

Teaching Pitch Internalization Processes

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Most music educators would agree that one of the primary goals of aural skills training is to develop in students the ability to recognize and understand musical relationships with “the mind’s ear.” That is, we strive to teach students to *internalize* pitches and pitch relationships. By internalize, I mean the ability to mentally create or recreate auditory images without singing, playing, or otherwise outwardly reproducing the pitches.¹ Yet most of the strategies traditionally used to teach both aural skills in general and dictation skills in particular rely exclusively on ex-

¹Edwin Gordon (*Learning Sequence and Patterns in Music*. Chicago: G.I.A. Publications, 1977) uses the term *audiation* to describe essentially the same idea that I invoke with the term *internalization*. However, there are several important differences between our respective approaches to teaching the concept. Gordon’s audiation begins with a wider range of concepts, activities, and objectives than does pitch internalization. For example, audiation includes the aural understanding of key relations, modes, tonality in its broadest sense, and rhythm and meter. Audiation also begins with pattern recognition and recall. In short, the focus of audiation from its earliest stages of development is the apprehension of tonal and rhythmic patterns within a larger context such as a key or mode. In this way, from the outset, context is a crucial to the learning process. Although pitch internalization also ultimately strives for an intuitive understanding of musical events within larger contexts, its more immediate goal is to teach students how to develop the ability to access imagined pitches. Internalization seeks first and foremost to teach the *process* of creating or recreating pitches in one’s mind. Once this has been achieved, students can begin to incorporate larger patterns and contexts into the learning process.

ternal sound sources.² This reflects the tacit assumption that students can learn to internalize musical relationships through exercises and drills that exclusively utilize external sound.

In this paper I will: 1) consider some of the reasons why the use of external sound sources remains so prevalent in aural skills instruction; 2) examine some commonly-used aural skills teaching strategies that are based on the assumption that instruction with external sound sources will result in internalization; 3) propose strategies for determining early on which students are likely to struggle with or fail to translate external sound sources into pitch internalization; and, 4) suggest several approaches designed to teach internalization more directly, approaches that can be used in conjunction with more traditional instructional techniques.

FACTORS CONTRIBUTING TO THE OVER-RELIANCE ON EXTERNAL SOUND SOURCES

Pedagogical tradition aside, there are numerous reasons underlying the reliance on external sound sources for aural skills instruction, perhaps the most obvious of which is that music is an aural phenomenon. If the goal of aural skills training in the broadest sense is to help students to better understand the music they hear and play, external sound sources would seem a logical and even necessary point of departure. Moreover, many of the widely-accepted aural skills instructional techniques and strategies in use today that rely exclusively on external sources have long and proven histories of success in teaching average and above-average music students. For these students, experience over time with such sound sources usually results in the ability to internalize pitches and pitch relations.

²The authors of two recently published aural skills manuals encourage students to utilize auditory images in the execution of various perceptual tasks: see David Damschroder, *Listen and Sing: Lessons in Ear-Training and Sight-Singing* (New York: Schirmer, 1995); and Arthur Gottschalk and Phillip Kloeckner, *Functional Hearing: A Contextual Method for Ear Training*, (New York: Ardsley House, 1997). However, they do not attempt to systematically teach internalization skills and appear to assume that all students are already proficient at pitch internalization even before they begin formal aural skills study.

Perhaps the most compelling—though least pedagogically justifiable—reason for the exclusive use of external sound sources is testing: how else can one measure a student's progress? In order to gauge a student's ability to internalize pitch relations, it is necessary to evoke from the student a testable response. Typically these responses are either notated, sung, or played on an instrument. While the evaluation of students' progress is essential to the timely and logical presentation of gradually more advanced aural concepts, it is important to be clear about precisely what we want our tests to accomplish.

