

## Students' attitudes to aural training in an academy of music

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### **ABSTRACT**

#### ***Students' attitudes to aural training in an academy of music***

*Aural training is part of any higher music education. The discipline is compulsory and traditionally aural training is considered a theoretical discipline in spite of its obvious practical character. There is a need for systematic knowledge of the role of aural training. A general question in this article therefore is: How does aural training contribute to the student's musical development? – As part of an empirical study of aural training at the Norwegian Academy of Music (Reitan 2006), a survey was conducted to investigate several aspects of the discipline, its relevance, content, effect and learning outcome, and also its relation to other subjects in the curriculum including theoretical as well as performing subjects. The study involved 104 students in the 1<sup>st</sup> and 2<sup>nd</sup> year of study. – The results show that, in the students' experience, aural training is to a high degree an important subject (92 %) and a useful subject (84 %). Aural training leads to a great variety of practical/oral/written skills and to theoretical knowledge appreciated as useful and transferable to musical praxis. The study shows that aural training also leads to more accurate comprehension and more focussed awareness of music in general. It is suggested that aural training contributes to the development of skills such as inner hearing, audiation and categorial perception. Keywords: aural training, relevance, inner imagination, awareness, audiation*

## **Introduction**

Why aural training<sup>1</sup>? Every music student in higher music education is exposed to aural training as a compulsory discipline, whether they study for a career as an orchestral musician, a music teacher or an organist. This means that all students have experienced how aural training contributes to his or her musical development. In this article I will discuss several aspects of aural training associated with its status as a compulsory subject in higher music education.



Since aural training is compulsory, there has to be a reason for it. What do we know about the subject and what do we base our knowledge on? Aural training is mainly a field of practice, based more on experience than on scientific research. It is a subject with a long history in music education and the invention of methods aimed at learning melodies goes a long way back, these methods include solfège, tonic solfa and other similar methods. Today's aural training consists of a variety of practices and methods and the content varies from the training of intervals, sight singing and melodic dictation to advanced melodic and rhythmic training, aural analysis, analyzing and identifying chords and harmonies and the use of instruments in the lessons. We also have seen the development of more specialized aural training for the jazz and folk music programmes as these music styles have entered the classical conservatory culture. There is also an ongoing production of textbooks and exercises for the purpose of aural training. In spite of the differences in methods and content, there seems to be an agreement on the obvious place for such a subject in the study programmes in music, since it is a compulsory subject. This is also documented by Tomatz (1997) who made a study of four European conservatories; the Royal Academy of Music in London, the Royal Northern College of Music in Manchester, the Paris Conservatory and the Hochschule der Künste in Berlin. All institutions had aural training as a compulsory subject in the first years of study, though they had different ways of organizing the classes and different priorities in the content of the discipline. They all had an entrance test in aural abilities, normally for placement purposes.

Since aural training is mainly based on practical experience, there seems to be a lack of a firm link to research studies of relevant issues, for instance to the psychology of music. This might be due to the fact that aural training teachers do not normally involve themselves in research on the perceptual or cognitive basis for the subject. The main concern for aural training teachers has been the development and execution of training programmes, exercises and methods and the production of textbooks. On the other hand, psychologists do not specifically focus on pedagogical questions. Butler (2001:59) describes this situation by referring to the music psychologist Diana Deutsch: "... Deutsch's book [*The Psychology of Music*] gives a relatively small amount of attention to cognitive development and the acquisition of cognitive skills and almost no attention to the teaching-learning process." This means that many psychological studies do not have a pedagogical purpose or cannot be adapted to practical teaching in the classroom.

In this article my main concern is how students experience the relevance of aural training, through its importance and usefulness, its character as a theoretical or practical subject and the transfer effects of aural skills to performance. I also want to discuss how aural skills and knowledge are connected to the psychological phenomenon of inner hearing and of audiation. This means that I will study the relevance of aural training from two perspectives: a) aural training in the context of a study program, in relation to other subjects and b) aural training from "inside", the very essence of it.

