The Spirit of Zoltán Kodály in Special Education: Best Practices in Hungary

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Luca Tiszai graduated at Ötvös Lorand University in 2000 in special education and earned her second degree in music education in 2004. In 2013, she earned her masters degree in Andragogy at Pazmany Péter Catholic University. Her musical background is based on the Kodály method, and her area of expertise lies in working with individuals with different disabilities. Since 2007, she has worked with individuals living with severe disabilities. Luca has developed a pedagogical method called *Consonante* and has also established a performing orchestra with her clients. She currently teaches at the University of Szeged Juhasz Gyula, Faculty of Education Institute of Special Education.

Abstract:

The article describes the best practices of special education and music inspired by the intangible heritage of Zoltán Kodály. Kodály emphasized the role music plays on the intellectual, emotional, physical, social, and spiritual development of the individual. The aim of the Kodály based preschool program is to build a firm foundation for further music learning using a wide range of singing games. This playful musical introduction can be almost fully adapted to special education. In addition to the preschool program, different methods have been developed and adapted. This article describes two receptive methods, namely: (a) the practice of acoustic schedule and movement-music program of Klára Kokas, and (b) two methods for instrumental music (the ULWILA and the Consonate methods).

Keywords: Special education; Hungary; methods; music teaching; music therapy

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Preamble and Context

Zoltán Kodály emphasized the important role that music plays on the intellectual, emotional, physical, social, and spiritual development of the individual. His understanding of this field demonstrates his awareness of the pedagogical and therapeutic perspectives of any kind of music education (Tiszai, 2015). Due to Kodály's educational reform, music education became part of the compulsory curricula in Hungarian elementary schools from the late 1950s to the end of communist rule in 1989. As a result, many Hungarian educators were well trained on musical instruments. Music was a natural and accessible tool for both general education and in particular, special education. Although the number of music classes and the level of musical training in the average population have decreased radically in recent years, Kodály's holistic approach toward music pedagogy penetrated and positively affected many different levels of special education in Hungary.

Transfer Effect in the Light of Recent Research

Kodály (1941/2007) accentuated the comprehensive network of the transfer effects of music. He believed that "musical education contributes to the many-sided capabilities of a child, affecting not only specific musical aptitudes but his general hearing, his ability to concentrate, his conditional reflexes, his emotional horizon and his physical culture" (p. 93). In order to gain concrete scientific evidence of his observations, Kodály initiated research in how music education can help students improve their overall social and developmental skills. One of his students, Klára Kokas, and her colleagues, were pioneers in proving the transfer effect of music education (Kokas, 1969). The result of this four-year longitudinal study has been criticized, because it could only prove correlation, which does not necessarily mean

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causation. This was, however, one of the first scientific investigations about the importance of daily music lessons in the cognitive and socio-emotional development of a child.

The development of neuroscience made it possible to explain Kodály's observations, gaining a more detailed knowledge about the widespread benefits of music education experienced during intellectual, social, and emotional development. The different neuroimaging techniques have been reinforcing the correlation between literacy and numeracy skills, spatial- temporal reasoning, and music education. Musical training as a complex multisensory and motor activity strengthens connections between regions of the brain. In music perception and production, for example, visual decoding, auditory perception, and fine motor systems are repeatedly executed. Skill transfer occurs when a learned skill impacts on the performance in another context. Research on the transfer effect pointed out "near transfer" skills is where the same skill is used in different activities, such as auditory processing on speech perception, score reading on reading ability, or temporal sequence processing and speech production (Chobert, François, Velay & Besson, 2014; Kraus et al, 2014; Overy, 2003; Patel, 2014; Tierney & Kraus, 2013). Hallam (2010, p. 6) described and categorized the following areas of skill transfer: perceptual processing of sound (temporal, pitch, and rule governed grouping information), fine motor skills, emotional sensitivity, conceptions of relationships between written materials and sound (reading music and text), and the memorization of extended information (music and text).

