written the chord progression up on the board.
This method of learning also encourages them to internalise the form of the song as well as the harmony.

They also learn two or three pieces per semester using notation. I always write the chord symbols in on the chart so that they can see what position the notes they are singing hold in the chords.

I will also sometimes use a combination of these methods, getting them started on a section of the arrangement before handing out charts for them to read.

**Assessment**

The students are assessed as a group for their two performances during the semester. In iterations of the course to date there has been credit for attendance and participation/engagement in class, as well as a written reflection on the class and what has been gained from it.

I also assess them individually in 5-10 minute blocks. This is where they are required to sing the melody set for unaccompanied performance, and also sing the root notes of the song while I play it on the piano.

They are tested on several drills that are practiced in class –

- Singing an arpeggio in inversion, in harmony with the piano
- Singing the required type of 3rd between 1 & 5, and adding the required type of 7th.
- Singing a logical voice leading part in a simple chord progression such as I-vi-ii-V, from a given starting note.
10 LESSON PLANS FOR AET
AET Lesson 1

Sing the notes of the major scale using the numbers 1 to 7

Consider how the tonic chord is made out of the scale notes 1, 3 and 5.

The following is a sequence in which the scale notes may be pointed to, beginning with the tonic chord and moving on to notes either side of the 5th and eventually the 7th. Continue using the numbers.

Sing the major scale returning to 1 after each interval, still singing the numbers.

Divide the class into 2 groups and have each group try singing the tonic as a drone while the others sing the scale.
Practise octave leaps from random notes, using the students' comfortable vocal ranges.

Split the group into 3 and have them sing the major triad. Then have the middle part move to make the chord minor, back to major and then to a sus4 chord. Swap parts so all can try this.

Sing the chromatic scale together using a neutral syllable such as "lah".

Split the group into 2 and have each try droning the start note while the others sing the scale again.

Sing the triad arpeggio using numbers, starting with root position and continuing with 1st and 2nd inversions. Have the students sing a different inversion to that played on the piano.
Play an open 5th on the piano, one note a time if necessary. Have individual students sing a major or minor 3rd to make a chord. Then add a 7th, perhaps starting with a major 7 and changing it to minor.

Round singing is a good way to start for inexperienced part-singers. This is just an example of many well-known rounds that may be used. Once the group knows the tunes securely they can be split into 3 groups in order to enter 2 bars apart. Discuss the harmonic reason why rounds work, the repetitious underlying chord progression.

The following is a Russian folk melody, The Birch Tree. After the class learns to sing the melody in unison, a drone note can be added, enabling the students to experience the sound of all the intervals thus created.
AET Lesson 2

Sing the notes of the major scale using the numbers 1 to 7

Discuss how the notes of the Major 7 chord can be found in the major scale.

The following is a sequence in which the scale notes may be pointed to, beginning with the tonic chord and moving on to notes either side of the 5th and eventually the 7th. Continue using the numbers.

Sing the major scale returning to 1 after each interval, still singing the numbers.
Divide the class into 2 groups and have each group try singing the tonic as a drone while the others sing the scale.

Practise octave leaps from random notes, using the students' comfortable vocal ranges.

Split the group into 3 parts and have them sing a major triad. Have the middle part move down a semitone to change to a minor triad, back to major, then up to create a suspended 4 chord. Swap parts and repeat.

Continue with this exercise this time having low part rise by a semitone to create a diminished triad. Return to major triad, then ask upper part to rise by a semitone to create an augmented triad.

Sing the chromatic scale together using a neutral syllable such as "lah".
Split the group into 2 and have each try droning the start note while the others sing the scale again.

Sing a dominant 7 arpeggio in root position. Have the students sing it again while the 1st inversion is played on the piano. Continue with all combinations.

Play an open 5th on the piano, one note a time if necessary. Have individual students sing a major or minor 3rd to make a chord. Then add a 7th, perhaps starting with a major 7 and changing it to minor.
"LEAN ON ME"
I find that most students have heard this song before. Sing the melody together.

Then ask the students to sing a harmony starting from the 3rd above the first melody note.

A third part can be added below the melody starting on the 4th below the melody note. They need to follow the exact contour of the melody.

The harmony in this song is not as straightforward as it first appears. When the bass notes are added the character of the chords and some slash chords are revealed.
Adding the bass part turns it into a feasible A Cappella arrangement. Often I have used this song only as an initial step towards singing in harmony, but I have also used the full song as part of the repertoire.
AET Lesson 3

Sing the notes of a mixolydian scale using the numbers 1-7.

