

A cappella ear training: Bringing theory and aural skills together via singing in a jazz program environment

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Abstract

As jazz study has become an established branch of the tertiary music landscape, disquiet has arisen in some quarters about the “mechanical” way in which improvisation is taught. This study examined the ways in which singing in an a cappella harmony group affected the improvisational abilities of tertiary level jazz students. Over three semesters, students participated in a method developed by the author known as “A cappella Ear Training” (AET). AET was used to test the author’s assumption that learning to sing in harmony with other voices and without recourse to the mechanics of any instrument would improve the ability of the students to internalize the theoretical information with which they were being presented in all areas of the course. The research used a qualitative approach, and drew on data generated through participant-observation and interview techniques. Students were observed throughout the course, with the author making field notes on the practice of the class session. Further interviews with some participants were conducted to ascertain the students’ perception of the AET approach. Analysis of the data confirmed that AET enabled the development of a theoretically informed practice whereby the participating students came to recognize concepts in practice and performance.

Keywords: A cappella, ear training, harmony, improvisation, jazz, musicianship, theory.

Background

As an instrumentalist I have always mediated between the notes on the page and my instrument by singing. In a very direct operational way, I have always found it difficult to play any tricky passage on the instrument without being able to sing it first. Of course, singing is the manifestation of what one hears; the aural image is important for the eventual production of the music.

The musical community and even the community at large seems to hold a perception that one either plays by ear or doesn’t; either reads music or doesn’t. In practice, this issue is far more nuanced. Nolet (2007) articulates this view: “When music literacy and orality are perceived not as a dualism but rather, as a dialectic, both musical literacy skills and orality skills are strengthened, for the purpose of enhancing the overall musicianship of the learner” (p. 33).

This paper seeks to position the A cappella Ear Training (AET) method as a rejection of the dualism of ear or eye, and suggests that the two are mutually supportive. When applied to jazz instruction and learning specifically, the function of AET to reinforce theoretical concepts aurally provides a powerful mechanism for learning and performing jazz.

In the popular imagination, jazz musicians are often perceived to be musically uneducated in the formal sense, playing “what they feel”. This is of course an un-helpful simplification. Prouty (2006) points out that the jazz masters were not always as theoretically uneducated as people like to believe, and that the tradition has been handed down using various types of one-to-one instruction, listening, and notated methods, or a combination of these—“(Charles) Mingus, in fact, was known for regularly teaching his band members their parts by singing

them, while at other times he relied on notated scores" (p. 5).

The AET method came about in response to what I saw as shortcomings in the way music is generally taught. Theory and ear training are seldom presented in an integrated way so that students see that they are facets of the same thing. This phenomenon is by no means limited to the jazz education field. It also appears that ear training itself is falling victim to rationalization in all kinds of music education. As something that is quite labour-intensive to assess, it is falling by the wayside, along with other similar educational practices (Penny, 2010).

Literature review

Audiation is the term used by Gordon (1999) to describe the difference between merely hearing sounds and being able to understand those sounds within a musical framework or syntax. Audiation also describes the reverse process; that of hearing sound as one looks at the printed page: "To notationally audiate, we need to transcend the printed symbols and audiate the music that the symbols represent. Just as aural perception is different from audiation, so the process of decoding notation is different from notational audiation" (Gordon, 1999, p. 42).

There is little literature directly related to the use of singing in promoting strong musicianship for adults. The AET method bears similarities to the methods of Kodály, in that the voice is used as the means of absorbing musical information in preparation for transferring that knowledge to instrumental musicianship. Kodály (1974) exhorts music students to sing in choirs, particularly the middle parts, to improve musicianship. Hiatt (2006) and Rawlins (2006) discuss the necessity of holding an "aural image" in order to crystallize the notes to be learnt on an instrument. Many authors writing in non-jazz settings have posited that ear playing ability has a positive effect on general musicianship, sight-reading and independent musicianship (Colwell, 1992; Ketovuori, 2015; Luce, 1965;

McPherson, 1995). Johnson (2013) writes, "Common to the understanding of most instrumental, choral, and music theory teachers, singing is where it's at for developing musicianship" (p. 68).