In the case of far transfer, the connection between the training and transfer domains is not evident, such as the correlation between musical training and spatial, verbal, and mathematical performances. One of the possible explanations of far transfer is the theory of neural connection. This theory suggests a neurological connection between music and spatial processing. (Hanson, 2003).

The Significance of Early Childhood Education

According to the Kodály Concept, it is vital that children should be able to read music before instrumental training. The first stage of establishing musical literacy is to improve rhythmic skills and teach different intervals and musical patterns. Although most of the students struggling with intellectual challenges are not able to accomplish the complex task of sight-reading, these students also benefit from Kodály's early training program.

Katalin Forrai, one of Kodály's students, developed the preschool program. Her book (1998) entitled *Ének az óvodában* [Singing in Kindergarten, translated to English as Music in Preschool] was a basic training manual for future special educators. In addition to the songs and other materials, Forrai provided an extended theoretical basis for general music education explaining the role that music plays in the development of a child. The method uses a wide range of children games involving spontaneous and learned body movements, vestibular experiences, and different visual symbols. Kodály (1951/1974) pointed out the connection between music-movement and emotional involvement saying that:

> Children's singing games allow a more profound insight than anything else into the primeval age of folk music. Singing connected with movements and action is a much more ancient, and, at the same time, more complex phenomenon than is a simple song (p.46).

The aim of the preschool program is to cultivate a solid foundation for further music learning using wide range of singing games. This playful musical introduction can be almost fully adapted to special education.

Forrai provides different singing games as the basis for learning. For example, dyadic singing games involving sensory perception, body image, and gross and fine motor skills, are used to reinforce social connections. Other children's games affect social and interpersonal behaviour skills, namely: cooperation, turn taking, imitation, and receptive and expressive communication. Other games provide opportunities for practicing different roles in the community as soloist, listener, leader, and supporter (Davies & Richards, 2002). Games

accompanied with movement help to cultivate mobility and rhythmic coordination, ultimately improving fine motor skills.

In addition to the positive impact on cognitive and motor development, Forrai mentioned the emotional outcomes of musical activities. Similarly, Kim, Wigram and Gold (2009, p. 390) describe music as an "essentially emotional, relational and motivational medium" talking about musical attunement as "an intuitive and moment-by-moment process, sensitively tuning into, elaborating and regulating each participant's behavioural and emotional expressions through musical engagement." According to the theory of Daniel Stern (1985, p. 135), this "reciprocal, rhythmically matched and synchronized communication, using various forms of vocal exchange, eye contact, facial expression and bodily movement" is an essential part of both nonverbal interactions and music (Kim, Wigram & Gold 2009). Thus, in the case of limited verbal abilities, music is a powerful vehicle for interaction and social/emotional development. In addition to involve people into a meaningful preverbal or nonverbal communication, music is widely used for helping children to express their feelings and emotions, decreasing challenging behaviours such as aggression and self-aggression, changing negative feelings, increasing self-esteem, and preventing or alleviating secondary handicaps (Oldfield, 1999; Stokes & Sianson, 1992; Warner, 2007.)

Music in the Daily Practice of Special Education in Hungary

In Hungary, music training became a part of daily life in special educational settings. With regards to children living with intellectual disabilities, Hungary has always had a long tradition of segregated educational practices. In fact, Jakab Frím established the first segregated institution in 1875. It is important to mention that Frím wanted to archive real educational goals with his students. He also wrote about the educational power of music in special settings (Tiszai, 2013). Although the education of children with cognitive impairment was not a continually developing process, the ideas of Zoltán Kodály resonated with special

education practitioners in Hungary. Moreover, the overall objective and purpose of using music to reach comprehensive educational, rehabilitative, and developmental goals is highly congruent with some of the methods used within music therapy (Varsakovszkyné-Velsz, 1998; Daveson and Edwards, 1998; Stephenson 2006).