Discuss the way in which the dominant 7 chord is found in the scale.

The following is a sequence in which the scale notes may be pointed to, beginning with the tonic chord and moving on to notes either side of the 5th and eventually the 7th.

Continue using the numbers.

Sing the mixolydian scale returning to 1 after each degree, using the numbers.
Divide the class into two and have each sing a drone on 1 while the others sing the mixolydian scale.

Practise octave leaps from random notes, using the students' comfortable vocal ranges.

Split the group into 3 parts and have them sing a major triad. Have the middle part move down a semitone to change to a minor triad, back to major, then up to create a suspended 4 chord. Swap parts and repeat.
This is the same drill as lesson 2. You may wish to divide the class into smaller groups to make sure individual students can demonstrate the skills.

Continue with this exercise this time having low part rise by a semitone to create a diminished triad. Return to major triad, then ask upper part to rise by a semitone to create an augmented triad.

Sing the chromatic scale together using a neutral syllable such as "lah".
Split the group into 2 and have each try droning the start note while the others sing the scale again.

Sing the chromatic scale again, this time with each student singing the notes in turn, one note of the scale each.

Sing a dominant 7 arpeggio in root position. Have the students sing it again while the 1st inversion is played on the piano. Continue with all combinations.

Play an open 5th on the piano. Have the students sing the major 3rd, then the dominant 7.
Do the same exercise in several new keys.

Sing the following cadences, root notes first, then all parts, swapping so everyone sings all.

REPERTOIRE

Complete the learning of "Lean on Me". Have the students sing the A section learnt last week, in which the melody is harmonised in a mostly parallel fashion.

In the second A section, a soloist sings a slightly different melody while the group repeats the first A section using an accompanying "doo" syllable.

Then there is a B section, in which the group sings in unison for the first 2 bars, splitting into harmony for the next 2 bars. If any of the male singers can sing the low E, the last two bars of the bridge can be taken down an octave.

For ease of remembering the arrangement, I have used a A,A2,B,A,A2,B,A form for this song, utilising the two other verse lyrics.
when you're not strong, and I'll be your friend, I'll help you care

doo, doo doo doo doo etc.

very on, for it won't be long that I'm gonna need

some-body to lean on,

You just call on me brother when
The part beneath the melody in this song is a good example of how notes from the pentatonic scale are often used in major key harmony to create passing chords. A completely parallel part in this position would lead the singer to non-chord tones. The C to A downward path avoids the leading note sounding where it is not useful in the harmony. This is an important skill which when learnt and understood, leads to the ability to harmonise spontaneously.
AET Lesson 4

Sing the notes of a natural minor scale using the numbers.

Discuss the way in which the minor 7 chord is found in the scale.

The following is a sequence in which the scale notes may be pointed to, beginning with the tonic chord and moving on to notes either side of the 5th and eventually the 7th.

Sing the natural minor scale returning to 1 after each degree, using the numbers.
Split the group into 2 and have each try droning the start note while the others sing the scale again.

Sing the chromatic scale together, then in turns.

Have the students sing the same scale again and play a chromatic scale on the piano from another starting note, for instance a major 3rd away.

Play a tonic note and ask the group to sing a major 3rd above it.
Add the 3rd on the piano and ask for the 5th.
Add the 5th on the piano and ask for the 7th.
Vary the chord from Major 7, to minor 7, to dominant 7.
Discuss the familiar chord progression I-vi-IV-V-I with the students. Sing the root notes together.

Sing the diatonic triads from the roots, then sing in parts. Choice of register is not important at this point; students should sing where they are comfortable.

**REPERTOIRE**

*Stand By Me (Ben E. King)*
If not all students are familiar with it, listen to the original Ben E. King performance.
Begin by having all students sing the bass line. (In a register that is comfortable for them)
Designate three other groups besides bass singers and ask them to find the necessary notes for A major. Have each part ascertain whether or not their note needs to change for the F# minor chord. Similarly for each successive chord, have them think about whether their note needs to change, and if so, what to using the principal of small intervals/steps.
Sing the melody over the top, then ask for a student volunteer to act as soloist. The verses can be shared between a number of soloists.

I made a variation to the rhythm in the chorus since the progression is the same. There is an Asus4/E chord in the last bar, for 'turning around' back to the A chord.

Full arrangement available.
Sing the major scale together, using numbers

Sing scale returning to 1 after each degree. Practice slowly then increase speed.

Point to notes for students to sing, still using the numbers. Following is an example order:

Sing the chromatic scale together, then in turns.
Have the students sing the scale again while you play it on the piano from another starting note, for instance, a perfect 5th away.

