

PLAYING BY EAR IN THE SUZUKI METHOD: SUPPORTING EVIDENCE AND CONCERNS IN THE CONTEXT OF PIANO PLAYING

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Abstract

The Suzuki method is based on the assumption that the most natural way to learn music is through repetitive listening and ear-playing. It is through playing by ear that a child is introduced to the instrument and no printed music is used in the early stages. A review of existing theoretical and empirical literature will show strong evidence supporting the importance of ear playing. This paper will also demonstrate that there are reasons to be concerned about the development of aural skills, but no reason to associate ear playing with poor reading skills.

In the 1930s, the violinist Shinichi Suzuki experimented with a new method of teaching music to very young children and he became convinced that the best way to learn to play a musical instrument was to follow a process similar to the learning of one's own native language (Suzuki, 1969, 1981, 1986, 1989). Later known as the mother-tongue approach, the method is based on the principle that by immersing young children in music, mainly by having them listen repeatedly to the pieces they will learn to play on their instrument, their musical abilities would unfold in the most natural way. The idea that in the initial stage a child should learn to play by ear instead of relying on note reading was in sharp contrast to the more common practice of the time (Landers, 1984). But when Suzuki's young Japanese students were heard, first in a film presented in the United States in 1958, then during a tour in 1964, the quality of their performance was for many a testimony of the success of this method (Herman, 1981). Many influential musicians and dedicated music teachers became advocates of this approach (Bigler & Lloyd-Watts, 1979; Hargrave, 2010; Herman, 1981; Kataoka, 1985; Kendall, 1978; Koppelman, 1978; Powell, 1988; Starr & Starr, 1983). Since then, the Suzuki method "has grown to a world-wide movement" (Bigler and Lloyd-Watts, 1979, p. 1) and has become one of the leading music

methods in North America. In view of its popularity and considering that tens of thousands of students are now learning music through the Suzuki method (Suzuki Association of the Americas, 2010), we are fully justified in undertaking an analysis of one of the basic principles of this method—ear playing.

Defining the mother-tongue approach

It is interesting to look at how Suzuki (1989) came to associate the concept of the mother-tongue approach to music learning. He explains that he was first astonished by the fact that “children everywhere in the world were speaking in their own language; moreover, they did this fluently, which required a very high level of proficiency” (p. 19). Since all children of normal intelligence spontaneously learn to speak their language, he believed that there “must be a secret; and it must be training.” He observed that “indeed, all children . . . are brought up by a perfect educational method: their mother tongue,” and he wanted to find out if he could “apply this method to other faculties” (1969, p. 10). He “studied very closely how a baby learns to speak and tried to work out some method according to these basic rules” (1989, p. 38). Suzuki “adopted as a model the mother-tongue system of language learning . . . defined its attributes and applied them to music study” (Schneiderman, in Comeau, 1998, p. 6).

When applying the mother-tongue approach to music teaching, the concept of immersion comes first. Suzuki noted that children are surrounded by language sounds from birth, and “he reasoned that if children were surrounded by musical sounds to the same degree, they would develop an equally remarkable ability in music” (Bigler and Lloyd-Watts, 1979, p.1). It is often noted that, “through listening, the children absorb unconsciously the language of music just as they absorb the sounds of their mother tongue” (Powell, 1988, p. 7). Listening is thus the most basic element of the method, for “when one listens repeatedly, the music enters the mind; and the

more thoroughly it is internalized, the easier it is to reproduce” (Kataoka, 1985, p.13). This immersion is done through the use of recordings.¹ Young children repeatedly get to hear the pieces that they are going to learn on their musical instrument. The importance of repetition² is strongly emphasized: “children listen to the recordings of their music over and over again” (Bigler and Lloyd-Watts, 1979, p. 6); “students . . . become familiar with this selected repertoire through many, many listening repetitions” (Taggart, in Comeau, 1998, p. 33); and “children learn by repeated listening to the music they are about to study just as babies listen to the sounds of language heard about them on a daily basis” (Liccardo, in Comeau, 1998, p. 33). So the child is introduced to the instrument through playing by ear; he should know the melody well before trying it out on the keyboard. No printed music is used until the student has mastered basic playing skills: “Wait to teach [reading] until an appropriate age and time. Until that time, I think it’s more important to develop the ear so that children listen to and judge their own sound.” (Suzuki, 1993, p. 12)

Research problem

Ear playing is at the core of the Suzuki method and Suzuki teachers endorse this approach. Suzuki’s principles and application of ear-playing are often presented in non peer review music education magazines.³ However, the Suzuki method is rarely discussed in scholarly writings. Fewer than 20 PhD dissertations have been written on it, and they can be classified into

¹ It is sometimes suggested that the Suzuki method was made possible by the advancement of technology: “until recently, a system based on listening was not possible because the supporting technology did not exist [but now] tape recorders and/or other means of making recorded music [are] easily and widely accessible Dr. Suzuki had the vision and wisdom to utilize modern technology and thereby changed and improved the way music is learned and taught” (Bigler and Lloyd-Watts, 1979, p. 5).

² When well-known Suzuki piano teachers were asked how much listening is required (Comeau, 1998, p. 35), their answers ranged from one hour a day (for Adams, Liccardo, Powell) to three (Schneiderman and Williams) and four hours a day (Fest and Harrel).

³ The *American Suzuki Journal* is a quarterly publication of the Suzuki Association of the Americas for teachers and parents, and it discusses at great length the various components of this method; the *Music Educators Journal* lists 112 articles on the Suzuki method, while the *Journal of Music Teacher Education*, *Clavier Companion* and the *American Music Teacher* each have a few articles.

four main topics: 1) curriculum issues,⁴ 2) new applications,⁵ 3) comparative analysis,⁶ and 4) experimental investigation.⁷ It is very difficult to find papers on this method in scholarly journals.⁸ We have been unable to find any studies that provide a critical analysis of this popular approach that parallels music learning with first-language acquisition. Suzuki developed his teaching principles through his own intuitions and experience, but few researchers have since investigated whether the initial process of playing by ear is supported by existing theoretical and empirical literature. This paper will address this gap in the research, particularly in the context of piano learning and teaching. First a quick historical overview of pedagogues and educators that have promoted ear-playing will help to put the Suzuki method into perspective. Then strong evidence supporting the importance of ear playing in the early stages of learning will be presented. Lastly, in addressing two criticisms linked to ear-playing, we will argue that while there are problems with the development of aural training, there are no reasons for concern with regard to music reading.

