

Between building foundational skills and instilling self-guided learning: Solfège pedagogy in higher music education

1. Introduction

While in some educational systems solfège is taught systematically from a young age (whether in specialized music schools or in classroom music), in other countries it is a compulsory discipline only in professional education. In the latter case, students start learning solfège as teenagers or young adults but by that time they have already developed some of the solfège skills through years of playing an instrument.¹ What these skills exactly are, and what overall musical knowledge students already have, differs from one student to another. Some are already familiar with certain chord progressions, some have general knowledge about keys and intervals, some have never sung before, and some can already play by ear on their instrument. Students themselves are not always aware of the level of their skills or may have the wrong impression about them. Teachers need time to obtain an objective picture of each student's abilities. If the teacher wants to build on the students' pre-knowledge, it can be difficult to decide exactly where to start and which route to take towards the goal. Starting at the level of basic skills makes this much longer and might demotivate students; starting at too high a level will unavoidably leave gaps in knowledge. Many music theory pedagogues choose to start "half way," after first having systematized all the knowledge and skills that should already have been developed—which might turn out to be both too low and too high at the same time.

The first phase of solfège tuition is crucial for determining the strength of the student's foundation; all the other knowledge will be built thereon. However, it seems that the very first months of solfège tuition (at the conservatory level) are also the most problematic ones.² In my opinion, the reason for this is the *combination* of the delicate nature of the developing aural skills and the practical choices that are being made. For example, many solfège courses skip the very first steps, as the students have already acquired some aural skills elsewhere (most probably not with a solfège pedagogue), which blurs or sometimes even disables a proper learning sequence. The choice of integrating or coordinating solfège and other music-theory subjects can also elevate the difficulty of teaching solfège in the first months—due to the additional task for the teacher of making the pedagogy of these different subjects compatible. These issues will be discussed later.

¹ Most of the issues in this article are applicable to both instrumentalists and singers. However, practice shows that singers often have different pre-knowledge (far less theoretical, including sometimes very modest experience with music notation), which might lead to the necessity of a different methodic approach. For this reason, in referring to "student" I will refer to an instrumentalist.

² See Hoag (2013) for a discussion about the problems (and solutions) of teaching music theory core to first-year students.

Insufficient tuition time, when the final goal is fixed, can prevent students from realizing a good learning sequence. A small number of lessons per year coupled with the ambition of acquiring a high level of skill drives teachers to accelerate the teaching tempo. However, moving on too fast can result in a weak foundation and the frustration of students whose skills seem to be “unreliable.” West Marvin (2012) pointed out that there is an increased need for remediation in freshman theory classes, despite newly designed home-grown online tutorials that are made for helping students get to a higher level in music theory and aural skills before the classes begin. Students are expected to “fill the gaps” through independent learning; the same practice can be met in many courses: there is insufficient time to learn in school, which is compensated for by much homework. However, experience shows that students do not always know how to learn solfège. Considering sight singing, “approximate” performance can mislead a student’s reflection, and a student might also not be able to identify the problems. Should we spend more time teaching students how to learn or should we redefine the final-level skills and forget about homework?

Independent study is one of the important issues in any education, not just because of the lack of tuition time. Nowadays, the changes in the profession of musician have also led to increased study outside formal education. Smilde (2009) researched the meaning and the implications of the concept of lifelong learning in music and discussed what skills and kind of education a future successful musician needs.³ As a consequence of the ever-changing challenges that face the musician, teaching the student everything that might later be needed becomes impossible. It is the responsibility of education to equip students with learning skills. Following this trend in music education, and understanding that some learning skills are domain-dependent, teachers could consider *teaching to learn* solfège as one of the goals of this subject.

The subject of solfège is in practice realized in several ways. Mostly its focus is on sight singing, but it sometimes includes ear training or even music theory.⁴ Method books usually mention the development of inner hearing or musicianship skills as the general goals of this subject. In many countries (such as the Netherlands) it is taught by music theorists as a part of music-theory core. This gives opportunities to closely relate solfège to analysis, harmony, or other written-theory disciplines. Elizabeth West Marvin (2012) identified the “integration of aural and written skills and increased time devoted to aural training” as one of the six tendencies in the current development of music-theory pedagogy. Some of the popular text books, such as *The Musician’s Guide to Aural Skills* (Phillips, Clendinning, & West Marvin 2005), are based exactly on this integration. Many other solfège books relate their chapters to the topics of music theory.

Integrating two or more subjects is a challenge: as I will discuss in this article, the learning sequences of these disciplines do not always fit with each other. Recognizing this problem, Karpinski (2007)

³ A successful new musician, according to Smilde, is able to combine the roles of a performer, a pedagogue, a composer, and an organizer. The successful musician feels at home in a variety of musical styles, and has excellent communication skills. See Vujović (2012) for a discussion about the possible implications of the concept *lifelong learning* for solfège tuition.

⁴ In some educational settings this subject is called “aural training”; in some others aural training focuses primarily on listening skills. Any of the variants could be considered as the subject of this essay.

decided to leave integration until the fundamental aural skills are developed—his aural training course starts with several chapters that do not use standard music notation and are not related to the written theory (while other chapters are). While he seems to be in favor of starting the year with aural training, Jones and Bergee (2010) pleaded for staggering the aural skills sequence a semester behind the written theory. Inspired by Kodály and Dalcroze, Bannan (2010) proposed *harmony singing*, through which the students experience harmonic concepts through singing, which can be seen as a discipline between solfège and harmony, rather than an integration of them.