Most tests are designed to assess students' progress in one or more areas of competence, although tests can also be used as instructional tools that require the student to synthesize skills, thought processes, and information that may have been presented or learned independently. Still, testing should not be the primary means of instruction, nor should instruction be compromised for the sake of testing. Unfortunately, both of these scenarios are all too common in aural skills classrooms, where over-reliance on testing is a real danger. One particularly glaring contradiction inherent in the exclusive use of external sound sources is that while students are ultimately tested on their ability to internalize pitch relations—via dictation, sight singing, error detection exercises, etc.—they rarely are taught specifically how to master this skill. Rather than teaching internalization directly, instructors assume that it will develop indirectly and largely on its own. In the absence of such direct instruction, all classroom activities become, in effect, a series of tests. Should we not first teach the skills that we will later test?

TRADITIONAL APPROACHES

The following is a small sampling of commonly-used aural skills tasks that reveal the pervasiveness of the assumption that the exclusive use of external sound sources develops pitch internalization skills. The focus will be restricted to some of the more rudimentary activities, since it is here that so many of the difficulties that students experience at all levels of aural skills study originate. Later, I shall offer some alternative approaches to beginning aural

skills tasks that more directly incorporate pitch internalization into the learning process.

In the broadest sense, dictation exercises test three different skills: 1) the ability to remember what was played without analyzing or interpreting it; 2) the ability to identify the pitches and rhythms played, and to understand their relationship to other events in the exercise; and 3) the ability to notate what was heard. Typically, students must perform all of these tasks silently. That is, they must internalize the pitches and pitch relationships. The first two skills will be the primary focus of the ensuing discussion.

One of the first considerations in setting up a dictation exercise is whether or not to establish the key, a task that is more complex than it might on the surface appear to be. Establishing a key is not merely the identification of the tonic note; rather it entails grasping the entire nexus of relationships that combine to create the perception of a single pitch as the tonic. If the key is given, it can be established in a variety of ways: by playing a short chord progression, a melodic pattern, a single chord, or perhaps simply by playing the tonic note itself. All of these strategies require the student to internalize external sounds and then mentally recreate the rest of the relationships inherent in the key just to set up the exercise. If the student already has difficulty with pitch internalization, s/he will not be able to construct the necessary contextual framework. Since the fundamental activity in performing musical dictation is a comparison of what is known with what is unknown, the absence of a key context precludes such comparison and undermines the student's chances for success.

Other means of establishing the key involve the student more actively. For example, the class can sing a chord progression, the tonic chord, or the tonic pitch. However, having students sing a given pattern does not guarantee that they can accurately mentally recall or access it in the absence of singing.³ More importantly, since students often are not allowed to sing during a dictation exercise—let alone during a public performance—establishing the key by having the students sing is, at best, an indirect preparation for the task of internalizing what they hear.

³This idea is considered in greater detail further in the ensuing section.

It might also be desirable *not* to establish the key prior to an exercise. This approach tests the student's ability to determine the key based on the content of the exercise. Specifically, it requires the student to hypothesize a tonic pitch based on cues contained in the example, and then to compare the rest of the pitches in the exercise to the tonic—no mean feat for someone who might have difficulty accessing even a single imagined pitch.

Determining the starting pitch of an exercise is among the most important and, for some students, the most difficult aural skills tasks. We have all seen student dictation papers wherein the failure to correctly identify the starting pitch virtually eliminates any chance for success. Without knowledge of the starting pitch, the student is usually unable to identify any other pitch in the exercise because the proper key orientation is missing.

Some instructors try to compensate for student weaknesses by providing starting pitches, assuming that in time the students will no longer need to be given such information. However, in providing the initial pitch, we tacitly tell the students not to worry about deciphering this information: since they know that the starting pitch will be provided for them, they don't bother to practice how to determine it for themselves. More importantly, instructors miss the opportunity to *teach* the students how to identify the starting pitch. Often the result at later stages of study, when the starting pitch is no longer provided, is that students spend an inordinate amount of time trying to figure out the starting note because they were never taught how to do so.