Advocates of ear playing

Following in a long tradition of instrumental instruction, teachers tend to emphasise pitch notation and reading skills, and most current method books are designed to teach note reading

⁴ The development of a lesson plan sourcebook (Hwang, 1995), of a teacher's guide (Lee, 1992), of a reading course (Lo, 1993), of a comprehensive curriculum (Romeo, 1986), of a program combining Waldorf and Suzuki (Smolen, 2000), and the description of home practice sessions (O'Neill, 2003).

⁵ Adapting the Suzuki method for art education (Arimitsu, 1982), for the bassoon (Schwalje, 2008), for a mixed method for cello students (Lee, 2007), for American and European piano pedagogical materials (Rutledge, 1983), for an alternative piano group class approach (Williams, 2000), for a program in Israel (Menczel, 1997).

⁶ Investigating violin technique in the Suzuki Method and other pedagogies (Perkins, 1993), cello technique in the Suzuki Method and other pedagogies (Lee, 2001), different pedagogical methodologies for the clarinet (Sperti, 1970).

⁷ Measuring the perceptual/cognitive listening development between Suzuki trained and traditionally trained students (Moorhead, 2005), the attention and perseverance behaviours of preschool children enrolled in Suzuki lessons and others involved in preschool activities, (Scott, 1987), the effect of Suzuki instruction and early childhood music aptitude (Stamou, 1998), the effect of different incidental listening experiences (Chang, 1999).

⁸ Brief mention of the Suzuki method (often not relevant except for mentioning the existence of the Suzuki method) was found in 34 articles in the *British Journal of Music Education* and 56 articles in the *International Journal of Music Education*.

right from the beginning. There are however prominent educators who have promoted the development of ear playing before introducing notation. Even in the early 1700s, Couperin (1716/1974) in his teaching manual “L’Art de toucher le clavecin” was recommending that students be introduced to keyboard playing by ear: “One should not begin to teach notation to children until after they have a certain number of pieces in their hands. It is next to impossible, while watching their book, for their fingers not to become disarranged and twisted . . . moreover, memory is formed much better in learning by heart.” (1974, p. 32). In the same century, the philosopher Jean-Jacques Rousseau (1762/1979), also a musician stressed a learning sequence that favoured sound-before-sign: “The intuitive experience and enjoyment of music should come first A good deal of traditional music education has worked deductively: the formal rules have been taught in the abstract, for example, through verbal description of written notation, rather than in the practical context of making the sounds themselves” (1979, p. 215). Well-known 20th century pedagogues have promoted similar approaches. The American piano teacher Abby Whiteside stated that “the only safe beginning for a music student is to play by ear. To believe this completely, one need only observe the ease and accuracy of those students who began in that manner. The skill they develop is never duplicated by those who learned the notes first and built up a coordination depending on the eye” (Whiteside, 1997, p. 165). Canadian professor Marc Durand (1996) finds it essential that music learning focus first on sound, for a strong connection must be established between the ear and the instrument before the eye connection is developed. American teacher Stanley Schleuter (1997) developed his theory of instrumental learning based on his observation of language acquisition: “Children gain vocabulary and verbal facility over a long time period through speech alone and without a symbol system Music learning should follow the same basic sequence of events for

language learning” (p. 21). He believes that “music readiness [should] occur first so that students have something to express musically with instruments and only then does notation take on musical connotations” (p. 23). His rationale is very similar to Suzuki’s, but his teaching approach is somewhat different: the student must first establish a vocabulary of tonal and rhythmic patterns through singing, clapping and counting exercises, concurrent with the development of musical instrument skills. Application of language models of learning have also been of particular interest to jazz teachers because this form of performance demands improvisational skills. The linguist Barry Velleman (1978) developed several recommendations for jazz educators and he suggested that a large part of the training be spent on drilling improvisational patterns without reference to written materials. He emphasized the need for students to model patterns of sounds after hearing the instructor and he stressed that: “ear training should precede music reading” (p. 29).

It is obvious that many prominent pedagogues have valued ear-playing and that all of these have had their own strategies for applying this principle. However, it is Suzuki who has had the greatest impact, spreading ear playing to thousands of beginning music students all over the world. His systematic approach is well suited for young children and the impressive results he achieved contributed to the popularity of learning to play by ear. What, however, is the supporting evidence for promoting ear playing?

Support for Ear Playing

Central to the debate surrounding ear-before-eye or sound-before-sign sequence is the premise that sensory and motor experiences should always precede the learning of a concept and the use of symbols. Children’s ability to read music is not the problem; as Tommis and Fazey (1999) have shown, children as young as three can develop a basic understanding of the pitch

component of musical notation and relate this to the piano keyboard. Methods for preschoolers such as the *Kelly Kirby Kindergarten Piano Method* (Kelly-Kirby, 1939) and *Music for Young Children* (Balodis, 1993, 1996) have been very successful in teaching youngsters how to read music and play the piano from a simple score. The question is whether music reading is the best way to start a musical instrument.

Over half a century ago, the psychologist James Mainwaring (1941, 1947, 1951) made the observation, while comparing musical and linguistic skills, that the ability to speak and understand one's own language precedes the acquisition of the ability to read and write it, and yet musical education frequently begins by inverting the sequence: "Instead of learning first how to produce . . . the sounds . . . and later being taught to associate a symbol with the sound he can immediately and unconsciously reproduce, the child is taught to associate the symbol with an activity, such as the depression of a particular key, and not with the resultant sound" (1941, p. 206). This progression follows the following scheme: recognition of a symbol, then automatic motor response followed by an unexpected sound (1941, p. 208). When this method is adopted, the "association which becomes mechanized is that between a visual symbol and a manipulatory action" (1951, p. 201). Mainwaring promoted the sound-action relationship where the visual symbol evokes an image of the sound and stimulates the necessary action. The correct sequence of teaching is then as follows: "recognition of symbol, image of sound represented, kinaesthetic manipulatory reaction, production of expected sound" (1941, p. 214). Mainwaring favoured playing by ear, which he defined as an acquired skill that reproduced directly on an instrument a recalled musical experience (1951, p. 201), for he believed that "to 'think in sounds' . . . is . . . of fundamental importance in the development of musicianship" (1941, p. 208) and he felt that

“the ability to ‘play by ear’ . . . is, in fact . . . genuinely a criterion of real musicianship”
(p. 210).