The Use of Receptive Experience: Acoustic Schedule and the Kokas Method

Acoustic Schedule: Leitmotifs in the Daily Routine

Children are able to understand the world through auditory experiences. For example, a young child can connect the sound of boiling water to an upcoming meal. The practice of special education in early childhood and in the case of individuals living with severe and multiple disabilities, reinforces this naturally occurring ability using an acoustic schedule, which is an aural communication system. People living with severe disabilities usually have difficulties locating themselves in space and time. In order for students to understand the structure of select activities, different calendar systems are used as a means of providing consistency and stability with both personal and group schedules. Such consistency and stability benefits both students and teachers within special education settings. For those who have difficulty connecting events with pictures or objects, an acoustic schedule based on music or environmental sounds helps to decrease their anxiety and promote emotional security (Kern & Humpal, 2012).

In order to increase the possibilities of natural sounds in early childhood education, it is highly beneficial to consistently couple a selected song with a specific daily activity, known as a schedule song. For example, using specific songs for waking up, dressing up, breakfast, etc. This coupling can positively affect overall knowledge and understanding of everyday routines, creating a positive and conducive learning environment. The so-called 'schedule-song' or any other kind of musical reinforcement of an event, object or person, especially when sung by the primary caregiver, also creates a deep emotional connection, which also

helps the children to gauge their surrounding environment. The song can range from a small melody to a song with a specific form. Moreover, the caregiver can use so-called flexible songs, which consist of both a stable and a changing element, such as a dressing song with a given structure and pattern, and a changing part where specific clothing parts can be named.

This system is highly similar to the leitmotif system of Wagner. Unlike natural sounds, leitmotifs form a conventional sign system: a melody or a motive that denotes a person, an object, a character, or situation. The repetition of the same leitmotiv provides a basis for understanding the plot: the theme easily associated with the idea, object, or character without any verbal explanation. Furthermore, these melodies are consistently changing and developing during the listening experience. This constant change provides additional information about the character's inner state, helping to anticipate forthcoming actions or connect the audience to someone or something not present on the stage. Since leitmotifs help orient students in approximately 15 hours of music, they have both a structural and connective function.

The leitmotif system is also used in cinema, with the most famous example being the music of the Star Wars by John Williams. Hearing the Force theme, for example, became an emblematic symbol of the film. The success of Williams' idea proved that this kind of musical association is effective, even if the audience does not pay special attention to understand and decode the system. Similarly, the acoustic schedule helps the orientation of nonverbal students in space and time. Furthermore, the human voice is highly sensitive, thus the motive sung has a message about the singer's inner state. This practice also provides security for two reasons. First because of the orientation, and second because the communication is more balanced by singing. In essence, it is difficult to shout, rush someone, or be harmful when singing. Moreover, melodies simultaneously help the caregiver to express

positive feelings and tame any unpleasant feelings, which ultimately leads to an honest, learnable, and predictable learning environment.

A Receptive Method of Klára Kokas

Klára Kokas (1929-2010) was a Hungarian music educator and professor of psychology and pedagogy. “As Kodály's follower the original question she asked, was: How could music really be everyone's and how could it be brought closer to children?” (Forgács, 2008, online). The unique method of Klára Kokas facilitates a deep musical understanding through the repeated listening of selected short high-quality classical masterpieces. Participants share their emotions by the freely improvised movements of their body, which Kokas defines as dances. A close analysis of these dances reveals that participants’ movements are often synchronized with more than one significant characteristic of the musical piece they are listening to. For example, these dances express changes in tempo, melody, rhythm, and/or dynamics. Although Kokas did not establish a theoretical background for her program, Daniel Stern’s theory about vitality affects and the theoretical framework of Embodied music cognition provides a theoretical basis for understanding the nature of these dances. According to Kokas (2003, pp.1-5), “they explore – in freely chosen order but in their indivisibility – rhythm, melodic cadences, shifts, in consonance, harmony, responses to each other, their dialogues, their meetings, the entering, the departing, or the harmonious blending of the different parts.” Zsuzsa Pásztor, a professional musician and a researcher of music and movement, made video analyses about the movements of the children. She explains (2003) that the spontaneous bodily response to sound is philogenetically much older than the intellectual concepts, thus, small children are able to perceive and respond to complex musical patterns that they would not be able to approach intellectually. Studying mother-infant communication, Daniel Stern described the phenomenon of affective attunement, moment-by moment dynamic changes in the behaviour of the communication partners. These