Many musicians writing from the perspective of jazz and contemporary music advise that this aural image idea, and the use of singing to solidify it, is central to becoming a fluent improviser. Graham English (2006) talks about singing bringing learning into the body and changing the information from something you know, to a part of your identity. This is akin to the "knowing that" as opposed to "knowing how" described by Helding (2014); "know-how is bound to the body" (p. 229). Donelian (1992) advocates for the use of singing in aural training as a fundamental aspect of jazz training:

The place to start working is with listening and singing (or tapping, for rhythm), which are physical actions, in conjunction with theory, which is cerebral action. When theory is joined to the physical action of singing, (or tapping), a complete grasp of the music is created. (p. 14)

Writing on the subject of teaching jazz theory aurally, Swann (2000) notes: "The primary question, then, is how the jazz educator can integrate aural skills and theory training. The answer is through singing" (p. 4). Bernhard (2002) extends this reasoning further:

At a time when support for comprehensive musicianship is prevalent in the profession (e.g., MENC, 1994), vocalization is an important instructional strategy for instrumental music educators to embrace. Based on this collection of research, vocalization activities, particularly when related to tonal understanding, may promote instrumental performance achievement, as well as musical comprehension. Thus, while developing and maintaining quality instrumental performing ensembles, teachers may enhance musical learning and foster the development of complete, independent musicians. (p. 33)

In tertiary jazz education, which began relatively recently in the 1960s (and the 1970s in Australia), debate has arisen about students discovering their individual voice as an improviser. In his appraisal of collegiate jazz programs in the USA, Javors (2001) found that:

Collegiate jazz programs have often been charged with functioning as factories in producing very proficient musicians who rarely assume an individual voice or creative style, a deficiency that is diametrically opposed to the essence of jazz. (p. 67)

Many argue that the prevailing scale/chord theory that is taught at institutions leads to hordes of players that sound the same. Bass player Adam Nitti (2004) writes of the difference between playing from learned theory and playing “what you hear”:

In making our choices of what notes to play (or to avoid), we rely mostly on the fundamental “rules” of chordal improvisation. As a result, we tend to develop what I call “default” ideas that can be used over many common progressions... Although this is an effective way to be introduced to the art of improvisation, improvising only by “playing the math” ultimately leads to a dead end in your development. If you want to be a great improviser, you need to learn how to play what you hear—and this level of development doesn’t naturally evolve from matching memorized patterns to chords. (p. 92)

This assertion bears investigation, because most of the heroes of the Jazz canon did not learn their craft at universities, but instead by listening to their own heroes. The rise of jazz coincided with the availability of recorded music enabling learners to make a close study of the performances of players they wanted to emulate. This means of study requires some aural skills and there is general agreement in the literature (Azzarra, 1993; Crook, 1999; Dobbins, 1980) that improved aural skills lead to better improvisation skills. This theory puts aural learning at the centre of jazz education, or at least places it side by side with the theoretical knowledge gained. Blake (2010) brings it to bear on the question of developing an individual voice as an improviser, positing: “Putting the ear, rather than the fingers (technique) or the brain (theory), at the center of your musical learning is the key to forming a truly personal style” (p 2).

Within the jazz education literature there is an as-yet small sub-branch dealing with scat singing, which is expected from vocalists within the jazz world. Singers have no option to resort to

musical machinery in order to “find” notes—they must understand pitches in relation to harmonic organisation. As Weir (2015) highlights:

jazz singers have a much greater need for advanced ear training than instrumentalists; they have no button to push that will manufacture an altered dominant scale. In other words, players can play things that stem from their cognitive understanding and technique, whereas the nature of a singer’s instrument requires them to hear everything that they sing. (p. 30)

This aural understanding is in essence what I wish to guide instrumentalists towards. Weir (1998) says “the fact that singers must ‘hear’ everything they sing is both a challenge for them and also a blessing: they are more naturally connected to their innate musicality” (p. 72). I would posit that rather than formulating a separate approach to improvisation instruction for vocalists and instrumentalists, all musicians would benefit from the connection to the “innate musicality” of which Weir speaks. Kodály (1994) advises that singing without instruments promotes true and deep musicality, enabling students to develop as musicians before they concentrate on becoming instrumentalists.