While there is much research in the domain of solfège issues in music psychology and there are many publications concerning classroom music, almost the only sources of information about solfège methodology for college-level students are solfège method books and textbooks. Conservatory students without previous solfège training (henceforth referred to as “conservatory beginners”) are not problematized as a specific group of solfège-learners. Even Gary Karpinski’s very influential book, *Aural skills acquisition* (Karpinski 2000), does not try to define this target group. In this article I am proposing that conservatory beginners are seen as a specific group of learners who are experienced and novice at the same time. I will point out and discuss several issues that are relevant to the design of the solfège method for this group, especially concerning the first months of learning where the foundation is being built. I will argue that learning solfège in general is a process with its own particularities, which should not be compromised.

In the following text I will start from the level of methodology, to create the context in which concrete methodic approaches can be analyzed. Through a comparison of methods for children and adult beginners, I aim to explain some of the problems that are encountered in the solfège pedagogy.

2. Teaching solfège: methodology

What kind of skills are solfège skills and how does one acquire them?

Inner hearing can be defined as the skill of *imagining* the musical sound (pitch, rhythm, harmony, texture, etc.) either in a response to music notation (through sight singing the sound image is translated into the real sound), or as a creative process. This skill is often coupled with or said to be the other facet of the skill to *understand* the (real or imagined) musical sound in terms of the same categories (pitch, rhythm, harmony texture, etc.), which can then be named, played, or notated (by the means of standard music notation or any other notation system). Considering Gordon’s (2012) term *audiation* in place of *inner hearing*, this skill exceeds the pure “coding” or “decoding” of music (translating between notation and sound), and is a process of giving musical meaning to the sounds we hear or can imagine.

At the core of each method of teaching solfège are *the ways* of learning the (relative) sounds of individual notes. This refers to introducing (by a teacher or a book) and internalizing individual tones or patterns in major/minor keys or modes, as well as rhythm patterns in particular meters. In this process a system of associations is usually used that will help in the development of automatisms in response to sound or notation. This can be the system of solmization syllables (names), a system of numbers, a graphical system such as drawn stairs representing the scale, a system of hand signs, a

system of learned motifs or songs, and so on. The system of associations is one of the most obvious elements of any solfège method; it is then not surprising when the question “Which method has your solfège teacher used?” is answered by “relative solmization.”⁵ However, while choice of the system does not have to make an essential difference, having any system or no system does matter (Holmes 2009). It is important to note that a system of associations serves a method, and is not a method in itself.

The question of what counts as a method is an important one. Gordon (2012) emphasized the difference between a method and a teaching technique. According to him, method refers to defining the myriad of sub-goals, defining the sequence of reaching them and the general ways this should be realized. Teaching technique refers to the concrete actions and aids the teacher uses to reach the pedagogical (sub-)goals. Drawing on these descriptions, we could conclude that any method should thus help the teacher in reflecting on students’ progress by offering an overview of the particular skills they should have developed at a certain stage. These skills could be defined both in terms of the content (musical elements or concepts to be mastered) and in terms of the skillfulness in using that content (the level of acquaintance with it).

There are various possibilities concerning the choice of musical elements to be taught.⁶ While some methods start from the feeling of tonality and work on fixating the sound of particular scale degrees or scale intervals, some others start from the motifs found in children’s songs or folk songs and in the standard repertory. Gordon’s (1976) early research showed that tonal patterns and rhythm patterns can be categorized according to difficulty levels, depending on how easy they are to memorize and recall. Following the natural pedagogical direction from easy/known to difficult/unknown, such a categorization helps to determine the order of musical elements to be taught.

In solfège, there are different levels of understanding (knowing) a musical element (concept). For example, it can be recognized in sound or in notation, it can be named or successfully put in different contexts, and it can be recalled in inner hearing or even used as a basis for understanding another, new element. Thus, discussing solfège skills cannot be reduced to naming the music-theoretical concepts that will be worked on. In his *Learning Sequences in Music*, Gordon (2012) explained in detail each of the stages of mastering melodic and rhythmic patterns.⁷ The stages are organized into *discrimination* and *inference* levels. Discrimination levels come first; at these stages the teacher teaches tonal and rhythm patterns through imitation, memorization, and audiation. At

⁵ A set of note-names is not necessarily a system for learning to audiate. In case of movable-do (relative solmization), the syllables are indeed coupled with the relative sound of particular tones in a key, and this process of associating name to sound is used as the basis for the teaching practice. Solmization, by itself, is not a method.

⁶ I will use the term musical element to refer to any portion of musical language that can be audiated, such as scale degrees, harmonic functions, particular melodic leaps, clichés, rhythm patterns, cadences, etc.