changes are characterized by cross-modal matching of intensity contour or "kinetic qualities of feelings" and, "dynamic micro-momentary shifts in intensity over time that are perceived as patterned changes within ourselves and others" (1985, p. 263). Stern described that in addition to early preverbal play, different artistic forms, especially dance and music, are in use. For example, the unity of the dance and the music in a ballet performance is based on the matching contour of sound and movement in tempo, stress and accent, force, and other characteristics. Children are highly sensitive for these basic forms of expressions, thus, they enjoy playing with vitality affects, imaging and imitating the character of music with movement. However, this form of musical game is also a way of learning; they explore deeper and deeper layers of a classical piece including timing, harmony, form, structure, timbre, and the imagination and the emotional experience of the child. As Pásztor (2003) explains, this is a process of learning through bodily experience: translating complex musical signals to familiar experience through familiar movement-patterns. This is the way of musical understanding that Leman (2007) describes as embodied music cognition. Kokas (2003) describes this process:

> It is easy to adapt to music; one can mark the rhythm with one's feet, skip and lean with the tune, turn with its turns, vary with its variables. Music starts the ball of our imagination rolling: it sets the tempo of the movement and traces out the limits of its progress. Music always shows where the movement starts out from, and also where it ends. This is how the game begins: from its initial, confused state, the movement settles into form and assumes a structure in time. Individual imagination in this case manifests itself in the originality of movements. It is a testimony of the children's reaching a certain stage of development, when they start devising the finale of their performance. In other words, they remember and anticipate the closing movement. The "finale" – its inner anticipation – is the first indication of their ability to think in music. (online)

The participants in Kokas' method are also encouraged to imagine stories in which they play the protagonist role and express the story through dance. Participants can dance solos, sharing their experience with the group, following their dance with verbal explanation. As Deszpot (2011, par. 3) mentioned, this creative progress "could work as a communication

channel between the personality and its hidden dimensions." Participants can dance alone, or in pairs/small groups. The unconditional acceptance and intimacy of the Kokas method promote social understanding and other interpersonal skills. "As a learning method, the music-movement program is extremely complex; it affects the entire personality, including the intellectual, emotional and physical domains." (Deszpot, 2011, online)

Kokas worked with inclusive groups and diverse professionals adapted her method to different groups living with disabilities. The application of the method to individuals living with severe disabilities shows that many of these individuals are skilled in full-attention and passionate listening to classical music. The method seems to be useful even without imaginative-cognitive verbal narratives.

Alternative Instrumental Music Teaching Methods for Individuals Living With Intellectual Disabilities in Hungary

Playing a musical instrument is considered to be the most complex human activity (Zatorre et al., 2007). Referring to the general population, several authors have pointed out that musical talent in general terms does not exist, because the musician, the listener, and the composer possess different aspects of musical talent, like the ability to improvise, perform, play a musical instrument, sing, compose, or to receive and own music with emotion (Gembris, 2005; Gyarmathy, 2002; Kokas, 1999; Révész, 1953). As Hallam (2006) mentioned, "individual musicians have differing strengths and weaknesses within their profile of musical skills" (p. 427). However, musical ability is traditionally associated with motor skills (Gilbert, 1981) and sensory discrimination skills (Seashore, Lewis & Saetveit, 1960). The lack or dysfunction of these skills covers the existing musical talent. Many tests have been developed in order to measure the grand variety of identified musical skills, but they are rarely useful to discover the nature of the musicality of people with damaged sensory or motor skills. As Professor Gerald Hüther (2009) pointed out, one of the most precise fine

motor activities in the whole body is the control of the vocal cords. Individuals with severe motor impairment usually sing off-key. This is not an obvious sign of the lack of inner hearing but rather the result of the incapacity to control their vocal cords. The same problem manifests itself in the case of producing rhythm: the inability of moving in time with a rhythm is a possible consequence of a delayed motor response. The complexity of different musical activities is not an obstacle for music education. To the contrary, it offers different opportunities for participation. The evaluation of the musical talent of individuals living with different disabilities could offer a key for using alternative methods based on their observed musicality.