Method

I investigated the foregoing assertions regarding the importance of singing for ear training with students in an undergraduate jazz course offered by a private education provider, where I was employed as instrumental tutor and ensemble director. The institution had a focus on tonal, “straight-ahead” jazz, requiring lyrical, melodic improvisation, rather than modal or post-bop styles, making it a logical fit with the “play what you hear” ethos. Students were offered the class as an elective within their Bachelor course. Students enrolled for different reasons—some had sung in choirs before and had enjoyed the experience. Several 3rd-year students enrolled because aural skills classes ended after 2nd year and they were aware that they needed help to keep developing the skills. Some vocalists enrolled because they

thought it would be easy (not having necessarily yet recognized the challenges of understanding pitches in relation to harmonic organisation as outlined by Weir), and some, who I would describe as my initial target group, were instrumentalists who recognized that unaccompanied singing would test their aural abilities.

For the first two semesters the class was timetabled for one hour per week. Later in the project, it was made into a higher credit point course and was doubled to two hours. Each class consisted of drills and exercises related to basic theoretical and chord knowledge, plus rehearsal of repertoire for end-of-semester performance. In this way, the class is unique, in that it is a class with attendant assessment that also has an ensemble performance outcome.

The AET method requires an instructor who is confident of their aural perception and comfortable with chords including extended chords and voicing methods. Both my piano playing and my singing have their limitations, but overall I have the skills to both participate in and oversee the thorough learning of harmonies and musical concepts. The styles of music tackled are generally not the kind that require conducting—my role in the group has been to sing either alto or tenor parts, supply a “cut-off” at the end, and sometimes play a percussion shaker.

Students at this school are required to write a 500-word essay for every course they take as part of their end-of-semester assessment. I used these essays to gather data, as well as setting up an anonymous Survey Monkey survey, perhaps my most objective source of feedback, which 19 people (over three semesters) completed. In addition, I recorded a semi-structured interview with seven of the students over the three semesters. I surveyed nine university lecturers engaged in aural skills teaching in jazz and contemporary music courses around Australia, seeking answers regarding the importance of ear training, how they used singing in their teaching and assessment, what methods or texts they were using and how they define the

term “musicianship”. I conducted semi-structured interviews with two experienced jazz educators. Human ethics approval was obtained for these activities. Throughout the process I kept a journal, reflecting on how well things worked or how they were received by the group. Assessment tasks were developed and adjusted over the three semesters, and the performances were recorded.

I made a lesson plan for each lesson and adapted these as the semester progressed according to the response of the students. Each group had a different gender make-up. My first miscalculation was that I would be able to use many of the a cappella arrangements that I had written over the years for other groups. I was forgetting that a high percentage of the students in most jazz courses is male, meaning my ensembles had what is the opposite situation from most choirs—a preponderance of males. I had to immediately get to work on new arrangements tailored for the cohort!

I began to write arrangements that addressed specific issues in music, such as descending bass-line harmony and rootless chord voicings, and made an analysis of several of my arrangements, looking at the learning outcomes of each and the different teaching methods used.

Each semester the group learnt at least one song without the use of the notated arrangement. This forced them to use their aural skills and memory, for example, every time a new section started they had to think about what their starting note was, which I encouraged them to understand in the context of the chord and the overall progression, as well as in relation to the last note sung. One of the benefits of this choral activity for most students is that they experience a more direct style of performance than they do with their instruments in their hands. As always, when notation is dispensed with, more attention can be paid to group dynamic and performance detail, as well as the students gaining a holistic ownership of the material.