⁷ Gordon’s method is built around rhythmic and melodic patterns but his system of learning sequences could be applied to other content-structure as well.

the inference levels students have to learn on their own by generalizing on the basis of what they have mastered at the discrimination levels. Gordon emphasized the importance of following the sequence because each stage prepares the student for the following stage, and the omission of any would disturb the learning process and create difficulties in the following phases. Several musical elements can be taught in parallel, as long as the correct learning sequence is maintained for each of them. It is of great importance to realize that in learning any new element a student has to have the necessary skills – to possess the *readiness* for it. While working on a particular element, the student develops at each stage readiness for moving on to the next stage. Looking at the number of stages that get disturbed by skipping a certain stage, it is clear that skipping the first one will have the most impact. This suggests the particular importance of the very first stage. On the curriculum level, this is the stage where fundamental skills are being developed.

Gary Karpinski (2000, 11) stressed the importance of fundamental skills: “It seems unwise to begin a curriculum with intervals or scales and to progress through melodic dictation, two-voice dictation, and harmonic dictation without ensuring that students can differentiate the various textural conditions that give rise to the need to apply such listening skills in the first place.” He drew on psychological research and proposed that the perception of pulse and meter are the starting point of any learning of rhythm, and memory of pitch collections and inferring tonic are the starting point in learning tonal music. In Gordon’s learning stages, the first stage of learning any pattern is aural/oral discrimination, where the students should learn to “auralize”⁸ them, still without note names, and without reference to any kind of notation. As the nature of these fundamental skills is rather abstract to students, the teacher has a great responsibility to incite and lead the learning in this phase.

The teacher’s role in the starting stage is also to help instill the right attitude toward the subject matter. Research within music psychology makes it clear that a “learning biography” exists in our brain, and that it influences our further learning and behavior. Susan Hallam (2006, 26) stated: “The way pupils are taught influences the ways in which they approach particular tasks.” When the learning has occurred in a verbal setting (i.e., through explanation conveyed in language and appeal to cognition), the chances are great that the student will couple the subject matter with understanding, rules, and data. When the learning has occurred in an explorative, active engagement, the student will couple the subject matter with his or her own experience. This suggests a possible reason why some students feel solfège is detached from other music making: if music theory is the starting point for learning to sight sing and read the score, then it could be felt that solfège is an activity of a different kind from other music making (although probably it could be felt to be more strongly related to harmony, analysis, and other theoretical disciplines).

These thoughts, among others, have led many music educators and music psychologists to the conclusion that learning music should *go from sound to symbol*; that is, from singing, playing, and listening to reading and writing, and not vice versa. The criticism of learning notes before learning to play or sing (especially in the context of beginning instrumentalists) is that a focus on notes or theory might decrease the aural sensitivity of children. Drawing on the psychological research of several

⁸ I am taking this term from Karpinski (2007), who used it as the aural analog to visualizing.

authors, McPherson and Gabrielsson (2002, 106) wrote: “[...] vision tends to dominate and inhibit the processing of signals from other modalities. Consequently, if children’s attention is focused on reading notation, they may have few cognitive resources left to devote to manipulating their instrument and listening to what they are playing.” In solfège, even at the conservatory level, some pedagogues have pleaded for the postponement of the use of standard music notation until students have built a basic aural understanding. Gordon (2012, 143) believes that “it is harmful for students to be exposed to notation and music theory without first achieving skill in audiation.” In his learning sequence, he places symbolic association (reading and writing) after aural/oral and verbal levels. When students have difficulties with reading notation, he advises stepping back in the learning sequence to teach elements at a lower level (aural, verbal). Karpinski (2007), on his side, uses “protonotation” in the first chapter of his textbook, to decrease the amount of information the students have to process simultaneously.

Having a skill implies being able to use it whenever needed. Aural skills should be developed to the extent that they are an automatic response, if these skills are to be considered accomplished. “Repetition is the mother of learning,” says a Latin proverb; Susan Hallam (2006, 26) said that, “While brain structures adapt quickly to new musical experiences in the short term, this learning is lost unless it is revisited on a regular basis.” Musical skills are “engraved” in the brain but this trace fades if the skills are not used often enough. Learning solfège in professional education sometimes includes both acquiring knowledge of solfège (understanding the skill one possesses and the ways to further develop it) and developing solfège skills (inner hearing to a level of automation). While it is not very difficult to teach students various strategies for sight singing, it requires much time to adopt these strategies to the level of being automatic. Automation is extremely important in music making. Writing about improvisation on the basis of cognitive load theory, Kenny and Gellrich (2002) stated that “if the knowledge base is sufficiently internalized (in long-term memory) and automated (through practice and performance experience), the resources used to generate surface melody are ultimately freer to focus on developing coherence and structural unity.” In solfège, lacking the automaticity (related to the elements that are considered to be known) hinders activities in the lesson, prevents the student from experiencing the music while performing an exercise, and restricts the student to the level of “technical” or theoretical issues.