Other clues intended to assist the students include the placement of reference pitches at strategic points throughout an exercise. Again, if the student cannot mentally recall these pitches between playings, they will be of little use. These are just a few of the many examples of rudimentary exercises that require students to internalize pitch relations, but which fail to actively teach the process of internalization. With the exception of tonal memory drills—wherein the goal is not identification or analysis, but simply the recall of a given pattern—all dictation exercises that exclusively utilize external sound sources require students to be able to internalize pitches and pitch relations.

IDENTIFYING STUDENTS FOR WHOM PITCH INTERNALIZATION IS LIKELY TO BE PROBLEMATIC

Recent research in auditory imagery suggests that creating or recreating music in one's mind uses similar neuronal processes as perceiving music with one's ear, but the latter appears to be substantially easier than the former.

Although performance varied considerably across individuals, all subjects reported that—with more or less difficulty—they had been able to generate the song internally during the imagery task. . . . In keeping with our previous experience with similar tasks, the imagery condition was significantly more difficult than the perceptual condition (all but two subjects performed better on the perceptual task).⁴

Given the potential differences in students' ability to internalize pitches, it is important to identify as early as possible those students for whom pitch internalization already is or is likely to be a problem. The following are strategies that have proven to be effective in uncovering student difficulties: Ask a student to imagine a pitch, and then to sing the pitch when certain that they can do so. When the student sings a pitch, ask if it is the pitch the student was imagining. I have received responses to this question ranging from 'Yes, it was the pitch I imagined,' to 'No, it was a different pitch,' to 'I can't tell if the pitch I sang was the same pitch I imagined.' For those students who accurately sing the pitch they imagined, pitch internalization is not likely to be problematic, since they have already figured out how to access their "inner ear." For the others, particularly those who cannot tell if what they sing is what they hear mentally, unless they are taught to recognize and reproduce what they are hearing, it will be much more difficult to develop the ability to internalize pitch relations.

The importance of this first step in the internalization process—learning to imagine and access a single pitch—cannot be over emphasized. Experiments conducted by Hubbard and Stoeckig reveal

⁴Robert J. Zatorre, et al, "Hearing in the Mind's Ear: A PET Investigation of Musical Imagery and Perception," *Journal of Cognitive Neuroscience* 8/1 (January 1996): 29.

that it takes less time to imagine a single tone than it does to imagine a chord.⁵ This suggests that some imagery tasks may be more complex than others. In light of this, it is likely that the difficulties encountered by those students who struggle to internalize isolated pitches will increase dramatically as the complexity of the course content increases.

Sometimes students can actually sing a melodic pattern, such as a major scale, with relative ease, yet they may not be able to mentally recreate or access the auditory image of the same pattern.⁶ This can be confirmed with the following exercise: Direct a student first to sing a major scale, then to mentally recall individual notes within the scale, and finally to sing scale degrees at various points in the mental hearing process. For example, direct the student to recall the first three scale degrees and then to sing the fourth degree. Even though the student may readily be able to sing the first four scale degrees in succession, s/he may struggle or not be able to sing the fourth scale degree without the benefit of having sung the preceding three.⁷

⁵Timothy L. Hubbard and Keiko Stoeckig, "The Representation of Pitch in Musical Images," in *Auditory Imagery* (Hillside NJ: Lawrence Erlbaum Associates, 1992).

⁶I often begin with a major scale because most students are reasonably familiar with its sound, regardless of their musical experience or background. More important, research suggests that there is a strong link between auditory imagery and *subvocalization*, which will be considered more fully in the section on alternative strategies. Subvocalization can take several forms. It occurs when one initiates the physical motions necessary to create a particular sound, but stops short of actually producing the sound. Alternatively, one might silently pronounce a sound or series of sounds, say "do-mi-sol," and *listen* with the "inner ear" to this reproduction by the "inner voice." The idea here is that the physical changes occurring in the vocal chords, lips, tongue, etc., provide kinesthetic cues that can facilitate recalling a sound. By starting with a familiar pattern, such as a major scale, the students can utilize the physical sensations associated with singing to help access their inner ear.

⁷This suggests one plausible explanation for why some students can be reasonably competent with sight singing and yet struggle with dictation. In sight-singing exercises, the student provides essential pitch references in the form of external sounds which are absent in dictation exercises, where the student must mentally supply the pitch references.