I have already mentioned the lack of research-based knowledge of the effect or role of aural training. This is also confirmed by Jørgensen (2009:118-120). He categorizes research



studies in aural training in a) studies of teaching methods or of specific skills, b) the use of technology in the lessons, c) studies of aural perception and discrimination, d) different approaches in listening tasks and e) the transfer of skills to instrumental practice. It is only the transfer of skills which specifically concerns attitudes towards the role of aural training. The teachers' aspect is studied by Kosberg (1998), based on interviews of Norwegian teachers of aural training and of brass instruments in higher music education on their attitudes and expectations to the subject. She stated that some of her respondents from both professions seemed to think that aural training is not important if the learned skills cannot be transferred to other situations, which normally means a transfer effect to performance (ibid.:118). My own study (Reitan 2006) is based on the students' attitudes to aural training at the Norwegian Academy of Music (NAM). This study is the basis and background for this article.

The aural training discipline is situated between two research fields: music education and the psychology of music. While music education focuses its research on learning/teaching, on methods/didactics, on curriculum studies, on motivation etc., the psychology of music focuses on perception and cognition related to listening/reading, on memory, on absolute and relative pitch etc. There is an obvious link between the fields, and we see that the situation in Norway is gradually changing since there is a growing emphasis on research and development as part of any teaching position in higher music education.

## Definitions

What is aural training? Since there are many practices, there are also many and varied definitions. Some definitions emphasize the training of concrete skills, such as the training of intervals, sight singing and dictation and thus give a narrow description of the subject, as in the definition of *ear training* from the Harvard Dictionary of Music (Apel 1970a:250): "An important field of elementary instruction to teach the student to recognize and write down musical intervals and rhythms." Frede V. Nielsen in *Musikdidaktik* (1998:320) gives a wider description of aural training as:

...an old discipline in music training. Its aim is the training of aural awareness, especially concerning musical structures – first and foremost those connected to melody, rhythm, harmony – perhaps also to musical form. According to the development of aural awareness the aim is to establish verbal categories, a fundamental musical language of musical terminology. This means that the aural training discipline becomes an integrated part of the musical craftsmanship.<sup>2</sup>

This description has a focus on the keywords *awareness* towards *structures* connected to *musical language*, which seems to involve more than concrete skills as it includes an



obvious cognitive element of understanding. On the other hand, it has to be said that the concept of skills in general and in educational meaning normally involves both cognitive and psychomotoric skills, even if it is not explicitly stated.

According to a curriculum of the Norwegian Academy of Music for the classical performance program, *Studieplan* (2009:51), the aim of aural training is “to develop and strengthen the aptitude for inner conceptualization of sound and further to be able to use one’s inner imagination actively in all kinds of musical work.” A more concrete description follows regarding how this should be achieved: through the strengthening of the musical memory and by improving reading and listening abilities. Important key words are *inner conceptualization* and the *inner imagination*. The aim is also to develop skills in perceiving structures, both read and heard, in the music, and to use the skills in the study of musical repertoire. As in Nielsen’s description this definition of the aural training discipline is much wider than the Harvard version presented above which was only concerned with skills in intervals and rhythms. Another parallel to Nielsen is the transfer of aural training. Nielsen’s approach is more general saying that the discipline becomes integrated in musical craftsmanship, while the Norwegian Academy of Music is more specific in connecting it to the study of musical repertoire.

The structure of the study programmes of NAM for bachelor of music performance consists of three categories of subjects: performing disciplines, subsidiary disciplines and elective courses. Aural training is one of the subsidiary subjects (Norwegian: støttestoff<sup>3</sup>) together with harmony, counterpoint and the history of music etc. It is compulsory in the first years of study. According to the plan the first two years of study are meant to give “basic skills for musicians”. This structure is similar to other institutions’ study programmes even if the content of the disciplines may differ according to local or national traditions. So there should be a general interest to investigate whether the students feel that aural training has the intended supporting effect which lies in the meaning of the Norwegian concept of ‘støttestoff’.