The issue that is not often addressed but deserves much attention is the development of learning skills in students. Some metacognitive skills are transferrable, such as identifying goals, planning, developing strategies, monitoring, and reflecting on learning. Other learning strategies are domain-dependent and cannot be learned in another domain (e.g., how to learn to sing a difficult leap or how to correct a rhythmic mistake). Before starting with a solfège course, adult beginners have probably learned to reflect on the process of learning (practicing) and to spot the problems and obstacles. However, they might not be able to understand a particular problem that occurs and, related to that, may not be able to think of a concrete strategy to overcome it. Contrary to the first impulse of some teachers to speed up tuition and cover as much ground as possible in one lesson, it could be more useful to slow down at times to leave a student in a problem-solving activity and teach him or her to learn. If students are to practice, left alone to learn independently, then these learning strategies should be considered as one of the goals of the tuition. This has immediate implications for deciding the homework for the students: the homework should follow (possibly also

develop) students' specific learning skills; students should not engage in independent work for which they do not yet have the skills.⁹

3. Methods and teaching approaches

Having discussed some of the important issues on a methodological level, let us now move to some concrete examples of solfège pedagogy. This article is concerned with the first stage (the first year or even semester) of learning solfège, and this chapter will outline and discuss some of the existing approaches.

If one analyzes various solfège method books and textbooks for the beginners' level (as sources of information on the subject), it becomes obvious that two general categories emerge: books for children and books for students in higher education. As expected, bearing in mind the age, the knowledge, and the music-learning experience of each of these two groups, the methods "prescribe" different teaching procedures, and also have different starting points. In the following text I will outline the characteristics of both groups. Methods for children will be represented through examples from Serbian and Hungarian pedagogy.¹⁰ The system used in Serbia and that used in Hungary are both analyzed through textbooks, method books, and practical experience.¹¹ Methods for adults will be illustrated by examples from several well-known method books and textbooks of American and European origin.¹² The discrepancy of sources between the two groups is the consequence of their different statuses in formal music education. Chosen sources for the first group are method books that explain the pedagogical principles which are built into various concrete approaches (textbooks). Conservatory beginners' courses are not informed by such overarching, principle guidelines, but rather they are individual teaching approaches, worked out in a textbook form.

The aim of the following analysis is to point out by means of comparison, some issues in solfège pedagogy that are undeservedly "forgotten" in pedagogical discussions about students in higher music education.

⁹ In her article "Solfège-homework," Beočanin-Mijanović (2010) argued against asking novice students to study unknown melodic or rhythmic material at home: besides avoiding erroneous results that are difficult to correct, teachers should prevent the development of dysfunctional learning habits in students, such as playing melodic exercises on the piano and then learning the melodies by rote.

¹⁰ In the Serbian educational system, solfège is taught as a music-school subject starting from the first grade of music school (generally at age 8–10). In the Hungarian educational system too, solfège is taught within specialized music-school education, but also in Kodaly-type primary schools.

¹¹ The author had been teaching solfège classes in Belgrade, Serbia and visited a set of demonstration lessons and workshops in Budapest, Kecskemét, and Nyíregyháza, Hungary.

¹² It is not my aim to review these books. The examples are merely illustrations of the practice that will probably not be unknown to the reader.

Methods for children

In both Serbia and Hungary children first learn to sing many songs by ear; these carefully chosen songs serve as a musical database of known elements and as the foundation for further learning. Following this, children will learn to recognize the known elements they hear and also to name known elements in notation. The last in the sequence are theoretical explanation and generalization. The children do not wait too long for the introduction of music notation (in Kodály's system symbols are first simplified), but even then all the new elements are first internalized through repetitive singing of related songs by rote.

Although the Hungarian system uses movable-do and Serbian absolute solmization, in the first phase of developing associations both systems rely on establishing the links between note-names and the relative sound. In the Serbian system the first half year of tuition focuses on C major as the "principal" key, so, related to associations, the learning in this phase is comparable to the learning with movable-do.¹³ The songs and melodies the children often sing in the lessons (by rote, with text and solmization syllables) become the models for the associations. Serbian scholar Vasiljević (1991) and the Hungarian Kodály-expert, Dobszay (2011), both stressed the necessity to learn more than one melody for any particular musical element; the more examples there are, through the overlapping of sound impressions, the deeper the traces of the learning will be. In the first phase, the teacher can remind pupils of a learned song so as to initiate an association to a particular musical sound (clichés, patterns, and tonal functions of individual scale degrees); pupils will later become gradually more independent and able to recognize the (string of) known elements in unknown (sounding or written) music.

Vasiljević (1991) pointed out that music is happening in time, so the skill of recognizing musical elements must be brought to the level of an automatic response where students do not need time to think and decide which strategy to use, but they react to a visual or aural stimulus immediately. To achieve this, it is necessary to conduct effective training, which includes returning to the basic material regularly, combining listening with singing exercises, and sometimes also practicing theoretical drills. Teachers in the Kodály system have worked out strategies for implementing "musical drills." To motivate children to sing the same melody more than five times without losing concentration, the teacher always gives them a different task to accompany their singing; this can be performing an ostinato rhythmic pattern, singing alternatively in the "inner ear" and out loud, splitting a melody to be sung in two groups, singing it in canon, singing it with text and also with solmization, and so on. All these activities also have their own goals, but at the same time they provide the context in which the same is repeated over and over again, while children are focusing on an always different challenge.