ALTERNATIVE STRATEGIES

Let us now consider some specific strategies for developing pitch internalization. Clearly there are many techniques available, and this discussion is not intended to be exhaustive. Although some of these techniques can be employed at any level of instruction, most of them are designed to develop skills that will provide the foundation for later study. As such, they are most appropriate for the early stages of aural skills training.

After employing some of the techniques discussed earlier for identifying those students for whom pitch internalization is potentially problematic, the focus shifts to the task of recognizing and retaining a single pitch (usually the tonic). The way in which sounds—either imagined sounds or sounds perceived via the ear—are recalled involves one of two processes. First, externally generated sounds provide direct access to the short term memory. The listener can simply recall the means through which the sound was presented—the piano, another person's voice, etc. Second, if the sound is to be imagined without first being perceived via the ear, the listener must provide some form of covert articulation or subvocalization in order for the inner ear to "listen" to it.⁸ This covert articulation may take the form of the listener imposing on the to-be-imagined (TBI) pitch a particular instrumental timbre, the sound of someone else's voice, or the sound of their own voice. There are potential advantages to the student imagining her/his own voice as the mode of presentation. The information provided by the physical cues associated with actually singing the TBI pitch can help the students to recall the target pitch. Smith, Reisberg, and Wilson hypothesize that the motor plan—whether realized or not—necessary to reproduce the TBI pitch in effect "loads" the inner ear in much the same way that external sound loads the short term memory store.

⁸The following discussion of the use of subvocalization in teaching pitch internalization is based on David J. Smith, Daniel Reisberg, and Meg Wilson, "Subvocalization and Auditory Imagery: Interactions Between the Inner Ear and Inner Voice," in Daniel Reisberg, *Auditory Imagery* (Hillside NJ: Lawrence Erlbaum Associates), 1992.

Students who report difficulty in accessing and singing an imagined pitch often can improve significantly by *initiating* the process of singing the imagined pitch, but not actually doing so. By paying attention to the changes taking place in planning to sing, these students report greater success in recalling and accurately reproducing the imagined pitch. After the class establishes the key by singing a major scale as many times as is necessary for everyone to become thoroughly familiar with its sound, ask individuals to sing the tonic pitch, making sure that those students who struggled with the earlier mental imaging exercises get a chance to sing the tonic note. Direct the students to imagine the tonic, asking them to confirm that they can, in fact, hear it. If any student cannot mentally recall the pitch, repeat the entire process until s/he can do so. Occasionally, even after singing the scale several times, a student is still unable to retain the tonic. While the rest of the class sings the scale, direct that student to quietly hum the tonic pitch, paying particular attention to the physical sensations associated with singing the pitch. This is typically sufficient to enable the student to recall the pitch.⁹

Once all of the students are confident that they can mentally hear the tonic pitch, play a short melodic pattern in the key established at the outset of the exercise, but one that does not include the tonic note. The students confirm that they have retained the tonic by singing it either on a neutral syllable or on "do."¹⁰ Little by

⁹Admittedly, the task of retaining the tonic pitch has as much to do with tonal memory as it does with auditory imagery. However, memory tasks such as this are very helpful in developing imagery skills and teaching students to access their inner ear.

¹⁰Diana Deutsch suggests that decrement in pitch memory is not simply a matter of limited storage space in a general memory store, nor the result of attention distraction. Rather, she posits that there exists a specialized system for pitch memory. She describes this system as a "lateral inhibitory network," wherein each new pitch introduced inhibits memory of the immediately preceding pitch. This hypothesis offers a plausible explanation for student reports of being "overrun" by too much information during dictation exercises. Tonic retention drills of the sort described here aim at helping students minimize the distracting effect of each newly introduced pitch. See Diana Deutsch, "Memory and Attention in Music," in *Music and the Brain: Studies in the Neurology of Music* (London: William Heinemann Medical Books, 1977).

little, the length and complexity of the melodic patterns increase until, finally, the pattern contains cadential figures that suggest another tonal center. Since the students' only task is to remember a single pitch, they should be able to retain the original tonic even with the implication of a new key area. The students should practice these types of distraction exercises on their own until they can direct their attention toward other events taking place in the music and still recall the tonic note at any time.