## Method and accomplishment

In this article the main field of research is the study of the students’ attitudes to aural training in an academy of music. The method for collecting information was a survey among the students in the 1st and 2nd years in the bachelor programmes (Reitan 2006). About 90% (N=116) of the students participated. All study programmes were represented, including classical, jazz and folk music: orchestral musicians, pianists, organists, singers and music education students. In the questionnaire I used two kinds of questions: *open* questions with verbal responses coded into categories and *closed* questions with markings on a scale for 1-5 or verbal gradings, both treated with statistical coding. In addition there



was space for free comments for further explanation of the scale markings. In the study as a whole I focused on four aspects of aural training:

- the subject itself, what kind of subject aural training is, theoretical, practical etc.
- the relation to other subjects in the programme
- the learning outcome
- the teaching situation, about stress, well-being, work load etc.

In this article I will address data from the two first aspects above. Here I will focus on the degree of importance and usefulness, on its character as a theoretical or practical subject and on the transfer of knowledge and skills.

## Results

### An important and useful subject?

I asked the following two questions:

1. To which degree is aural training an *important* subject in your study?
2. To which degree is aural training a *useful* subject in your study?

There might be some uncertainty about the difference between the two concepts, 'important' and 'useful'. When using these words, I had in mind an understanding that importance is a wider concept than useful. The results revealed that the students perceived a difference in the two aspects, as seen in figure 1.

The tendency is positive for both questions. More than 90 % of the respondents think that aural training is important/very important and more than 80 % think that it is useful/very useful. This seems to be a clear statement in favour of aural training in the study program.

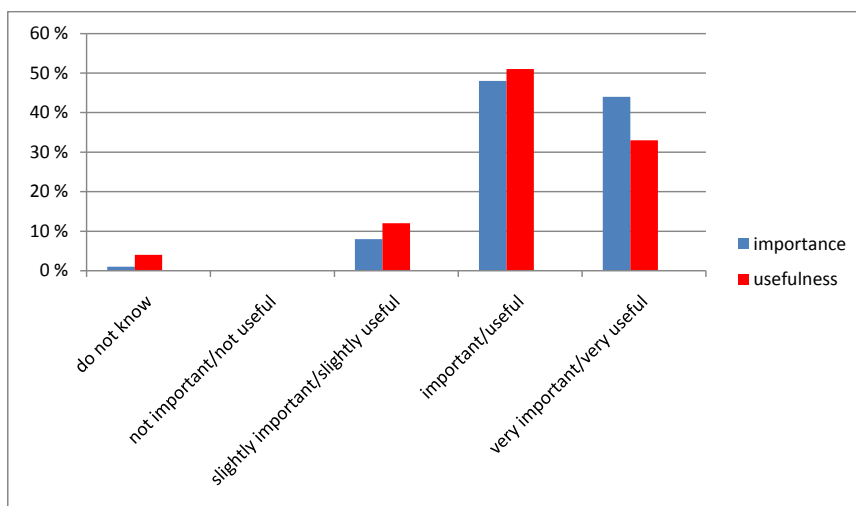
In the verbal comments the students explain why their attitudes are so positive. One explanation is rather *general*, as some students express in various ways the importance of developing the musical ear, in the training of different aural skills, intervals, sight singing, rhythms, chords etc. Some statements are open without any further justification, as this comment from an oboist: "Definitely the most important of the 'subsidiary' subjects."

Many remarks are connected to specific needs or use in the *instrumental practice*, a statement of the *transfer effect*. A singer writes: "To sing requires a good ear (as for other instruments). I learn the songs more quickly when I can immediately read the rhythms and see where the melody line moves." Different statements explain how aural training is a help for hitting the notes on brass instruments, for improving sight reading, for improving the reading of rhythms and of timing, for improving intonation, for mastering intervals in tympany playing, for learning of new repertoire faster, for choral singing etc.

Jazz musicians also explain how aural training helps them in improvisation activities and in transcribing of music. It seems that the explanations vary according to the individual needs of the different instrumentalists. These explanations point back both to Nielsen’s definition of aural training as an integrated part of musical craftsmanship and to the curriculum of NAM as “basic skills for musicians”, here connected to concrete and practical skills in relation to their instrument.

Many students explain the importance and usefulness of aural training with the development of more qualitative or abstract skills, such as *understanding* and *awareness*. A folk musician (hardangerfiddle) says: “This is a subject where you develop awareness of important elements in the music.” In general, the importance of the cognitive aspect is highly expressed in my study. This gives a wider perspective of what skills are involved in aural training, not only the importance of the practical skills that are normally associated with the subject.