Kodály pedagogues emphasize the importance of *three Ps*: preparation, presentation, and practice. Preparation refers to all the activities (singing, musical games, listening, etc.) in which the child experiences a particular phenomenon (tonal function, harmonic progression, type of scale, rhythmic figure, etc.) without paying attention to it. "It is useful for the child to encounter a given

¹³ In a later phase students discover that *sol* can also sound as the tonic, and they learn to "redefine" the solmization names in the new key.

phenomenon several times at a lower level of perception before it is made conscious. [...] first, a phenomenon just ‘appears’, either without explanation or with a short reference. When the appropriate moment arrives, we will place the phenomenon into the conceptual order” (Dobszay 2011, 7).¹⁴ Presentation is the act of pointing at and naming the phenomenon that the child is already very familiar with. Practice is consciously working on the phenomenon in order to gain proficiency in recognizing and recalling it as such. The teacher is expected to be aware of the different stages necessary for mastering a musical element/concept. These stages are then integrated in the curriculum so that every action prepares for some other action. A lesson is rarely experienced as a “big new topic,” but mostly as a step forward, with learning happening in a flow.¹⁵

The teacher controls each small step in the sequence of learning. He or she is able to lead the child through activities in such a way that the child is sufficiently challenged but also always able to perform the task. In simple terms, this means linking all the various exercises in such a way that the challenge in one becomes the known thing in the next, whereby the child learns “unnoticeably.”¹⁶ In the long-term it means that the teacher carefully plans the preparatory work for each small element to be learned, that he or she is carefully preparing the sequence of learning activities and learning objectives. Although pedagogical improvisation should always provide room for individual differences among students, these methods for children are directed *from teacher to student*. This role gradually changes during the course of studying: the growing knowledge and skills of students become the basis for their gradually increasing independence.

Methods for university/conservatory students

Compared with methods for children, methods for adult students seem to have been developed on a totally different basis. The vast majority of solfège books aimed at students in higher education are collections of melodies, with few if any methodological suggestions for the user. Perhaps also for commercial reasons, authors sometimes even explicitly state that their book is flexible to use in diverse pedagogical systems (various methodological approaches). It is the thematic organization of some books that suggests certain of the authors’ considerations. Thematic organization and the musical quality of the exercises are also the most frequently reviewed and advertised features (see Marvin 2008; see also descriptions of many solfège books on publishers’ websites). What seems to matter is the integration of disciplines, the aesthetic and didactic quality of the material, the variety of types of assignments, the amount of material to practice, and independent learning.

¹⁴ See also Vasiljević 1991, 23–24.

¹⁵ The guiding of the learning process in a long-term sense is often emphasized by Hungarian teachers (during BKA study tour in 2013). The following thought was often expressed: “If my students find it difficult to understand a new concept I am introducing, it can only mean that I failed to prepare them well for this learning.”

¹⁶ For more about preparation as pedagogical concept in Serbian practice, see Vujović and Beočanin-Mijanović 2012, 170–172.

Combining music theory with aural training is a logical choice. It takes advantage of the fact that students are simultaneously following music theory subjects, and already have some theoretical knowledge. Even if they do not exactly have this knowledge, students are capable of understanding theoretical concepts, and so they can develop aural skills in connection with learning music theory. This is especially obvious in methods based on integrating several disciplines, such as sight singing, ear training, harmony, counterpoint, and/or analysis. *The Musician's Guide to Aural Skills* (Phillips, Clendinning, and Marvin 2005) is one such book. It aims at building a comprehensive curriculum, where knowledge and skills are linked and developed in tandem. Solfège classrooms so turn into creative workplaces, where playing (mostly on a keyboard), composing, singing, improvising, and other activities are firmly backed by knowledge and skills in several areas. Integration of disciplines provides for more efficient learning—learning one skill helps the learning of the others by means of skill transfer. It also gives more opportunities for a rich musical context in the classroom, which in the end gives more musical meaning to the exercises. Even some of the books that are “restricted” to sight singing implicitly link this skill to music theory. In *A New Approach to Sight Singing*, Berkowitz, Fontrier, and Kraft (1997) integrated music theory by organizing each subchapter around one particular musical concept. The authors inform us in the introduction about the ways the book can be integrated with the study of harmony and counterpoint.

Another very practical “tool” that is often employed in methods at the college-level is a keyboard for use by students (e.g., Berkowitz et al. 1997, Jersild 1983, Phillips et al. 2005). Keyboard is generally considered to be a good tool for visualizing some music theory concepts (such as whole and half steps), certainly also as a tool for practicing harmony or for providing a second voice or accompaniment for singing. The keyboard, when students are sufficiently skilled in playing it, provides also a kind of “musical reality”: it provides a richer sound when it accompanies singing, and the mere activity of playing an instrument links solfège to other musical practices. Phillips et al. (2005) assigned a very important role to the keyboard in their method: all the concepts are first played before singing or analytic listening. The greatest benefit of students using the piano is perhaps the possibility it gives to integrate several disciplines in a rich learning environment; for example, by playing harmonic progressions and singing an improvised melody.

The textbooks cover wide range of music elements from diatonic stepwise progressions to chromatic, large leaps, alterations, modulations, and various harmonic turns. Considering this load it can be assumed that most of the practicing will be done at home. For more support, publications include CD's with listening exercises but sometimes also with performed assignments for a check-up.¹⁷ Most books include theoretical explanations of the matter and procedural explanations of the exercises to help students in independent learning. Karpinski (2007) occasionally provided a list of skills or knowledge that students should have at that stage. Phillips et al. (2005) outlined the topics that will be handled at the beginning of each chapter. Both books stimulate students' reflection on their own learning process.