When the class can successfully recall the tonic on demand, the students are asked to recognize where in a short melodic pattern the tonic note occurs. At first, the pattern may need to be as brief as two notes. As the students become more proficient, the exercises get longer, culminating with the addition of meter and the students being required to place the tonic in its proper metric and rhythmic position. This, of course, is a variation on the common strategy of providing notated reference pitches throughout an exercise, only the references are now in the student's mind rather than on the page.

By now the class is ready to return to the task of mentally listening through the major scale. Even those students who previously struggled with this exercise tend to have greater success the second time around, because their original referent—the tonic note—is more firmly established, and because they have been shown how to practice accessing internalized pitches. When the students can imagine the entire major scale, they are guided to mentally locate and then sing various scale degrees, and eventually combinations of scale degrees. This exercise will later serve as the basis for interval identification drills.

When a student makes a mistake, another student is asked to identify which scale degree was actually sung. At this point, the original student is directed to recall the nearest reference to the desired scale degree. If s/he "gets lost," they are to return to the tonic and start over again. If they cannot find the tonic, another student sings the tonic note for them and entire process begins again. In this way, the student is not given the answer, but rather is led through a process that will allow her/him to uncover the answer on their own. Ultimately, the process is transferable from context to context, the answer typically is not. Given that mistakes are quite common at this stage, it is easy to keep the class engaged, since the students are

responsible for monitoring each other's responses to ensure accuracy.

Scale degree identification exercises can be expanded to include pitch patterns of varying lengths. For example, one student can recite a three- or four-note pitch pattern in solfège syllables, scale degree numbers, or note names that another student is then asked to sing. Since the student who composed the pattern is responsible for detecting any errors in the singback, s/he must also know what the pattern sounds like. Students often discover on their own which melodic combinations are easier to hear mentally and which ones are more challenging. This exercise can fruitfully be reversed as well, with one student singing on a neutral syllable a pitch pattern that another student must then identify. Again, the rest of the class is monitoring for errors. Finally, harmony can be added to the exercise, with students creating pitch patterns that reflect an underlying harmonic progression. This lays the foundation for the introduction to improvisation.

Pitch pattern drills can also be used expressly for error detection, while reinforcing internalization skills. For example, the instructor—or, later in the term, one of the students—writes a series of solfège syllables on the board. The class is directed to internalize the pattern. Once they have the pattern in their mind's ear, the melody is played with one or more notes changed. The students must first sing the pattern on the board, then sing what was played, and finally identify where the error(s) occurred and the errant note(s).

I mentioned earlier that starting pitch identification, a skill which few aural skills texts require students to perform, is often left up to the students to develop on their own. Once again, auditory imagery studies provide compelling research that can be applied in the design and presentation of exercises that teach starting pitch identification directly. In an experiment in which subjects were asked to identify a target pitch as soon as the pitch became loud enough to detect, Farah and Smith found that subjects could better identify the target pitch when instructed to imagine the same frequency before the target pitch was actually played.¹¹ In short, subjects per-

¹¹M.J. Farah and A.F. Smith, "Perceptual Interference and Facilitation with Auditory Imagery," *Perception and Psychophysics* 33 (1983).

formed better when the imagined pitch and the target pitch were the same, and performed poorer when the imagined pitch and the target pitch were different. Moreover, performance was better when subjects imagined the pitch prior to the target pitch being played, rather than imagining it concurrent with the playing of the target pitch.