The learning of material without notation was not part of my original plan. I added chord symbols to my notated arrangements so that a student at any

stage could check what the place of their note was in the chord. This in itself is not something that is usually a focus of choir singing, although I would argue that it should be if the singers are to develop their musicianship. Throughout the three semesters however, I experimented with different degrees of notation, for example, some songs were learnt with the guidance of a lead sheet, so that students could be led, using conventional voice-leading skills, to figuring out what their part should be, knowing what the chords were. This approach also gives the students a good opportunity to study the melody and how it outlines the chords. I used this method to teach my arrangement of *Sweet Georgia Brown* (Bernie/Pinkard/Casey, 1925) starting out by singing the melody using scale numbers from the root of the chord in order to facilitate this understanding. Using a repetitive rhythmic figure, the students could figure out their own parts using voice leading skills—this works well with the song because the chord progression largely uses dominant 7th chords in a cycle. In the more complex turnaround sections I taught them my arrangement by rote, but, again, with the chords in front of them on the lead sheet, the notes can be made sense of in a theoretical way.

A more repetitive song, such as *Stand by Me* (King/Lieber/Stoller, 1961) can be learnt without any notation, since the commonly-used I-vi-IV-V chord progression is consistent throughout the verses and choruses. Textural differences can be made to differentiate the sections, and by using the “soloist backed by ensemble” method, a group can have this song ready to perform in half an hour.

Although the AET course was delivered in a jazz context, I started the semester with pop and folk music because of their comparatively simple harmonic material, working up to a jazz arrangement towards the end of the semester. Due to the complexity of the harmony, a cappella jazz is difficult even for experienced choral singers, so it was logical to start out with simpler and in some cases, more familiar, material. My contention is that unaccompanied harmony singing is an efficient way to bring theory to life in any style.

A strategy that I have been using myself over the past 15 years, which I have used as part of the AET method, is that of learning to sing through the root notes of a song along with the melody. As someone who is comfortable at the piano, I can sing the melody whilst playing the root notes, and once secure with that, sing the root notes whilst playing the melody. I find that once I can do this I can hear my way around most of the changes. This activity is recommended by Dylan Bell (2013), who is writing in the jazz vocalist training space:

In my classes, I found it helpful to have the vocalists sing the roots to each chord. Vocalists are naturally attuned to hearing melody, but are not always accustomed to hearing bass notes or root movement, and singing bass lines helps strengthen the understanding of a harmonic progression. Having some vocalists sing the roots, and others the melody, all a cappella, is especially useful. (p. 40)

I used this activity as assessment for AET. I also formalized a set of ten lesson plans, detailing the drills and exercises used along with some repertoire examples.

Results and discussion

This was highly qualitative research, in that students did not supply before and after samples of their improvisational ability. There is some agreement that such things are difficult to quantify; as Madura (1995) states: “there appears to be little agreement on the number and types of measurable descriptors of jazz improvisation achievement” (p. 48). In any case it was beyond the scope of this project to pursue quantitative accounts of the performances. The results detailed below are from the students’ own thoughts and perceptions about their understanding and ability.

For the purpose of collating the responses several headings that emerged from the reading of the data are used to order the following.

Listening

This was one of the most commonly used words among student responses. As discussed previously,

listening and hearing are different things as far as a practising musician is concerned (Gordon, 1999). While I didn't speak of these concepts specifically to the students, some of the responses spoke to the issue of hearing things within a musical framework, echoing Gordon's thoughts about audiation: "I now have better skills at being able to listen more analytically to melody and transcribe it rather than guessing what the next note might be." This idea is central to the AET ethos.

When jazz players speak of listening on the bandstand, they are referring to the central jazz skill of taking in what other musicians are doing and being able to respond appropriately. Students of jazz are often thinking so hard about how to deal with the musical materials in hand that they hardly have the cognitive capacity to also listen for what the other members of the ensemble are playing. The a cappella context is an ideal one in which to develop this skill, as each member of the group is acting as accompanist to the other members, and notes can only be pitched in relation to each other.