Figure 1. The degree of importance and usefulness of aural training



### Aural training – theoretical or practical?

Aural training is often referred to as one of the theoretical subjects in the study programme. This study tells something else: 57 % of the respondents think that it is mostly practical and 31 % that it is just as practical as theoretical. A statement from a pianist shows this double position between theory and praxis: “The theoretical part is for me mainly to understand and to see the connections that are useful in a practical performing situation.”

This corresponds to the concept of *applied music theory*, a concept used in several study programmes in the Norwegian Academy of Music<sup>4</sup>. Theory in aural training is here seen as a tool for practical purposes. Nielsen's definition stated the establishment of verbal categories connected to structures, which might seem to be a parallel to the importance of theory as a tool for identifying and understanding how to perform in practice. For some students the link between the two aspects is very close, as a folk music student put it: "It is difficult to categorize what theory and praxis are. I feel that aural training is a subject where these borders are blurred."

In other words, aural training has elements of both the dimensions of *ars- and scientia*, of skills and of verbal and theoretical knowledge (Nielsen 1998:106). Since the subject is a combination of practical and theoretical elements, of concrete practical skills and of abstract intellectual skills, there should be a potential for transfer and use in a variety of situations and needs. The question is how this is focused on in the teaching.

### **Aural training and the transfer of knowledge and skills**

As indicated, aural training can have a positive impact on instrumental practice. In my study the students were asked to state the degree of *use of aural training skills* in other subjects in the study programme. The results showed that they felt the strongest connections between aural training and the subjects of harmony and counterpoint as well as to the instrumental subject and to chamber music. Another part of the study was to see the degree of *reference to aural training* from teachers in other subjects in the study programme. The results were almost the same: most reference from the teachers in harmony and counterpoint and secondly from the instrumental teachers. But the degree of reference was considerably weaker than the degree of how the students saw the use of aural training. This means that the students seem to see a link between aural training to other subjects in the study programme even if they are not explicitly told to do so from the teachers in these subjects. The role and contribution of the aural training teachers concerning reference to and use in other subjects was not included in the study.

Is aural training useful in the study of new repertoire on their instrument? 55 % of the students stated that they often used elements from aural training in this situation, while 42 % seldom did. Even if the main tendency is positive, there should be a potential for improvements here, as the harpsichord player said: "The subject is important. But I do not use it consciously. I feel that other teachers are not conscious of the role of aural training in the study programme." Perhaps more collaboration between the teaching staff would help this situation?

Many verbal comments explain how the students use aural training when studying and learning new repertoire, for instance when reading melody, rhythm and harmony. A saxophone player wrote: "I am always singing my pieces, and since it is mostly new music, I profit from *Modus Novus* [Edlund 1963] and the training of intervals. In addition I often play jazz, and then I need knowledge of harmony." Other students refer to intonation or to the special



demands when learning contemporary repertoire. It seems that the students' use is connected to individual needs, probably also connected to the different challenges their instruments present. Other comments indicate that it is difficult for them to say whether they use it or not, because it is so integrated in what they do, like this bassoon player: "I do not use it consciously, but it is integrated in everything I do on the instrument: intonation, rhythm etc."

## Discussion

### Aural training – a relevant subject?

Why aural training? Is it relevant? It is obvious that every subject in a study programme should be considered relevant. My empirical data are collected from students in a learning situation. This means that they evaluate their actual experience of aural training, perhaps not as future musicians, and probably not the future effect of aural training. In many ways it seems that the students find it relevant, as the results for both its importance and usefulness are so positive. We also see that the students' transfer of aural training skills to other subjects or to the instrumental field is positively demonstrated. But we also see that the explanations they give for their use and transfer of aural training skills are manifold. The students come to an academy with different backgrounds, instrumentally and musically. They have all passed an aural test and have demonstrated their level of aural competence. The teaching of aural training takes place in groups of 4-8 students with limited opportunity for individual teaching. So the students have to extract what is relevant and important for them. My study shows that there is a high degree of use of aural training skills also in both instrumental and theoretical subjects. The question is whether this is the normal academic situation. Collaboration between aural training teachers and instrumental teachers on the aims and content of the aural training subject as well as other theoretical subjects would certainly benefit the students to see the links between the disciplines, though it might be difficult to achieve in practice, as discussed by Jørgensen (2009:120). Relevance is not a timeless matter; there will always be need for changes and adaptations in the content of the disciplines in a study programme. To change old habits might be a painful process, but it will probably result in a more dynamic culture in the academies.