The following exercises utilize Farah and Smith's findings.¹² Establish the key through internalization drills such as imagining a major scale, scale degrees, or pitch patterns. Since most dictation melodies at this juncture in the aural skills sequence begin on some member of the tonic triad, tell the class that the starting pitch will be one of two members of the tonic chord —say, the root or third; later, all three chord tones can be incorporated. Direct the class to mentally hear either the root or the third of the tonic triad. Play one of the two tonic chord members and ask the students to compare the note they are imagining with the one played. If a student responds incorrectly by saying, for example, that the two pitches are different when they are in fact the same, ask the student to sing the pitch they are imagining. Typically, the student realizes at this point that the two pitches are the same. As the students become more proficient with this drill, increase the level of difficulty by expanding the registral range of the pitches played.¹³

Other exercises that are somewhat more advanced include having the students imagine two different members of the tonic triad in alternation, and then deciding which of the two is being played.

¹²I assume that at this point the students are able to recall the tonic note on demand. If they cannot, I return to exercises that develop their ability to retain and recall the tonic note, and reinforce strategies for practicing this skill on their own.

¹³The strong connection between subvocalization and pitch internalization discussed earlier provides a plausible explanation for why pitches in more extended ranges are more difficult to internalize. Since the student cannot physically sing the pitch to-be-imagined, s/he cannot impose her or his voice on it, a tack which may represent the student's principal means of internalization. Drills of the sort discussed here can minimize student difficulty in hearing pitches outside of their vocal range, particularly if the student is encouraged to impose other carriers on the TBI pitch, e.g. an instrument, or another person's voice.

Students can also be asked to imagine a member of the tonic triad and then locate its position in the chord as it is played on the piano. This task is especially challenging in that it requires the student to mentally isolate the members of the chord. Still, it lays the groundwork for more sophisticated listening tasks that will be encountered later in the term, such as identifying inverted triads. Finally, when doing sight-singing exercises, students can be directed to mentally locate the starting pitch of each new exercise, and then to establish the key for the rest of the class. Admittedly, this is an advanced skill, and it may be prudent to delay its introduction until later in the term. Nonetheless, it can serve as a primer for future exercises involving modulation. Unless the immediate goal is to teach tonal memory or to practice intonation or some other task which might require external sounds, there is little need to use the piano to set up every new exercise.

Drills requiring students to alternately imagine two or more pitches provide a logical stepping stone from single line exercises to counterpoint drills involving multiple lines. Students are often correctly cautioned against treating two-voiced dictation exercises as two separate and unrelated melodies. Aside from the fact that such a tack ignores numerous clues provided by the interaction of the two parts—harmonic implications, cadence types, obligatory voice leading motions, intervallic successions, etc.—as the exercises increase in length and difficulty, there is rarely enough time to finish both parts independently. Students can be taught to handle multiple lines simultaneously by building on exercises they have been practicing already.

By the middle of the first term students should be able to alternate mentally between two scale degrees, and can now begin practicing putting the two together. Direct the students to first imagine the tonic pitch, and then the third scale degree. While mentally *sustaining* the third, have them recall the tonic. With practice they should be able to mentally hear both pitches simultaneously. Once they are able to do so, direct them to move one or both of the voices in a stepwise fashion. This helps to develop an internal sense of various types of motion between two voices. When students are competent with hearing two pitches simultaneously or in alternation, they can be shown how to mentally shift between a moving voice and a sta-

tionary voice. This type of practice helps students protect against being overwhelmed by too much stimuli during dictation exercises.

The exercises described above incorporate aspects of both dictation and singing, but sight-singing skills can also be isolated and approached in a manner that reinforces internalization more directly. Since most beginning sight-singing melodies are almost entirely stepwise, the students should be well equipped at this point to hear the melodies internally. If leaps are included in a melody, the students should be able to figure them out as a result of their practice with pitch patterns and scale degree identification drills. It is helpful to have students mentally hear melodies in real time while conducting. Once they have heard the melody, ask them to sing it aloud without looking at the score. This presents numerous opportunities for teaching tonal memory and discussing listening strategies that utilize pitch references students have already developed.