Divide class into 4 groups and build a major 7 chord, asking them to find 3, 5 & 7.

Have the students move chord up by a semi-tone on cue, back to starting chord, then down by a semi-tone.
Hymn: "All Glory Laud and Honour"

Students may need to be guided through scale degrees in different octaves before starting.
Sing melody using scale numbers.
Do the same with the other parts, starting with the bass part.

All Glory, Laud and Honour

Theodulph of Orleans, ca. 820

Melchior Teschner, ca. 1615
Ask the students to identify the chords and their inversions.
This task can also be set as an assignment.
Sing through each part with the class, using numbers, then allocate parts and try singing in 4 parts.
Preparation for this can include singing melody & bass part only, or any combination of parts.
AET Lesson 6

Sing the dorian scale using numbers.

Sing scale returning to 1 after each degree. Practice slowly then increase speed.

Divide the class into 2 and have each try the scale while the others drone on 1.

Discuss the way in which the scale contains the minor 6 chord.

Divide the class into 4 groups and build the chord from the root note.
Sing the chromatic scale together, then in turns.

Have the students sing the chromatic scale again while you play it on the piano from another starting note, for instance, a major 6th away.

Split the group into 4 parts and have them build a dominant 7 chord from the root. Ask those singing the 3rd to make it into a minor 7 chord. Ask those singing the 5th to make it into a minor 7 flat 5 chord. Ask those singing the 7th to make it into a minor 6 chord.
Harmony Writing and Singing.
Discuss which notes from the melody are chord tones and which are passing notes.

Discuss the adding of one harmony part. Can it be consistently a third away from the melody? Where are the places that this won't work? What are the implied passing chords? Are they diatonic?

Discuss the adding of a third part to the existing two. Note how in bar two, 5,6 and 1 are used and the leading note avoided to better sound the notes of the chord and the overall tonality.

This activity can be set as an assignment, and practiced in subsequent weeks with different examples so as to consolidate the necessary skills.
REPERTOIRE

"TO MAKE YOU FEEL MY LOVE" (Bob Dylan)

Write the chord symbols for the first 6 chords on the board. Guide them towards finding the nearest note that fits the next chord, and the next. Divide the group into 3 parts in the wide voicing indicated for the G chord.

\[\begin{array}{ccccccc}
67 & G & D & Dm & C & Cm & G \\
\end{array}\]

You may also wish to discuss what other chord progressions may fit with the same bassline.
Learn the introduction to the song, noting inversions and slash chords. Note the common pop style substitution for the V chord, the IV over V chord.

Sing the lead line yourself before appointing a soloist. The A sections of this song can easily be learnt without notation but you may want to hand out the arrangement for the purpose of learning the B sections.

Full arrangement available.
AET Lesson 7

Sing the natural minor scale using numbers.

5 Sing the natural minor scale returning to 1 after each degree, using the numbers.

The following is a sequence in which the scale notes may be pointed to, beginning with the tonic chord and moving on to notes either side of the 5th and eventually the 7th.

24 Sing the chromatic scale together, then in turns.

28
Sing the chromatic scale returning to the start note after every interval. The names of the intervals may be sung while singing this exercise.

Choose a simple, common chord progression, such as I-VI-V-I. Ask students first to sing the root notes.

Then ask them to sing the triads in root position.
Allocate starting notes from the chord to 3 groups. Have them think about whether or note their starting note is in the next chord in the progression. If it is, they will repeat it. If not, ask them to consider what is the closest note from the next chord to the one they are presently on. Continue this exercise for the whole progression.

Try the same exercise starting on different inversions so that all students experience different voice leading parts. Eg.

This exercise can be extended by adding the dominant 7 to chord V.

MELODY FOR SOLO (UNACCOMPANIED) PERFORMANCE

Play melody on piano for students after handing them copies of song.

Note compositional features of melody - constant return to the C while outlining chord progression with alternating notes.

Also note phrase shapes and repetitions both in A and B sections.

Sing melody together, then sing bass line notes as specified (including slash chords) in lead sheet.
AET Lesson 8

Sing the notes of a mixolydian scale using the numbers 1-7.

Sing the mixolydian scale returning to 1 after each degree, using the numbers.

Divide the class into two and have each sing a drone on 1 while the others sing the mixolydian scale.

The following is a sequence in which the scale notes may be pointed to, beginning with the tonic chord and moving on to notes either side of the 5th and eventually the 7th. Continue using the numbers.
Sing the chromatic scale together, then in turns.