Twenty-five years later, Kochetvitsky (1967) would make similar observations, based this time on the structure and function of the central nervous system. Through his analysis of the auditory stimulus, the conditioned reflex and the conditioned response, Kochetvitsky showed what he called the “extreme importance” of establishing a connection between the auditory and the motor system at the very beginning of music study, and later between the visual, the auditory and the motor systems. He deplores the fact that piano lessons traditionally follow this sequence: “visual impression → search for a key → movement” (p. 30). With this scheme, the result of the motor act is rarely heard since “there is not time for listening: the next note must be found and played” (p. 30). He recommended that the initial period be devoted to tone production, with full attention given to tone quality, kinaesthetic sensations and form of movement. Students are given simple tunes to play by ear, forcing them to hear inwardly the sounds they want to reproduce. This approach allows the development of the following schema: “auditory stimulus (inwardly heard tone) → anticipation of motor act → motor act resulting in actual sound → auditory perception and evaluation of the actual sound” (p. 30). The auditory stimulus calls forth the movement which produces the sound and the result of the motor action is immediately checked by the ear and evaluated. This link must always be observed in performance as well as in practice. The introduction of note symbols should come only when this link is strongly established; every sign should represent an element already experienced aurally. Then once notation has been learned, it is the teacher’s task to watch carefully to make sure that hearing inwardly is always the “leading and controlling element” (p. 31). The motor response should not become a direct reaction to a visual stimulation, but should always go through the auditory

system and only then promote the motor reaction. The printed note signs “first excite the cells of the visual region of the cortex, are transmitted to the auditory region, and only then . . . promote the corresponding motor response” (p. 28). The chain of reactions is always guided by the sound: “visual stimulus: the note sign → auditory stimulus: the inwardly heard tone → anticipation of motor act → motor act resulting in actual sound → auditory perception and evaluation of the actual sound” (p. 31).

A famous study by Posner, Nissen and Klein (1976) brings further evidence of the importance of developing good auditory stimulus at the beginning of music lessons, because when facing a double task, vision tends to dominate other modalities of perception: “subjects exhibit a general attentional bias toward the visual modality whenever they are likely to receive reliable input from that modality” (p. 161). When visual and auditory signals are presented simultaneously, or when visual and kinaesthetic signals are received at the same time, there is evidence showing that visual cues dominate (p. 159) and auditory cues will have less impact.

More recently, psychologists McPherson and Gabrielsson (2002) have also explained why the ear should come as an essential prerequisite to the introduction of notation. During the early months of training, they recommend teaching children to sing pieces by rote, and then transfer that familiar repertoire to their instrument. Playing pieces by ear is favoured in order “to establish the important ear-to-hand coordination skills” (p. 110). They believe that learning to decode musical notation is a complex skill that requires full conscious attention and when a teacher is asking a student to focus on another demanding task, the motor skills involved in learning to manipulate an instrument, these two skills are not yet automatic and are competing against each other. Because there are constraints on the amount of information beginners can think about at one time and because there are limits on how quickly they can process new

information, it can be pointless to expose them to the complex variety of technical skills needed to play an instrument while at the same time asking them to read and comprehend notation. Children focusing on reading notation “may have few cognitive resources left to devote to manipulating their instrument and listening to what they are playing” (p. 106).

Bamberger (1996, 1999) brings forward another important factor to consider when teaching beginners. Listeners, even novice ones, do not perceive music on a note-to-note basis, but through “structurally meaningful entities such as motives and phrases” (1999, p. 49). Even young children naturally focus their attention on these “units of perception” and “only with further effort do they move on to the ‘notes’ ” (p. 49). Teaching music should follow the same gestalt principle of sound organization. Instead of asking students to focus on the “smallest, isolated objects,” the individual notes, “with no context or functional meaning” (p. 50), students should learn music by experiencing the playing of meaningful musical patterns and phrases. Only after they have had considerable experience with larger musical entities, should single notes be studied in isolation. Otherwise, teachers are asking beginner students to put aside their most natural way of experiencing music. When notation is introduced too early, students struggle over individual notes, sometimes playing so slowly and hesitantly that they have no concept of the piece they are trying to perform. Playing by ear is a good way to ensure that learning is always musically meaningful.

Concerns about ear training

There is strong support for ear playing in the early stages of music learning, but what can we say about the common criticisms directed at the Suzuki method: 1) poor aural skills in spite of the focus on listening and 2) poor reading skills in the absence of note reading in the early stages of learning?

Suzuki teachers (Powell, in Comeau, 1998) insist that their method develops good aural skills: “Suzuki students’ ears tend to be wonderful because it is a listening-based approach” (p. 71). Listening is constantly emphasised as students learn to “listen to themselves when they play” (p. 71). The method insists on cultivating good tone quality where students demonstrate “listening refinement” and sensitivity to “slight gradation and variation [in sound quality]” (Schneiderman, in Comeau, 1998, p. 72). It is often acknowledged that Suzuki students play musically due to their well developed listening capabilities (Herman, 1981; Powell, in Comeau, 1998). However, a clear distinction must be made between developing the skills to listen to one’s own playing and acquiring strong mental representations of the musical properties of pitch, rhythm and harmony. The latter is known as ear training and implies both a cognitive understanding of the musical elements that are heard when music is being performed and the mental ability to experience sound recollections when written symbols are read from a musical score. A look at how aural skill is defined in Edwin Gordon’s music learning theory and a review of how ear training is introduced in popular music program will help us understand what might constitute legitimate concerns regarding the capacity of the Suzuki method to develop good ear-training skills.