¹⁷ E.g., Carol Krueger's *Progressive Sight Singing*, see <http://www.oup.com/us/companion.websites/9780195386042/>

Students will progress adding one new element at a time, and the actual sequence differs from one textbook to another. Sight singing in most books is considered to be at the very first stage (never done before), but many authors would probably agree with Jersild (1983) who wrote that a completely untrained person of average musical ability is able to sing an ascending major scale without difficulty. This “pre-knowledge” is assumed to already exist, and if not, it will be “engraved” in memory through drills. More or less at the same time the basics of music theory are being systematized. Another common element in most books, next to major scale, is the differentiation (theoretical and aural) of half and whole tones. This becomes a complementary initial chunk, next to the major scale. Phillips et al. (2005) actually started from half and whole tones. By combining major scale with half and whole steps, students should be able to easily build also other modes to sing in. By recognizing or intoning the string of half and whole tones, they should be able to tune into a particular key or it can help them to write a dictation. Jersild (1983) elicited portions of major scale, various tetrachords, to serve as secondary basic building material.

The fact that students already have some basic theoretical knowledge, some conceptual knowledge about the sound of, for example, chords or modalities, and that they have a need to understand the matter, has influenced teachers to develop methods that are based on understanding the concepts and then learning how these concepts sound. Solfège methods for college-level students are so often developed according to what is easy to explain. With Phillips et al. (2005) this is quite obvious: each chapter begins with short explanation of a theoretical concept, followed by music theory drills (knowledge) combined with keyboard exercises. Explanation is also employed as a guideline for sight singing. For example, recognizing the key and the scale degrees or the intervals will “tell” the students what they have to sing – assuming that they can recall the sound of the recognized elements, that they can auralize them. The remaining question is how do they learn these sounds and how should they build the database of this aural knowledge? The answer is probably: by doing. Lots of practice will eventually give good results.

4. Problems with methods for conservatory beginners

Aware of the fact that methods for conservatory beginners are often only outlined in textbooks, and that the success of these books rests with the expertise and didactic qualities of a particular teacher, I would still like to point to several issues that are either missing from these books and other publications or are present but problematic.

It seems that most books are meant for practicing and testing what is already known, and it is up to teachers to develop their own ways of teaching the students to acquire the necessary skills. Karpinski is one of few authors who has elaborated on various aspects of solfège pedagogy. While his *Aural Skills Acquisition* (2000) is certainly a valuable source of both (practical) methodological suggestions and background information, it is noticeable that he is actually focusing on and explaining the skill itself, and how it works. We read much less about the process of “engraving” the information in students’ brains or about the ways one really *acquires* these skills. The first chapters of other

textbooks are no exception; on the contrary, it seems that most authors (and teachers) are relieved when the tuition passes this troublesome stage.

Reflecting on the rationale behind choosing so-called “basic elements” in aural training, one could doubt their easiness. For example, half and whole tones are easy to explain as theoretical concepts. However, as sounds they are not at all easy to master. If a student is required to sing half and whole tones, ascending and descending, at any given pitch, it probably means that he or she has to modulate each time when the interval to be sung changes. This is contrary to the general opinion that modulation is a rather difficult task (it comes only in the last chapters in Karpinski 2007).¹⁸ If solfège follows the sequence of music theory topics, does it not mean that the solfège methodology is subordinated to the methodology for teaching music theory? Or, in better cases that it is subordinated to the methodology for integrating music theory and aural training? While not meaning to suggest that music theory undermines aural training, one should realize that it can obfuscate the skill-learning process. Teachers can be prompted to correct errors made due to poor aural skills by pointing to theoretical knowledge.

Solfège pedagogy at the university level fails to recognize the beginner in a freshmen student. Despite the *thematic* retreat to fundamentals, *didactical* approaches are not adjusted.¹⁹ This might be the core problem in teaching adult beginners. In contrast to the first stage of learning, in the later stages, where aural skills and music theory can be put together, many solfège books suddenly flourish. The teacher has full arsenal of examples, explanations, and challenges for students, who for their part finally see that their musicianship skills work and that they can be used in creating music; but it is hard work to get there.

One of the trends with new solfège publications—guiding the student in independent learning—reflects the awareness of the necessity for such instruction. But this is again the point where many textbooks fail: as long as the student performs correctly (following detailed instructions or not) the book proves to be good; when the student fails, few books will help. Most do not offer any guidance for reflection, let alone strategies for correction. Phillips et al. (2005) advised students to check their intonation by playing at the keyboard. In the case of a mistake the student will probably take the correct tone from the instrument, and it is to be hoped that the number of such corrections will decrease over time as the student learns from the mistakes. However, one should hope that this learning habit (rather than a learning strategy) will not prevail throughout the course.

One could ask if the book *is* a proper medium for the first steps in systematic aural training. If we are not convinced that it is, then the next question is whether students with poor skills at the beginning of a solfège course are able to catch up by self-study. While some theory subjects could be more or

¹⁸ In a research based on students’ self-reports, Vujović and Bogunović (2012) concluded that in the first stages of learning solfège students consider modulation one of the most difficult problems, and in the last they use it as a tool to solve other problems.