Finally, we all try to impress upon our students the importance of listening to others when performing in an ensemble. Yet, the ability to listen to others while playing their own part is a skill that students must consciously practice. To help students develop this skill, have them mentally listen through one line of a duet. When they are confident that they can hear the part, have them listen to it while someone else sings the other part of the duet. When they are successful, switch parts.

SUMMARY

Some of the issues that have been raised in this paper are by no means new. Instructors have long struggled with how to reach those students for whom traditional teaching techniques fail to produce success in the aural skills classroom. Nor are the teaching methods proposed here intended as being wholly original; other educators undoubtedly employ some of these and other similar techniques. The point I wish to stress is the underlying pedagogical belief that if we want our students to internalize pitch relations, we must consciously and actively teach them how to develop that skill.

Refocusing the early stages of aural skills instruction on pitch internalization does entail some compromises. First, and most importantly, the initial pace of the class must be slowed considerably. The instructor must be patient enough to allow students ample time

to learn how to develop and access their “inner ear.” However, it must be constantly reinforced that a slower pace does not imply a lackadaisical approach to learning. On the contrary, instructors must show students how to develop focused, concentrated practice habits. Ideally, the class serves as a model for the students for how to practice aural skills on their own.

A slower pace also requires greater creativity in the development and presentation of classroom exercises. Since part of the role of the instructor is to identify individual student’s weaknesses, a significant amount of one-on-one interaction is necessary. Keeping the rest of the class engaged and active in the learning process requires innovation, organization, and energy. On the other hand, such an environment fosters both independent and cooperative learning. Students can be paired or put in small groups, with each student in turn playing the role of the instructor. In helping one another the students increase their own understanding by clarifying the learning process for themselves. While the slower pace at the outset can be viewed as a tradeoff, it more than pays for itself later in the course and throughout the entire aural skills sequence. The firmer the foundation of listening strategies and skills, the faster material can be presented later, and the less backtracking that will be necessary.

Although there are many advantages to focusing on pitch internalization in the early stages of aural skills instruction, the following five seem particularly noteworthy:

- 1) Students for whom pitch internalization is likely to be problematic are identified early. For many students, perhaps even the majority of students, traditional approaches ultimately produce success in the aural skills classroom. However, for some students these same techniques simply do not work because they have yet to develop the most fundamental of all aural skills: learning to access their inner ear.¹⁴

¹⁴One may question whether a student who struggles with pitch internalization, or one who cannot accurately sing internalized pitches, is qualified to study music, especially at the college level. However, there are numerous factors contributing to student difficulties with internalization

2) Students are shown precisely what skills are crucial to success in the class and, equally important, are provided strategies to develop them. The more clearly we can communicate to our students what we are trying to achieve together, and the specific means by which each task is to be learned, the more focused and effective the learning process will become. Far too often students are urged to "go to the practice room and work on aural skills" without being told exactly how to develop each individual skill.

3) Directly teaching pitch internalization provides students with the references necessary for understanding musical relationships. This in turn provides instructors with a means of teaching listening processes and strategies that the student can apply regardless of the musical context. In a dictation exercise, for example, when a student is unable to decipher a particular note or passage, the instructor can guide the student to recall the internal references that will allow the student to find the answer on his/her own. In this way, the student learns a process that is transferable to other contexts, not just the correct answer within a limited framework.

4) Students for whom the use of external sound sources alone will, in time, result indirectly in the ability to internalize pitch relationships develop better internalization skills earlier and, as a result, are able to proceed at a faster pace throughout the entire aural skills sequence. Success with aural skills tasks at any level of instruction depends on competency with rudimentary, though not necessarily easily-mastered, skills. Skills such as pitch retention, scale degree recognition, the on-demand recall of diatonic pitch references, starting and ending pitch identification, and others that are often viewed as simple rather than as fundamental, are crucial to success at all levels of study.

5) Finally, by focusing more directly on pitch internalization, we will better prepare our students to accomplish the tasks that we will later test.

that have little to do with talent or preparedness. These include lack of experience with mental imagery tasks, physical problems associated with changing voices (especially for young men), inadequate singing experience, and nervousness stemming from performing in front of a group.