Relevance is also described in the written curriculum of NAM (2009:51) as it states that the aim of aural training is to "develop and strengthen the aptitude for inner conceptualization of sound and also to use the inner imagination actively in a variety of musical tasks." This should be achieved through the development of skills to be able to structure and memorize the music both in reading and in listening situations. This means that the basic skills in melody, rhythm and harmony, both written and oral skills, should be a basis for a variety of musical activities. Thus the musicians should experience that aural training skills can be applied outside the aural training class room, in the rehearsal





studio and in relation to other theoretical and practical subjects. But it also involves the cognitive aspect of understanding and awareness as an integrated part of musical craftsmanship.

Two comments from the students in my study connect aural training with such mental activities. A folk musician associates aural training with: "... systematizing the notes, exercising the brain, developing awareness." A pianist says: "... developing awareness, especially in relation to memorizing written music, harmonies, intervals etc., to see logical structures." These quotations contain some keywords already mentioned: awareness, structures and systematization.

What, then, is this process of systematization? In aural training it is hearing and reading in groups, patterns or structures instead of dealing with single notes or tones. The ability of reading is often compared to the reading of text and language. We do not read single letters, but conceive meaning through the words as an entity. Sloboda (1996:23) refers to linguistic theories from Chomsky on reading and shows how these theories can be transferred to musical perception. The phenomenon is called *categorical perception*. An important condition for categorization is to recognize the identity of a structure with a connecting verbal label. Verbal labels can be chord names, intervals, rhythmic groupings like syncopation, scales, keys etc. The ability to categorize is also relevant in the listening aspect of music. This activity is then a combination of theoretical knowledge and performance in practice. This demonstrates the close connection between theory and practice in the aural training subject, as shown by my respondents. According to Sloboda (2005:176) most people's ears function excellently. The ear is constantly sending highly sophisticated information to the brain about all sounds received. It is what the brain does with it that determines musical differences between people. Since the aim of aural training is to develop the ability to conceive and identify musical structures, it will also help the ability to memorize music, which is an important skill for musicians. The memory needs grouping techniques. Thus the musician needs some method of decoding or categorizing the individual sounds, in order to be able to hold the various sounds together in some structure or pattern. Karpinski (2000:73) calls it *chunking*. Snyder (2000:53-56), in his book on music and memory also uses this concept and describes how chunking of single groups forms a system of higher-level units. Chunking is also explained (Lehmann et al., 2007:111) as a human trait to search for patterns that allows them to process several units of information at the same time as meaningful units. In this respect the development of the inner imagination is of great importance.

### **Inner hearing and the literate musician**

The ability to imagine sound is an important part of the musical ear. The phenomenon has different names, but refers to more or less the same thing. 'Hearing inside' and 'inner hearing' are used by Edlund (1978) in a dictionary article. Harvard's dictionary (Apel 1970b:786) uses 'aural image' in an article about solfège. Other concepts are 'inner



representation' or 'inner tone reference'. Edlund says that aural training is aiming at an understanding of "how much of the written music that 'lives' in one's musical imagination." Choksy et al. (1986:89) call it

[...] inner hearing – the ability to think musical sounds without external voicing. [...] This ability is used whenever a person looks at a musical score, thinking the sounds. It is a mark of the literate musician, and it is a skill that can be systematically taught.