Have the students sing the same scale again while playing notes making up a major triad.

Sing a dominant 7 arpeggio in root position. Have the students sing it again while the 1st inversion is played on the piano. Continue with all combinations.

Discuss simple 12-bar blues chord progression and sing root notes.
Sing arpeggios in root position throughout the progressions.
Discuss the way in which ‘guide tones’ work. 3rds lead naturally to 7ths and vice versa. Have the whole class sing one then the other, then try it in harmony with root notes on the piano.

Many blues tunes could be sung accompanied by this representation of the chord progression with the addition of finger clicks on beats 2 & 4, for instance, "Going to Chicago" (Basie, Rushing & James).

If your students have any jazz harmony knowledge, you may make your way in increments to this version of the progression:
AET Lesson 9

Sing notes from a major scale, using scale numbers, for example:

1 2 3 5 etc.

Sing the chromatic scale together, then in turns.

Sing the chromatic scale returning to the start note after every interval.
The names of the intervals may be sung while singing this exercise.

minor 2nd, major 2nd, etc.

23
Have the students sing the scale again and start from 2 notes making a chord on the piano in harmony, sing

B♭7  B7  C7  C♯7  etc.

Play

Split the group into 4 and form a dominant 7 chord in this common piano voicing.

Practice moving the chord up and down by semitones on cue.

Choose a simple chord progression such as I-vi-ii-V-I
Sing the root notes together.
Then ask them to sing the triads in root position.

Allocate starting notes from the chord to 3 groups. Have them think about whether or note their starting note is in the next chord in the progression. If it is, they will repeat it. If not, ask them to consider what is the closest note from the next chord to the one they are presently on. Continue this exercise for the whole progression.

Try the exercise from different starting inversions so that all students sing all voice-leading parts. This exercise can be expanded with the use of appropriate 7ths in the chords. The root notes can be played on the piano or sung by students.

REPERTOIRE

The next piece of repertoire is a jazz tune, "No Moon at All" (Evans/Mann). It features a descending chromatic bass line. The A sections are in 3 parts with the sopranos singing the melody. In the B section a soloist features, leaving 3 parts to accompany. The B section features 'rootless voicings' but the root notes are prominent in the melody so it is not so difficult for the singers to 'hear' the changes. The notation for this piece is presented to the class from the start.
No Moon at All

S.  
61  
\(\text{Bm}\)  
doo doo doo doo ah no moon at all, don't make a sound,

Bar.  
61  
\(\text{F}\)  
what a night! e - ven light - ning bugs have dimmed their light,

B.  
61  
\(\text{A}^\#\)  
it's so dark! e - ven fi - do is a - fraid to bark,

64  
\(\text{E}\)  

doo doo_____ doo doo_____ doo doo

64  
\(\text{E}\)  

doo doo_____ doo doo_____ doo doo

64  
\(\text{E}\)  

doo doo_____ doo doo_____ doo doo
stars have disappeared from sight and there's no moon at all.
what a perfect chance to park and there's no moon at all

doo doo doo doo ah all
doo doo doo doo da doo
da doo doo doo doo doo doo
doo doo doo doo doo doo doo
doo doo doo doo doo

doo doo doo doo ba da____
doo doo doo doo

ba da____
Lesson 10

Sing the chromatic scale together, then in turns.

Sing the chromatic scale returning to the start note after every interval. The names of the intervals may be sung while singing this exercise.

minor 2nd, major 2nd, etc.

Have the students sing the scale again together whilst filling out a chord that includes the note, for instance a diminished triad. I like to vary the position in the chord of the sung notes. In this instance I have the group singing the middle note.
Split the group into 4 and form a dominant 13 chord in this common piano voicing.

On cue, move the chord up and down by semitones.

Now try a rootless voicing, a dominant 9 chord. Play the root on the piano, and have the students find the 3rd, 7th and 9th.

On cue, move the chord up and down by semitones, first with roots on piano, then without.
The following is the B section for "No Moon at All". Have the entire class learn the melody before continuing to the parts. This is important because the melody consists of the basic triads, and this will facilitate the learning of the rootless voicings.

should we want at-mos phere or in-spi-ra-tion dear...

da dup ba da da dup ba da da dup ba da da...

one kiss will make it clear that to-night's the night and bright moon-light might bright moon-light might

da da da da da da

B.
The following is the tagged ending for "No Moon at All". It features more rootless voicings, which are better practiced with root notes on the piano initially. Note that the chord symbols are provided so that students can know how the notes in their parts colour the sound.
no moon at all

no moon at all

dup da
dup da