ULWILA-Method Based on Coloured Notes

Kodály strived to make high-quality music education available for everyone (Szőnyi, 1973). Traditional music schools are rarely open for children with limited intellectual skills. Anna Vető, as a special education student, adapted the coloured-note method of Heinrich Ullrich. Ullrich, a German special needs therapist-music teacher, was aware of the fact that the inability to read normal sheet music served as the greatest impediment for these individuals to make music collectively. Ullrich established a new method of reading music with the help of a colour scheme that replaces the 5 bar line system. Each tone of the diatonic scale has a different colour. These colours, which appear in the score, are also indicated beside the strings, pipes, and keys of the instruments. According to Ullrich's method, the children can match a tone with its corresponding colour without even knowing the names of the colours. The semitone is simply denoted by the two colours, which the tone is between.

The marking of the rhythm is also simple. The quarter note is a full circle, a half note is two circles interlinked, the whole note consists of four circles, and an eighth note is a semicircle. The musical rest is marked by a blank hexagon. Further rhythmic values follow the aforementioned rules. Instead of bar lines, the notation uses signs for the strong beat. The

method uses dark colours for lower tones and light colours for the upper tones. Therefore, the visual manifestation of the notation supports musical understanding. Skilled players after years of learning are able to master the ability of musical reading. In fact, some of these musicians can even play from a score. (Ullrich-Vető, 1996; Bakos, 2014).

One of the most important characteristics of this method is that it teaches music in groups, contrary to the western tradition which is based on a method of instruction where musicians gain experience through individual instrumental lessons. Anna Vető recognized the potential of this method as well the similarities with the spirit of Kodály. As Kodály also accentuated, singing or playing together is remarkably important because of the sense of community. The musicians have to learn to pay attention to one another, ultimately adjusting their personal creative expression to the common performance. In addition to the special connections between the musicians, this creative and sensitive attention has a strong role in community building. As Forgács reported (2008, par. 5):

> Kodály's idea about making music accessible to everyone inspired many musicians and music teachers to introduce music to the field of special needs. In the past decades an increasing number of musicians and music teachers have started teaching disabled children. They have used the Ulwila method for example, which has the primary aim of enhancing children's musical and cognitive development. Although this is not considered music therapy, it is thanks to this method that several orchestras have been formed in which children can not only experience music, but also a sense of creation, togetherness and appreciation in their community.

This method became known and used in nationwide in Hungary. Many of the first music students are members of the Parafonia, a well-known performing orchestra. Different professionals use this method, making music with children and adults with variable abilities. In addition to the previously mentioned musical and non-musical benefits of using music in special educational settings, public performances also play an important role of social inclusion. The theory of Community Music Therapy emphasizes the socio-cultural context of music promoting solidarity and social change, “using music to bridge the gap between individuals and communities”. (Ruud, 2004, p.12)

Consonante-Method Based on Vitality Affects

Decoding musical notation means translating specific codes to sequential motor activity with metric precision and simultaneously being aware of a wide range of multi-sensory feedback (Wan & Schlaug, 2010). It is a complex intellectual activity even with the simplification of the colour-note system. However, individuals living with severe cognitive and motor impairments are able to appreciate music and perform highly musical movements. Furthermore, many of these people take pleasure in imitating and responding to surrounding environmental sounds by singing, whistling, and clapping. Stern (2010) explained these connections between the perceived music and performed movements as vitality affects: cross-modal matching of the contours of behaviours. Spontaneous and rhythmically synchronized body movements upon hearing music are also considered as an innate human behaviour (Eerola, Luck, & Toiviainen 2006; Styns, van Noorden, Moelants, & Leman, 2007; Kirschner & Tomasello, 2009; Toiviainen, Luck & Thompson, 2010). Human beings seem to have an "innate musicality" (Ansdell, 2015, p. 109). The Consonante Method, based on this preconscious innate response to music using modified instruments, suits the motor patterns of the musician. The method was worked out by the author in Ipolytölgyes, in Szent Erzsébet Home, a nursing home for people living with severe disabilities (Tiszai, 2016).