Edwin Gordon (1984, 2001, 2003, 2004),⁹ like Suzuki, looked at the process of language development as a means of understanding musical learning. He observed that a child first listens, and after much repetition begins to repeat what he has heard. After a period of imitation, the child begins to associate words with what they stand for, and then individual words are grouped

⁹ There are two other publications that will not be discussed here but are worth mentioning in the context of this study. Grunow, Gordon and Azzara (2000) developed a sound-before-sight method book, *Jump Right In: The Instrumental Series*. Based on Gordon’s Music Learning Sequence (1984), it emphasizes playing by ear prior to and while learning to read music. As a continuation of that series, Lowe and Gordon published in 2004, *Music Moves for Piano*, a piano series also based on Gordon’s music learning theory and designed to develop audiation and keyboard performance skills.

into sentences to communicate thoughts. It is only after these initial stages have been well mastered that the child will receive instruction on how to read and write. In order to match these natural stages, Gordon developed a set of sequential levels of learning that includes five stages of discrimination: aural/oral, verbal association, partial synthesis, symbolic association and composite synthesis. The aural/oral experience is at the core of Gordon's approach. Since a child learns to speak from listening, music learning should also begin with patterns of sound. This is accomplished through rote learning of tonal and rhythmic patterns using neutral syllables. Gordon stressed the importance of accumulating a vocabulary of melodic and rhythmic patterns, rather than acquiring knowledge of individual notes. At the second stage, an appropriate label is given to each pattern. Syllables are used to identify pitch and Gordon developed a rhythmic language to label the different rhythm patterns. Through verbal association, students learn tonal and rhythmic solfège. At the partial synthesis level, teachers use tonal and rhythmic activities to make sure that students can recognize tonality and meter. When this recognition is achieved, a student is ready to learn musical symbols through reading and writing, and the symbolic association level is reached. It should be noted that students must have mastered the aural/oral and verbal association stages before music symbols are introduced in order to ensure that they will always be able to hear internally the music written in notational form.

Gordon introduced the concept of audiation to explain the process that takes place when one hears music silently through recall. Through this process, mental hearing happens, even though no physical sound is present. But audiation is more than just a musical form of auditory imagery. It is a cognitive process by which the brain gives meaning to musical sounds, just like thinking gives meaning to speech. Audiation necessarily implies music comprehension and this is achieved through aural training and verbal association where, in the initial stages, each tonal

and rhythm pattern is attached to a syllable name. This association is a key element of good ear training abilities.

The Yamaha method (Lancaster, 1984-85; Wagner, 1985) is an example of another curriculum centred on ear training and musicianship development. According to the Yamaha Music Foundation (2003), their research has shown that young students are developing aural skills much more rapidly than other skills required in music lessons, like manual dexterity. They also found that it is difficult for young children to read music and play at the same time. So, instead of teaching music reading first and instructing them to learn pieces through note reading, each new song is taught through solfège using proper syllables (*do, re, mi*), and this experience of singing a song in fixed *do* is then easily transferable to keyboard playing. The sequence of learning begins with listening, then imitating with the singing voice, followed by the attachment of syllable names, then the presentation of music notation and finally the performance on the keyboard. This approach helps students to internalize the music they are learning; it stimulates and cultivates musical responsiveness to sound as it establishes a strong connection between written signs and aural representation. In this progression, it is not enough to memorize a sound pattern and to reproduce it on an instrument; a student needs to acquire a musical vocabulary of tonal and rhythm syllables to insure that notation is strongly link to a mental sound representation.

The Suzuki method works differently and does not take into consideration the development of such skills as audiation or sight-signing. Suzuki trainer Marilyn Taggart (Comeau, 1998), agrees that Suzuki teachers “don’t really do sight-singing per se. The ear

training seems to take care of itself because of the listening” (p. 71).¹⁰ Nowhere in Suzuki’s writings are these skills ever addressed. The mother-tongue progression follows a different sequence of learning. It starts with strong aural training as students listen repeatedly to a series of songs. When these songs are well integrated, students recall the patterns from memory and attempt through trial and error to find the right notes on the instrument, thus the expression “playing by ear”. The learning progression moves from the aural stage to the actual playing on an instrument. A direct link is established between pitch and rhythm patterns registered in the memory and the reproduction of these patterns on a musical instrument. In contrast to Gordon’s audiation or Yamaha’s solfège, an important component is missing: pitch and rhythm patterns are not labelled before performance happens on the instrument.¹¹ The progression bypasses any form of conceptualisation of basic musical patterns. The fact that Suzuki students listen repeatedly to their recordings and learn to play the piece by ear is no guarantee that they will develop a good cognitive comprehension of how music is organised or that any internal aural representation will be activated when music notation is later introduced.

There are other issues surrounding the development of ear training in the Suzuki method that are worth mentioning. Interestingly enough, methods that teach music to very young children often claim that they produce a high percentage of students with perfect pitch. While there is no scientific evidence that methods like Yamaha or Kelly Kirby Kindergarten Piano Method are in fact developing perfect pitch, it is still revealing that teachers from these methods

¹⁰ A few Suzuki teachers mention doing sight-singing or dictation, but according to Comeau’s interviews (1998), what is being done never goes beyond the introductory level. More importantly, these teachers are the exception and not the norm; Taggart’s comment is certainly more representative of most Suzuki teachers.

¹¹ It is interesting to note that her dissertation, Medford (2003) developed a program that combines certain elements of the Kodály and Orff approach with the Suzuki method. Repertoire is first introduced through solfège, using Kodály’s syllables and hand signals, and only then is a student asked to play the pieces on his instrument. A master’s thesis by Krigbaum (2005) applied Gordon’s music learning theory to Suzuki training by developing an audiation-based approach for Suzuki violin instruction. And finally, Kitts’ master’s thesis (1993) looked into the benefit of introducing Gordon’s rhythmic learning sequence to Suzuki piano students.

are noticing that ability among many of their students, but no such trend seems to have been observed by Suzuki teachers. Nowhere in the literature, even in magazine like the American Suzuki Journal, do we see any testimony that this method contributes to developing perfect pitch, although this method is used with students that are precisely at the critical age for developing such a skill. This could possibly be explained by the fact that this method does not attempt to develop an association between a specific sound and its syllable name, and no labelling of aural experience is introduced, something that is essential in the development of perfect pitch.