I asked the students, "Do you think that your aural perception has improved after a semester of AET? If yes, how?" Amongst the answers were these: "yes, I'm more aware of other parts within an ensemble and *listen more outside of myself*" (emphasis added); "I'm just more aware in any situation really, which is a pretty big thing"; "It's very good to be able to know what you're singing as well as being able to listen at the same time."

Confidence

Another commonly used word in the data gathered was "confidence". Again, the word is being used in more than one sense. For some respondents it is in reference to actual performance anxiety. Of course, many of the instrumentalists were not confident singers when they began the course, and most felt that their singing confidence increased. Additionally, many also felt, in the words of one, "a more confident approach to performance" in general. One of the benefits that I hadn't foreseen was the ability to

demonstrate by singing during band rehearsal. This facility was mentioned by a drummer and a pianist as being one of the valuable outcomes of AET. One student interviewee, a brass player, said: "I believe it has had a good impact on my confidence in performance... performing in front of a live audience twice per semester using an instrument that is not my main and is reasonably new to me. Performing with only the voice gives you nothing to hide behind... A small amount of comfort is felt when singing with a choir however as you are not the only one with nothing else but your voice."

The other kind of confidence frequently mentioned was aligned with the acquisition of aural skills. As students brought their knowledge of theory and their aural skills closer together, they felt more confident when improvising: "you learn to trust your own ear."

Related to confidence are the concepts of "trust" and "responsibility". After a few weeks of rehearsals and particularly after their mid-semester performance, most students realized how crucially they relied on one another, and a stronger sense of camaraderie was evoked, perhaps a stronger one than they had experienced in instrumental ensembles before: "ultimately, in the AET class, it's everyone's job to be sort of doing everything"; "singing in a group like this has also increased the amount of faith I place in other musicians"; "I felt there was an unspoken trust that was created for everyone to do their part correctly and blend to create a good sound."

Theory rendered into sound/ integration of skills

A central aim of AET is to bring theoretical knowledge to practical life by singing. Several students spoke on the subject of understanding one skill in the light of the other: "I appreciate the fact that harmonic concepts in this class were explained very simply. It also helped that these concepts were then immediately realized through singing and listening." The effect is to solidify all knowledge gained: "It has helped me

join theory and sound together in my mind"; "[it] has reinforced what I have already learned." Additionally, "integration" was mentioned more than once, for example: "overall it was a very enjoyable experience for the group who had fun leaning how to work as a team whilst integrating their aural skills and vocal abilities."

Inner tonality

This phrase or something like it was mentioned at least 20 times. By teaching the students to relate the diatonic notes of a key with one another aurally, the process of reading the notes became not just a mechanical business of placing one's fingers in the right place at the right time, but a process in which the music was heard internally before being reproduced instrumentally. "I think it's...more intrinsic, in that it is you who is learning it and you're becoming familiar with the sounds as opposed to the instrument, where the instrument is creating the sound and you're a witness to that." Participation in this kind of choir has special benefits for those who play single note instruments, one of whom noted: "after singing in a choir setting with harmonies I feel much more aware of the actual notes I am playing and not just placing my fingers in certain ways to produce a sound." As mentioned previously, the ability to sing a passage is a necessary pre-requisite to playing it, in my own practice. One student affirmed this: "the voice is the middle ground between the ears and instrument."

Reading and memorisation

Interestingly, a couple of students linked the process of learning by singing with memorization, or an increased ability to retain musical information: "When I use my voice I tend to retain the information of the music more easily." In the jazz context, this is supported by Blake (2010):

Memory is the skill that enables us to turn listening into repertoire and stylistic preferences into part of an actual style. Aural long-term

memory is the foundation of the trained ear, and the trained ear is the basis of building a style, and of the methods presented in this book. (p. 7)

Learning arrangements without the use of notation has become one of the central tenets of the method. One student speaks of the benefits: "While some of the tunes we sang had sheet music provided, in several cases (we) were each given a chord tone to sing, and worked through the progression as a class, figuring out the best way to voice-lead through the harmony. I found this incredibly beneficial. Singing and listening our way through the tunes was the best possible way to learn them...I recognized straight away how much stronger my understanding of the harmony was when we learnt tunes this way."