The leader observes the client's expressions of vitality affects and finds a movement, which is closely related to a natural expression, and makes an instrument function. The method is based on the so-called Bagpipe-bass, which is a typical phenomenon in Hungarian folk music. The model of the orchestra is the Hungarian Zither. It has only a few strings, on which the main melody is generally played. The remainder of strings (4-16, called the accompanying or "guest" strings), produce the keynote, the perfect fifth, the upper fifth, and upper octave of the keynote. The presence of these guest strings determines the key in which the melody can be played, in our case C and G. The unity of the orchestra is based on shared

vitality affects (Stern, 1985, 2010, Malloch, 1999; Malloch & Trevarthen, 2009). As previously explained, when humans hear musical character, we have an innate ability to respond with movement matching in quality and character, and we use this natural movement to make sound. The musicians' accompaniment is not just monotonic repetitions of the same sound, but rather, music with changing dynamics, varying levels of intensity, and alternate slow and fast orchestration of different tone colours.

Music empowers individuals to emerge from the bounds of isolation. Using modified instruments, participants can learn that whatever they do, it is always consonant with the whole -- it is a part of the common performance. Modified orchestral work allows participants to overcome their various behavioural and psychiatric problems. This method gives musicians an opportunity for personal growth, as members must learn to pay attention to one another. Participation in the orchestra allows individuals living with severe disabilities to form relationships with fellow members where neither party is forced to play the weaker subordinate role. The joy of playing music together in and of itself acts as motivation for participants. Musical performance and concert settings permit musicians to experience that their talents and efforts are greatly appreciated, which leads to increasing self-esteem.

This orchestral work shed light on the existence of atypical musical abilities. The music must be intrinsic motivation for the members, because it is impossible to motivate them with any non-musical reward to participate in hour-long rehearsals and concerts. This musicality manifests itself in unusual forms, which are difficult to measure with general methods. Future work is needed to discover the nature, anatomy, and extent of this musical talent.

Conclusion

The intellectual principles of Zoltán Kodály fertilized Hungarian special education principles, especially the education of children and adults living with intellectual disabilities.

While the daily musical activities were well incorporated in the daily practice of special education, the decreasing level of musical literacy in Hungary endangers this powerful practice.

The acoustic schedule, which is an aural calendar system, is built on the receptive experience of music. Similarly to the Wagnerian practice of leitmotifs, music and sound provide an optimal and predictable environment for individuals who cannot understand verbal communication or visual symbols. The Kokas Method was worked out for typically developing children, but has also been shown to be beneficial in the field of special education. Kokas used freely improvised body-movements to gain a deeper understanding of classical music. In addition to personal benefits, these common musical activities promote inclusion through positive encounters in common shared musical experiences with other members of society.

As Kokas (1999, p.15) mentioned, Kodály, "had selected and combined the best methods of his time" and also encouraged his students to be open to new ideas. Hungarian educators followed his pathway, creating new solutions to make orchestral works possible for those who could not participate in traditional music education. The ULWILA method simplified the question of sight-reading replacing the five bar line system with easily recognizable colours and shapes. The Consonante Method used the phenomenon of innate "protomusical" behaviour to involve individuals with limited cognitive and motor abilities to orchestral experience.

In order to find the most effective application of music (such us giving emotionally meaningful experiences), develop an emotional relationship to music, and reduce challenging behaviour or encouraging social interactions, educators and therapists can discover the musical skills and interests of their clients, which exist despite the lack of verbal communication, motor and sensory impairment, and/or secondary behavioural problems.

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