Another interesting point in this debate is linked directly to the development of ear playing. Although the Suzuki method requires that students listen repeatedly to their recordings and then “find” the notes on their instrument, the actual process for playing by ear is ambiguous and not clearly outlined in any of the literature¹². Krigbaum (2005) points out that Suzuki himself never offers a concrete process for how this learning should happen. That confusion often results in Suzuki students being taught to perform their pieces by rote, a process much closer to imitation than to playing by ear¹³. The teacher or the parent demonstrates while the child observes, then imitates. In certain cases, a child is taught “step-by-step, note-by-note, how to perform a piece of music through demonstration and verbal instruction” (p.77). Although students are performing without notation, they engage in a more passive process of imitation that does not reflect the ability to play by ear. The learning sequence where a student is searching for

¹² There are in fact very few teaching resources that offer concrete suggestions on how to actually teach ear playing. In *Jump Right In*, the sound-before-sign method book by Grunow, Gordon and Azzara (2000), and in Lowe and Gordon (2004) *Music Moves for Piano*, the authors recommend that students first be taught to sing certain songs by rote, then be invited to perform those songs on their instrument, with no further instruction on how to make this happen.

¹³ Adopting the definition in McPherson (2005), Musco (2010) provides a clear distinction between playing by ear, “a performance of pre-existing music learned aurally without the aid of notation” (p. 49), rote learning, “which entails aural processes but may also involve verbal or visual hints” (p. 50) and modeling, a “powerful tool for learning” (p.50) where the students get to imitate the teacher’s demonstrations. She then points out that many teaching materials promoting a sound-before-sight approach actually provide rote learning activities as opposed to ear playing ones. She also concedes that existing research often makes it difficult to distinguish ear playing from rote learning as the treatment protocols often mix the two.

the notes of a song on his instrument through a recall process of memorized patterns might actually not be well understood by many Suzuki teachers and in the end, the dominant sequence of teaching might rely more on demonstration and rote learning than on actual ear playing, a process that would generate little ear training. Also, once Suzuki students learn to read music, they start to depend on their music books to learn new pieces. They are still required to listen to their recordings, but the visual information from their music books often becomes their main guide. It could be argued that at that point, students often stop developing any form of aural skills.

Concerns about reading skills

Poor music reading has been the most criticized aspect of the Suzuki method. Teachers who depend on music notation to teach beginners have seriously questioned the absence of note reading in the early stages of music learning, suggesting that students might never reach an acceptable level of reading proficiency since they learn to rely so heavily on their ears rather than their eyes (How Teachers View, 1996; Musco, 2001; Hargrave, 2003; Garson, 2005;). Suzuki teachers do not agree with this critique, but they nevertheless have recognized that Suzuki students often have the reputation of being poor readers (Ballance, 2009; Erbin, 2009). Unfortunately, few studies have looked specifically at the effect of learning to play by ear on reading skills (Musco, 2010). However, when reviewing existing empirical research, it is possible to identify certain trends that clearly suggest there is no reason to be concerned.

Three studies have tested groups of instrumental students to find out if there is a link between the ability to play by ear and sight reading. Luce (1958, 1965) looked at the relationship between students' performance in sight-reading and their ability to reproduce short musical phrases by ear. A group of 98 high school instrumentalists were tested on original sight-reading

and ear-playing tests and the results indicate a significant relationship ($r = .50$, $p < .01$) between the two skills. She concluded that instrumental music education should include both, music reading and playing by ear. McPherson (1993) developed a theoretical model that outlines five distinct types of musical performance: sight-reading, performing rehearsed music, playing from memory, playing by ear, and improvising. Using a sample of high school instrumentalists, he wanted to clarify the relationship between these five musical skills. His findings show a positive correlation of $r = .40$ (and of $.55$ among the upper group of participants) between the ability to play by ear and the level of proficiency in sight-reading. His study also suggests that playing by ear contributes to overall musical growth and provides more enjoyable and meaningful learning. Bernhard (2004) investigated the effects of singing and playing melodies by rote in beginning band students. Statistics revealed a significant relationship of $r = .67$ between playing by ear and sight-reading. The results of these studies suggest that skills in playing by ear correlate with skills in music reading.

A number of other studies have looked at the impact of using a sound/aural approach to teach music students and the results are fairly consistent (Musco, 2010). No negative effect has been observed on sight-reading ability when aural modeling is used, and in some cases, there is evidence of the effectiveness of an aural approach to improve sight reading skills. An earlier study (Musco 2006) involves learning melodies by ear in order to play in an unfamiliar key. The results suggest that playing by ear may contribute to skill development, but most interestingly for us, both the experimental group (aural approach) and the control group improved significantly in sight-reading. In other words, learning songs by ear has the same positive impact on sight reading as a note-based approach. Smith (2006) examined the effect of playing songs by ear on the musical performance of middle-school instrumental music students. Subtest measurements

included music reading, aural response and ear-tune performance. Though trends in the data could be identified, none proved to be statistically significant. But it was clear that students who learned to perform by ear did not show a decrease in reading skill. The author concluded that it goes against prevailing attitudes that a student's skill in reading music will deteriorate if they spend time learning and performing songs by ear.

Haston (2004) assessed the effectiveness of teaching beginning wind instrumentalists using a sound-before-sight approach. The experimental group received an aural/modeling emphasis (singing while fingering their instruments, play-by-ear activities, call and response, and playing from printed music) and the other group had a visual emphasis (playing only from printed music). The aural/modeling group scored higher on sight-reading posttests, though not significantly. There were clearly no statistically significant differences between the sight-reading abilities of wind instrumentalists taught with an aural/modeling emphasis and those taught with a visual emphasis. The author concluded that teaching with an aural/modeling emphasis does not hamper students' music performance skills, and may in fact aid them.

Sperti (1970) adapted certain aspects of the Suzuki method to the teaching of the clarinet and conducted experiments to test the effectiveness of two different pedagogical approaches: one favouring playing by ear and the other one focusing on note reading. Both groups received class instruction using the same instructional material, but with different pedagogical procedures. The control group received 32 hours of established teaching practices based on note reading. The experimental group received 16 hours of lessons based on a comprehensive listening program and the use of rote teaching, after which they got an additional 16 weeks of score reading instruction. Both groups were tested for sight-reading performance and for subjective elements of performance like tone quality, technique and interpretation. The achievement of the subjects

in the experimental group was significantly superior to the control group in all categories of performance. This clearly showed that not only was there no negative impact on the ability to read music with the group of students who first learned to play the clarinet by ear, but they achieved superior results in sight-reading.