The singing of root note movement is another thing that contributes to the memorization or internalization of tunes. An assessment task for AET students is to sing a tune unaccompanied and then sing the root notes while I play the melody on the piano. Several students commented on how this activity enabled them to learn repertoire more thoroughly. One brought the reading and hearing activity together, noting: "While singing parts this semester I have started to take note of what I have sung before and if I can use that information in different sections to find notes that are not as easy to hear. This has made my sight singing better but also allowed me to see more relationships that lie within the tunes."

It is perhaps somewhat ironic that in this class the students have the opportunity to improve their reading and at the same time learn whole songs without using notation at all. The class activity that most affects reading ability is the exercise involving singing with scale degree numbers. This is a variation on the solfège idea and enables students to hear diatonic notes before singing them. As one student noted, "It is without question that I can say that I found that my sight singing abilities had improved by the completion of the course."

Musicianship

When I began my research I found some disturbingly incomplete definitions such as this one from the Cambridge Advanced Learner's Dictionary (2013): "a person's skill in playing a musical instrument or singing: *The sheer musicianship of this young woman is breathtaking.*"

In subsequent reading I have seen "musicianship" and "aural skills" used almost interchangeably which does not seem entirely satisfactory either. Priest (1989) articulates the complexity of the problem: "Like sportsmanship, seamanship—or intelligence, musicianship tends to represent a collection of behaviours which can be demonstrated in a way which is recognized by those who have it, but which is difficult to define in a way acceptable to all" (p. 176).

I asked my university aural teacher respondents to give their definitions, the most comprehensive answer being this one: "Musicianship is the ability to negotiate all aspects of music-making, such as technical facility, aural awareness, interpretation of notation, and improvisational skills, in order to synthesise them into creative, meaningful musical expression."

"Musicianship" was mentioned by 18 of my student respondents even though it was not used in any of the questions. A response representative of several comments was: "I feel that my aural ability and general musicianship is at a heightened level, I feel that I am now also better equipped to be a valuable and contributing member to any ensemble situation."

Improvisation

The integration of knowledge along with increased confidence both aurally and as a performer that students mentioned would in my view naturally improve the fluency of improvisation skills. I asked a direct question on this theme: "Do you think that participating in AET has had any effect on your improvisation skills?" There were several "not yet" responses to this, implying that they felt that it might happen in the future. In the words of one student: "By developing my ear this

class has allowed me to hear better lines within my improvised solos ... although my progress is slow I am learning to bring out those sounds on my guitar as I hear them in my mind's eye."

Concluding remarks

My initial target group was instrumentalists but it was interesting to note how the demands of a cappella singing were experienced differently by vocalists and instrumentalists. Vocalists often approach music from an almost entirely emotional stand point and in this situation they had the opportunity, and the need, to think clearly about how to find specific notes in context, which gives them a great starting point as improvisers, given that they have no option of using the mechanical, cognitive method.

The general idea of AET can clearly be applied in settings other than that of the jazz school and I am keen to see the method used in different settings, making the necessary adjustments. In a contemporary music/pop music course, for instance, repertoire could be more integrated between facets of the overall program and the AET course than I was able to achieve within the jazz program.

Whilst the results did not strongly support my initial assumption that learning to sing a cappella would improve improvisation skills, they did in fact demonstrate a range of benefits across a number of skills including reading, memorization and the integration of theory and practice. Other benefits which I had not envisaged also emerged, such as a greater awareness of balance between parts and increased rehearsal skills due to improved singing prowess. There was general agreement that aural skills were improved by the course, which as previously stated, is commonly held to be beneficial for improvisation skills. It was difficult, not surprisingly, to draw the participants out on concepts which, for me, crystallized over a long period of time, and finding the right questions to ask was one of the most challenging parts of the project. Since the conclusion of this project I have

formulated a further semester of lesson plans for AET that more explicitly facilitate improvisational outcomes, but this has yet to be trialed at the institution.

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