This refers to a kind of mental activity connected to both the reading and the memorizing of music and the ability to recall it without the physical sound. This is also the case in sight singing: to be able to sing what you see requires an inner representation of the tones. Lindeman (1961:7) in his textbook on sight singing and music dictation, argued how important it is for musicians to learn these skills: it is obvious for a singer to develop skills in sight singing, but even for a violinist it is crucial to hear the melody inside before playing it. Choksy even says that this ability is a mark of *the literate musician*, which means that you can read and write music, and she also claims that this *skill* can develop through teaching. The importance of developing the inner hearing in the aural training subject is already expressed in the referred curriculum, but I think that this practice can be considerably improved through a more conscious methodical teaching. The reason for this is that it is a basis for many activities in aural training, either in reading, memorizing, dictations and transcriptions. It is certainly important in composition. But inner hearing is poorly described in the relevant literature connected to the aural training subject.

A concept used in Anglo American books relevant in connection with the inner imagination and memorizing is *audiation* and the corresponding verb *to audiate*. Gordon (1980:2 ff.) defines it as the ability to hear music through recall and creation without its physical presence. This verbal construction does not exist in Norwegian or Scandinavian languages, but could easily be adapted<sup>5</sup>. Gordon says that to be able to audiate the music, we have to be able to perceive and conceive the music in a *meaningful* way. Basic audiation requires the immediate readiness to develop what he calls *notational audiation*, connected to *music literacy skill*. In the quotation by Choksy above she called it 'the literate musician'. A literate person is normally a person who can read and write, but also understand, not only mechanically execute the activity. This should also be expected of the literate musician.

Hallam (1998:181) also uses the concept of audiation. She claims that it is a complex skill and ability of inner hearing and of understanding written music without playing it. She even claims that this is a complex skill that is only partly achieved by professional musicians. The concept of audiation is a relevant way of thinking methodically and a means of developing the musical ear, which is the main issue in aural training. Nielsen (1998:322) states the importance of the inner musical imagination. He does not use the concept of audiation, but in the following quotation there is a parallel to music literacy:



If the written music is not 'sounding in your head', you will not be able to sing it. If there is no inner conceptualization of what you hear, you will not be able to write it down or verbalize it in any terminology.

According to Nielsen the *inner image* and the musical memory are closely connected and he calls this a *general musicalization*<sup>6</sup>, which might be a kind of music literacy. Another word for audiation is Karpinski's *auralization* (2000:4). He connects this to what he calls *thinking in music*, as an opposite to *thinking about music*. He says in his textbook in aural training: "Music listeners who understand what they hear are thinking in music. Music readers who understand and auralize what they read are thinking in music." Rupert Thackray has written two textbooks called *The hearing Eye* (1994) and *The seeing Ear* (1995), the titles are both paradoxical and describing. The titles suggest audiation, to hear what you see or read and to see or understand what you hear. In both cases there is an obvious element of theory or knowledge, but also reference to structures and categorization.

What we should be aiming at in aural training teaching, in addition to developing a variety of practical skills, is contributing to the development of the literate musician through the strengthening of the ability to audiate, to think in music in a way that is relevant to the musical practice. This basic musician's skill will thus help the singer to master the following task: "Then I can study new repertoire on the bus, if I wish."

Since the completion of my survey, there has been a change in the organizing and teaching of aural training in the Norwegian Academy of Music; to make a closer connection between aural training skills and the student's main instrument. In the second year of study the students bring their instruments to the lessons. This might considerably help the students to transfer directly what they read or hear to their instrument. May be it would be possible to achieve skills in reading, hearing inside and realization on the instrument as expressed by the violinist Anne-Sophie Mutter: "When I look at a score, I hear the sounds. And when I hear the sounds, I know how to produce these tone colors."<sup>7</sup>

## Notes

<sup>1</sup> Other names: ear training, aural skills, høre lære, gehörslära, gehørtrening, Gehörbildung, solfège.

<sup>2</sup> My translation from Danish.

<sup>3</sup> 'Subsidiary subject' is not an equivalent translation from Norwegian. 'Støttefag' also has a positive supporting content or meaning.

<sup>4</sup> Master in applied music theory and elective course in applied music theory (30 ECTS – including aural training, harmony, counterpoint and history of music).

<sup>5</sup> My suggestion: *audiering* and *å audiere*.

<sup>6</sup> Generell musikalisering.

<sup>7</sup> Anne-Sophie Mutter: *Portrait of a Global Success*. Sent on Norwegian television TV2 February 1. 2009.

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