Fincher (1983) evaluated the impact of rote playing upon sight-reading skill development in group classes of beginning adult piano students. This study attempted to answer long-held beliefs by piano teachers that a student will learn to sight read faster if he does not hear the pieces played in advance, which will lead to playing by ear instead of developing reading skills. The experiment was conducted with four classes of beginning adult piano students where two experimental groups learned to play by rote before seeing the printed page and two control groups learned through reading only. The rote students listened several times to a piece to grasp its aural image, then tried to play by imitation; only after several attempts of playing by ear, was the printed page introduced and the student continued to learn the piece by reading. Results indicate that the aural learning approach “dramatically affected” sight-reading skills in a positive way as the students from the ear-playing groups scored much higher in both pitch-reading and rhythm-reading. This study suggests that playing the melody by rote during the prestudy procedure enhanced the impact on sight-reading skill development.

Glenn (1999) compared two methods of teaching strings to sixth-grade beginning students over a full school-year period. One emphasized rote instruction in the early stages and the other was notation-centred from the start. Results indicate that students in the ear-playing approach performed as well as the students in the notation-based method in all performance tests, including sight-reading. Interestingly enough, students who received the extensive period of rote instruction demonstrated a significantly higher rate of continuation: 70% pursued lessons after

the test year compared to only 32% in the notation-centred class. Also, the rote-learning group reported being more motivated to play music than the other group. Glenn recommended that students should get to a level where technical gestures have become automatic when they play before being introduced to musical notation.

Studies looking into the effect of playing by ear on the development of music reading skills may not be numerous, but all the experimental investigations that have been reviewed here show evidence that playing by ear does not have a negative impact on reading abilities, and might have a positive effect.

Conclusion

It was interesting to note that Shinichi Suzuki developed the mother-tongue approach at the same time as many other music educators and researchers were debating similar ideas. The period was particularly favourable for associating music learning and language development and many educators came to the conclusion that music should first be learned through ear playing. This paper has shown that there is strong evidence supporting the value of playing by ear when first learning a musical instrument; the sequence should proceed “from sound to symbol” so students develop the ability to “think in sound.” However, it is also clear that playing by ear does not guarantee that when musical symbols are introduced, students will automatically be able to inwardly hear and comprehend notation. The importance of labelling sounds is an important step to insure good aural skills. This might be even more essential for students who are learning an instrument like the piano where pitch is a given and where the temptation to learn by rote is very strong because of the complexity of playing with both hands. There is real concern that Suzuki students could develop poor aural skills. On the other hand, there is no evidence supporting the belief that beginners who are taught by ear will never reach the same level of reading proficiency

as students who are introduced to notation at their initial lessons. There are no empirical studies that have ever demonstrated that sound-before-sight instruction harms students' abilities to read. While some studies indicate no effect on music reading abilities, other research shows that playing by ear improves them.

It is clear that more research is needed to develop a better understanding of the effects of the mother-tongue approach as applied in the Suzuki method. Several researchers discussed above (Fincher, 1983; Glenn, 1999; Haston, 2004; Musco, 2006; Sperti, 1970) developed their own experiments where they provided music lessons through an aural-modeling approach and measured its impact on various skills. But no studies have been conducted so far that have specifically assessed how well Suzuki students can hear notation inwardly before reproducing it on an instrument. It would be interesting to evaluate the mental process followed by Suzuki students once reading has been introduced. Are they progressing from the visual stimulus to the proper movement action (like any conventional student) or do they progress from the visual stimulus to the auditory stimulus (inwardly heard tone), then the anticipation of motor act and finally the movement action? There has also been no study to evaluate how many Suzuki students are actually learning new pieces by ear, through a process of trial of error, and how many are learning through rote learning where they observe and repeat the same action. Assuming that Suzuki students do learn to play by ear in the early stage of music lessons, there have been no studies to demonstrate if those students retain that ability after musical reading is introduced. Once reading has been superimposed on the process of playing by ear, if the ability to play by ear is not continued and the relationship sound-action is not consistently emphasized, it could be replaced by the symbol-action relationship. It would be interesting to evaluate 1) to

what extent Suzuki students keep developing ear-playing skills and, 2) whether they have greater facility than non-Suzuki students with skills associated with ear playing, like improvisation.

References

- Arimitsu, T. (1982). *The Suzuki Method of Instruction Applied to Art Education for Young Children in America*. Retrieved from ProQuest Digital Dissertations. (AAT 0550189)
- American Music Teacher*. (2011). Retrieved February 2011.
<http://www.mtna.org/Publications/AmericanMusicTeacher/tabid/296/Default.aspx>
- American Suzuki Journal*. (2011). Retrieved February 2011. <http://suzukiassociation.org/journal/>
- Ballance, R. M. (2009). Lessons in note reading from a tenor viol experience. *American Suzuki Journal*, 37(4), p. 54.
- Balodis, F. (1993). *Sunshine*. Kanata, ON: Music for Young Children.
- Balodis, F. (1996). *Sunrise*. Kanata, ON: Music for Young Children.
- Bamberger, J. (1996). Turning music theory on its ear. *International Journal of Computers and Mathematical Learning*, 1(1), 33-55.
- Bamberger, J. (1999). Learning from the children we teach. *Bulletin for the Council for Research in Music Education*, 142, 48-74.
- Bernhard, H. C., II. (2004). The effects of tonal training on the melodic ear playing and sight reading achievement of beginning wind instrumentalist. *Contributions to Music Education*, 31(1), 91-107.
- Bigler, C. G. and Lloyd-Watts, V. (1979). *Studying Suzuki Piano: More than Music*. Athens, OH: Senzay.
- British Journal of Music Education*. (2011). Retrieved February 2011.
<http://journals.cambridge.org/action/displayJournal?jid=BME>