¹⁹ A couple of the very first chapters in Karpinski’s manual (2007), dealing with rhythm issues, are an exception, as the teaching/learning is approached in an experience-based manner.

less easily learned from a book, skill training seems to require much more guidance from a “live” teacher. This could be due to the different nature of learning a theoretical subject from skill acquisition. Learning a theoretical subject can be enforced by transfers of particular learning skills obtained in other subject domains (such as the creating mental maps strategy), but developing sight singing skills might not be able to benefit from such a pairing.

Receiving high quality feedback is obviously a great advantage of learning with a teacher instead of with a book (for which we should not blame textbooks). Effective feedback when encountering a problem often draws on previous experiences; it refers to the ways one has learned something, or even returns shortly to earlier material and practicing procedures. When the solfège course starts from the level of basic skills, the teacher has an insight into all the steps taken in the learning process, and can often better understand the problems that the students are encountering. When the development of basic solfège skills is left to students (as preparation for the conservatory), in cases where these skills are poorly developed it could take less time to teach these skills anew, rather than to try to “fix” them. The importance of having a teacher in the first phase of learning solfège implies that most of the work will be done in school, which probably means redefining the final level of a solfège course.

It seems that the methods for children are more consistent with the conclusions from music psychology (outlined earlier in this text) than the approaches for older students: the former provide a controlled learning environment where particular attention is paid to the *ways* one develops the very basic aural skills. It is expected that solfège teachers ensure that there is *readiness* for each new step in learning. A teacher should be fully aware at any moment of where in the learning sequence the pupils are, where they should next be, and how they can arrive there. And the ways up are not linear, so the teacher has to control the development of the whole network of skills and knowledge. However, before deciding to implement the methods for children at university, let us consider the ways in which conservatory beginners are different from children-beginners.

5. Conservatory beginner

While children (with a good teacher) approach solfège as a set of more or less interesting and challenging activities, students’ motivation is much influenced by their understanding of the relationship between solfège and the principal subject, and their understanding of the learning process. The gap that might exist between one’s aural skills and the musical awareness developed through playing experience could frustrate, inhibit, and demotivate freshmen students. Incomplete or merely intuitive understanding can give them the wrong impression about own skill. Making mistakes when a task looks too easy—unavoidable with students without previous solfège training—will cause frustration and impatience. It often happens that students have certain skills that come only later in the course sequence, and they do not have the skills that the teacher considers fundamental. Students might feel that they have to step back to a lower level than where they already are.

Considering the lack of time, there are other problems as well. If the success of methods for children is partly due to the long time the skills are being developed, then students are simply predetermined

to stay “halfway.” Furthermore, research shows that the brain exhibits greater ease of adaptation in childhood, which means that skills obtained at an early age, when in use throughout life, are the most strong and reliable (Hallam 2006). Does this mean that we have to choose from either (1) staying, for example, on the level of diatonic melodies with simple rhythm, so that the performance can be fluent and controlled, or (2) covering also complex melodic and rhythmic elements, but accepting that the skill will be unreliable because the performance cannot be fully controlled?

On the other hand, conservatory beginners have their own advantages—exactly those that are emphasized in the courses at universities. Their acquaintance with the basics of music theory (even when this knowledge is not yet operative) does help the teacher to proceed faster once the aural “knowledge” is there. Also, aural skills acquired through playing, firstly at the level of tacit knowledge, do exist. Students already have a sound database; the teacher can guide them to learn how to use it. Most conservatory students are acquainted with a keyboard instrument, which enables learning activities such as practicing duos and making harmonization. Finally, students do have some transferable learning skills (even if not yet domain-dependent ones), which will in turn be employed for independent studying.

Teaching solfège at the university level might have different goals than teaching children. The view of the skills that should be developed might differ, not only for practical reasons (such as duration of the course and the age of students) but also because of the position of solfège within the curriculum. While aural skills themselves are not different, whether in the younger or older student, the goals concerning the music material to be handled (tonal, rhythmic, harmonic, other aspects), and the level of mastery of each learned element, can be different. It might be desirable to develop strong fundamental skills in students (including certain routines and a number of basic strategies for singing and listening) and, next to this, teach them how to learn the further skills independently: to diagnose what skills they are missing (including various musical styles), to understand the process of learning solfège in particular, to be able to reflect on learning, and to know what kind of learning material they can use. Different than with children, where the goal is to be able to perform the task without much preparation (routinized skill), with students we might want to put the emphasis on being able to “figure out” (and thus to perform with necessary preparation): if their professional practice requires one or another skill, they will know how to develop it. Finally, we might even want to question the proportion of the skills we are used to teaching in solfège; we might want to emphasize the skills closely related to one’s instrument (playing by ear, improvisation) at the expense of sight singing or singing at all. In this respect the integration of aural training and written theory could be seen as a choice for putting particular emphasis on theoretical concepts. Nevertheless, whatever goals are chosen one should always be alert to how that choice influences the method. If we choose to teach solfège (combined or not with other disciplines), then we have to take care to always be aware of its learning sequence—in whatever form we have designed it.