- Chang, D.-L. (1999). *The effects of different incidental listening experiences on performance achievement and developmental music aptitude of first-grade Suzuki violin and non-violin students*. Retrieved from ProQuest Digital Dissertations. (AAT 9948078)
- Clavier Companion*. (2011). Retrieved February 2011. <http://www.claviercompanion.com/>
- Comeau, G. (1998). *10 Teachers' Viewpoints on Suzuki Piano*. Ottawa, ON: CFORP.
- Couperin, F. (1716/1974). *L'Art de toucher le clavecin*. (M. Halford, Trans.). Van Nuys, CA: Alfred Publishing Co. (Original work published 1716).
- Durand, M. (1996). *Approche psycho-pédagogique de l'enseignement du piano*. (Piano pedagogy course given at Université de Montréal).
- Erbin, Z. (2009). A mother-tongue approach to reading. *American Suzuki Journal*, 37(4), p. 55-59.
- Fincher, B. J. (1983). *The effects of playing the melody by rote during the pre-study procedure upon sight-reading skill development of beginning class piano students*. Retrieved from ProQuest Digital Dissertations. (AAT 8403971)
- Garson, A. (2005). Suzuki myths. *American Suzuki Journal*, 33(3), p. 56-58.
- Glenn, K. A. (1999). *Rote vs. note: The relationship of working memory capacity to performance and continuation in beginning string classes*. Retrieved from ProQuest Digital Dissertations. (AAT 9927738)
- Gordon, E. E. (1984). *Learning Sequences in Music: Skill, Content, and Patterns*. Chicago, IL: G.I.A. Publications.
- Gordon, E. E. (2001). *Preparatory Audiation, Audiation, and Music Learning Theory: A Handbook of a Comprehensive Music Learning Sequence*. Chicago, IL: GIA Publications.

- Gordon, E. E. (2003). *A Music Learning Theory for Newborn and Young Children*. Chicago, IL: GIA Publications.
- Gordon, E. E. (2004). *The Aural-Visual Experience of Music Literacy: Reading and Writing Music Notation*. Chicago, IL: GIA Publications.
- Grunow, R. F., Gordon, E. E., & Azzara, C. D. (2000). *Jump Right In*. Chicago, IL: GIA Publications.
- Hargrave, C.W. (2003). A Suzuki reading method. *American Suzuki Journal*, 31(2), p. 36-38.
- Hargrave, C.W. (2010). Suzuki piano in the Americas: Our roots. *American Suzuki Journal*, 38(2), 16-18.
- Haston, W. A. (2004). *Comparison of a visual and an aural approach to beginning wind instrument instruction*. Retrieved from ProQuest Digital Dissertations. (AAT 3132535)
- Herman, E. (1981). *Shinichi Suzuki: The Man and His Philosophy*. Secaucus, NJ: Warner Bros.
- How Teachers View Playing by Ear. (1996, September). *Clavier*, 35(7), 6-9.
- Hwang, L.-C. (1995). *The development of lesson plan sourcebook for Suzuki piano school*. Retrieved from ProQuest Digital Dissertations. (AAT 9539820)
- International Journal of Music Education. (2011). Retrieved February 2011. <http://ijm.sagepub.com/>
- Journal of Music Teacher Education*. (2011). Retrieved February 2011. <http://jmt.sagepub.com/>
- Kataoka, H. (1985). *Thoughts on the Suzuki Piano School*. Princeton: Birch Tree Group Ltd.
- Kelly Kirby, M. B. (1939). *The Kelly Kirby Kindergarten Piano Method*. Oakville, ON: F. Harris Music.
- Kendall, J. D. (1978). *The Suzuki Violin Method in American Music Education*. Secaucus, NJ: Warner Bros.

- Kitts, W. L. (1993). *The effects of Edwin Gordon's rhythmic learning sequence on private traditional piano and Suzuki piano students*. Retrieved from ProQuest Digital Dissertations. (AAT 1356576)
- Kochevitsky, G. (1967). *The Art of Piano Playing*. Secaucus, NJ: Summy-Birchard.
- Koppelman, D. (1978). *Introducing Suzuki Piano*. San Diego, CA: Dichter Press.
- Krigbaum, C. D. (2005). *The development of an audiation-based approach to Suzuki violin instruction based on the application of Edwin E. Gordon's Music Learning Theory*. Retrieved from ProQuest Digital Dissertations. (AAT 1427646)
- Lancaster, E. F. (1984-85). The American Beginning Piano Method. The Yamaha Music Education system. *The Piano Quarterly*, 33(128), 19-33.
- Landers, R. (1984). *The Talent Education School of Shinichi Suzuki—An Analysis*. Smithtown, New York: Exposition Press.
- Lee, A. J. (2007). *Two non-traditional cello methods for young beginning cello students: A mixed methods study*. Retrieved from ProQuest Digital Dissertations. (AAT 3291782)
- Lee, S.-Y. (1992). *The Suzuki beginner: A teacher's guide to the Suzuki principles of violin*. Retrieved from ProQuest Digital Dissertations. (AAT 9230395)
- Lee, S.-Y. (2001). *Left-hand technique in the Suzuki Cello Method: An analytical overview and comparison with contemporary cello pedagogy*. Retrieved from ProQuest Digital Dissertations. (AAT 0802806)
- Lo, S. Y.-D. (1993). *A reading course for Suzuki piano students*. Retrieved from ProQuest Digital Dissertations. (AAT 9416618)
- Lowe, M. & Gordon, E. E. (2004). *Music Moves for Piano*. Chicago, IL: GIA Publications.

- Luce, J. R. (1958). *Sight-reading and ear-playing abilities related to the training and background of instrumental music students*. Retrieved from ProQuest Digital Dissertations. (AAT 5805901)
- Luce, J. R. (1965). Sight-reading and ear-playing abilities as related to instrumental music students. *Journal of Research in Music Education*, 13(2), 101-109.
- Mainwaring, J. (1941). The meaning of musicianship: A problem in the teaching of music. *British Journal of Educational Psychology*, 11(3), 205-214.
- Mainwaring, J. (1947). The assessment of musical ability. *British Journal of Educational Psychology*, 17(1), 83-96.
- Mainwaring, J. (1951). Psychological factors in the teaching of music. Part II: Applied musicianship. *British Journal of Educational Psychology*, 21(3), 199-213.
- McPherson, G. E. (1993). *Factors and abilities influencing the development of visual, aural and creative performance skills in music and their educational implications*. Retrieved from ProQuest Digital Dissertations. (AAT 9317278)
- McPherson, G. E. (2005). From child to musician; Skill development during the beginning stages of learning an instrument. *Psychology of music*, 33, 5-35.
- McPherson, G. E. and Gabrielsson, A. (2002). From sound to sign. In R. Parncutt and G. E. McPherson (Eds.), *The Science and Psychology of Music Performance*, (pp. 99-115). New York: Oxford University Press.
- Medford, C. D. (2003). *Teaching musicality from the beginning of a child's instruction: The GBYSO Intensive Community Program and how it incorporates the philosophies of Kodaly, Orff, and Suzuki*. Retrieved from ProQuest Digital Dissertations. (AAT 3084848)

- Menczel, V. (1997). *The application of the Suzuki method in Israel and the United States: A comparative case study*. Retrieved from ProQuest Digital Dissertations. (AAT 9737473)
- Moorhead, M. N. (2005). *The Suzuki Method: A comparative analysis of the perceptual/cognitive listening development in third grade students trained in the Suzuki, traditional, and modified Suzuki music methods*. Retrieved from ProQuest Digital Dissertations. (AAT 3167512)
- Musco, A. M. (2001). *Survey: Rote learning in instrumental music*. Unpublished survey reported in Musco (2010).
- Musco, A. M. (2006). *The effects of learning songs by ear in multiple keys on pitch accuracy and attitudes of band students*. Retrieved from ProQuest Digital Dissertations. (AAT 3251862)
- Musco, A. M. (2010). Playing by Ear: Is Expert Opinion Supported by Research? *Bulletin of the Council for Research in Music Education*, 184, 49-63.
- Music Educator's Journal*. (2011). Retrieved February 2011. <http://mej.sagepub.com/>
- O'Neill, A. A. M. (2003). *Parent as home teacher of Suzuki cello, violin, and piano students: Observation and analysis of Suzuki method practice sessions*. Retrieved from ProQuest Digital Dissertations. (AAT 3119251)
- Perkins, M. M. (1993). *A comparative study of the violin playing techniques developed by Kato Havas, Paul Rolland, and Shinichi Suzuki*. Retrieved from ProQuest Digital Dissertations. (AAT 9320157)
- Posner, M. I., Nissen, M. J. and Klein, R. M. (1976). Visual dominance: An information - processing account of its origins and significance. *Psychological Review*, 83 (2), 157-171.

- Powell, M. C. (1988). *Focus on Suzuki Piano*. Secaucus, NJ: Warner Bros.
- Romeo, K. W. (1986). *A Five Year Comprehensive Curriculum for Young Violinists (Suzuki, String, Music)*. Retrieved from ProQuest Digital Dissertations. (AAT 8618836)
- Rousseau, J.-J. (1762/1979). *Emile, or On Education*. (Alan Bloom, Trans.). New York, NY: Basic Books. (Original work published 1762).
- Rutledge, C. J. (1983). *An Application of the Philosophy of Shinichi Suzuki to Selected American and European Piano Pedagogical Materials*. Retrieved from ProQuest Digital Dissertations. (AAT 8413733)
- Schleuter, S. L. (1997). *A Sound Approach to Teaching Instrumentalists*. Kent, OH: Kent State University Press. (Original work published in 1984).
- Schwalje, A. T. (2008). *Beginning bassoon instruction: A curriculum based in part on the teachings of Shinichi Suzuki*. Retrieved from ProQuest Digital Dissertations. (AAT 3323922)
- Scott, L. P. (1987). *An Investigation of Attention and Perseverance Behaviors of Preschool Children Enrolled in Suzuki Violin Lessons and Other Preschool Activities*. Retrieved from ProQuest Digital Dissertations. (AAT 8717531)
- Smith, N. (2006). *The effect of learning and playing songs by ear on the performance of middle school band students*. Retrieved from ProQuest Digital Dissertations. (AAT 3255935)
- Smolen, S. J. (2000). *Teaching music as a living art: Drawing the best from Waldorf and Suzuki. One string pedagogue's integration of the philosophy behind the new impulse in Waldorf music education, and the Suzuki Method for stringed instruments*. Retrieved from ProQuest Digital Dissertations. (AAT 3065533)

- Sperti, J. (1970). *Adaptation of certain aspects of the Suzuki method to the teaching of the clarinet: An experimental investigation testing the comparative effectiveness of two different pedagogical methodologies*. Retrieved from ProQuest Digital Dissertations. (AAT 7124833)
- Stamou, L. (1998). *The effect of Suzuki instruction and early childhood music experiences on developmental music aptitude and performance achievement of beginning Suzuki string students*. Retrieved from ProQuest Digital Dissertations. (AAT 9909369)
- Starr, C. and Starr, W. (1983). *To Learn With Love*. Secaucus, NJ: Warner Bros.
- Suzuki Association of the Americas, (2010). Retrieved September 26, 2010, from <http://suzukiassociation.org/>
- Suzuki, S. (1969). *Nurtured by Love. A New Approach to Education* (Waltraud Suzuki, Trans.). New York: Exposition Press.
- Suzuki, S. (1981). *Ability Development From Age Zero*. Athens, OH: Senzay. (Original work published in Japanese in 1969).
- Suzuki S. (1986). *Talent Education for Young Children*. New Albany, IN: World-Wide Press. (Original work published in Japanese in 1969).
- Suzuki, S. (1989). *Shinichi Suzuki: His speeches and essays*. Secaucus, NJ: Warner Bros.
- Suzuki, S. (1993). *How to Teach Suzuki Piano*. Secaucus, NJ: Warner Bros.. Suzuki Association of the Americas (2010). Retrieved October 2010. <http://suzukiassociation.org/>
- Tommis, Y., and Fazey, D.M.A. (1999). The acquisition of the pitch elements of music literacy skills by 3–4 year-old pre-school children: A comparison of two methods. *Psychology of Music*, 27(2), 230-244.
- Velleman, B. L. (1978). Speaking of jazz. *Music Educators Journal*, 65 (2), 2831.

Wagner, J. (1985). Ear before Eye: The Yamaha Method. *Clavier*, 24 (1), 10-13.

Whiteside, A. (1997). *Abby Whiteside on Piano Playing*. Portland OR: Amadeus Press. (Original work published 1938).

Williams, M. K. (2000). *An alternative class piano approach based on selected Suzuki principles*. Retrieved from ProQuest Digital Dissertations. (AAT 9976972)

Yamaha Music Foundation (2003). *Yamaha Music Education System*. Yamaha Corp.