6. Conclusion: dynamic model

In a certain sense it is easier to develop methods for children. The methodologist has full control of the teaching process and neither the students’ previous knowledge nor their playing or listening experience need to influence their starting point. Methods for children are *all-in* packages: learning

sequence, teaching procedures, teaching material—all in one. Is it possible to develop a method for adult students where the learning sequence would also be highly controlled but at the same time fitting all the students in a group? Is it possible to start from zero and still challenge the students? Can we get far enough without being too economical with working on basic skills? In a desire to answer positively I will outline a dynamic model of solfège training. It is not a method but rather a methodological setting for a solfège course.

Drawing on the standpoints from the second part of this essay, I propose that the development of solfège skills is seen as consisting of three general sorts of processes: acquiring a meaningful subject-matter base to build on, activating cognitive processes whereby learning occurs by building upon the existing knowledge (of any kind), and fixating new knowledge/skills by the repetitive action of applying it in new situations. But before all, students' ears must be "open."

The dynamic model of solfège tuition is based on a gradual change in the ways of learning solfège throughout a two-year or a three-year course, and also on a gradual change in the role of the teacher over the same time. To control the process of learning in the delicate first few months, the teacher acts in a traditional manner, as the one who knows and who will teach the others by engaging them in musical activities. The students learn by doing (more imitation than exploration), are still dependent on the teacher, and their reflection is focused not so much on the learning process as on the musical result of the action. This is the phase where the foundation is set. By the final semester this is fundamentally different: the teacher is now a facilitator of learning and the students are doing most of the work independently. The first lessons are a variant of usual lessons for children: full time group singing, listening, and engaging in musical activities in a flow. The later lessons include much more theoretical work, as well as students' reflection, and give the final support to students in becoming independent learners.

Along this progressive continuum from controlled to independent learning and from rote singing to solving problems, the teaching strategy is dynamic on a micro level. Didactical games and "hidden" rote learning can be appropriate even in the later semesters, either as preparation for new learning or as an active relaxation from other exercises. On the other hand, in the first semester the teacher might already recognize the opportunity to challenge the students to explore or briefly engage in a problem-solving activity. Students can experience that as a small window to glance into the coming stages.

The main issue in the first stage is building a solid base of routinized basic aural skills. To avoid singing on "auto-pilot" (because the exercises looks too easy), and to take control of the learning sequence, the teacher could decide not to start from major scale but to choose another, less well-known initial chunk (such as different type of scale or set of patterns).²⁰ In this way, we do not try to build on pre-knowledge but rather we opt to find a way to begin from a zero base. Students' pre-skills will contribute to the *velocity* of learning, and the pre-knowledge will be integrated into the

²⁰ For this idea I am very grateful to Lucinda Georghagan (Royal Scottish Academy of Music and Drama). In a conversation she explained that she uses the pentatonic scale, to keep students alert.

new sequence automatically. In this phase students do not learn independently; both the discrimination and generalization types of learning are guided.

Repetition is important in skill learning and so the teacher has to provide sufficient repetition without decreasing motivation. We could adopt the Kodály approach to this end, and think of many different ways for performing the same music, or invent didactical games for adolescent students. Some of the possibilities is to add more layers to the activity, such as polyphonic singing, body percussion as self-accompaniment, listening to an unknown melody (second voice) while singing another. In such activities familiar things are still challenging, and having to control several activities at the same time increases concentration and focus.

While routinized fundamental skills are among the priorities of the first stage of solfège tuition, it does not mean that students will never face alterations or modulations. These more complex musical situations will be regularly met as a challenge, an illustration, or a preparation for some future learning. For example, when using relative solmization to teach sight singing, chaining *do-re-mi* so that every *mi* becomes the new *do* will result in singing a whole-tone scale. This is a convenient moment for the teacher to jump ahead in the learning sequence, and then return to practice the material that is required at that level. Such teaching is anchored in the chosen learning sequence but at the same time it opens the doors to many musical elements that will be taught later in the curriculum, or be left to the student to master independently if needed.

The nature of homework gradually changes. In the first stage it is restricted to practicing known music for developing automation and routine. In the next stage, when students have sight sung (individually) in the classroom, they are ready to try preparing new melodies at home, based on known elements only. The following phase is preparing music that also contains unknown elements that can be learned on the basis of the existing skills. To accomplish this, students have to be equipped with some domain-dependent learning strategies, such as combining the skills to solve a problem or defining the problem. In the final stage the students practice learning independently. The skills for independent learning are developed in the classroom. Creative assignments (composing, improvising) should be scheduled from the very beginning, but they must be carefully designed: the efficacy of a particular exercise will be satisfying only when the students have the readiness for it.

Integration with other disciplines (subjects) is to be welcomed whenever this is possible, as long as the topics come out the solfège methodology. Aural skills include, by definition, awareness of harmonic, contrapuntal, formal, and other properties of music, and in that sense solfège is already an integrated discipline. Using the principal instrument in solfège lessons could also be effective, but for practical reasons it is perhaps better to do some aural training in the instrumental lesson than the other way round.

The dynamic model resolves the tension between being a novice and experienced at the same time. It ensures that students acquire a firm base of aural skills and learning habits in the first stage, and that after the solfège course has ended the students are equipped with skills to face new challenges in lifelong learning.

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