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# Music Pedagogies as a Support for Language Learning

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**ABSTRACT |** The basis for music and language can be found deriving from the same net. On the basis of the analysis of phrase structure and phonological properties of musical and linguistic utterances, language and music have evolved from a common ancestor, a "musilanguage" stage, presented as five alternative choices within the theory of Brown (2000). Music conveys the musically meaningful emotive meanings and language conveys for propositional phrases and referential meanings, when observed as purely acoustic embodiments of a sound from which a verbal song is formed. Our voices can serve the most primitive brain structures. When breathing and when singing, the primitive brain and the new brain function simultaneously, harmonizing their powers of control. When considering of theories for music teaching, one must know, how a child's holistic and musical development and the ongoing musical and holistic learning events are structured and connected, based on philosophies of music education, musical structures and components and the bodily, mental and cognitive effects of music working in the brains, starting prenatally. In this paper, it is described, what it is about music that impacts us, and how does it work – to make us better understand the underlying musical processes to support a child's learning, and to find the suitable and best ways of planning the teaching and to set the goals for it, having music as a support in learning. In a deep learning event, emotions, body and reason are working together, the experiences connected in the limbic system of the brain. Music and language are both tools for human communication.

Keywords: fetus, musilanguage theory; music teaching; theories for learning; child development.

## 1. PHILOSOFIES OF MUSIC EDUCATION

The aim and task of the philosophy of music education is to prove and to show, why and what for we need music and how it should be taught. Does music serve us in such ways, that a demand of having music e.g. as a subject at school is justified? What is the reason for having music as one of the eldest school subjects? The framework for music education can be built from the elements of the idea of a man, the idea of music, the idea of education/fostering, the idea of values, the philosophy of life,

and – when thinking about history and this moment – from the cultural aspects to the history of human culture and the postmodern culture at the time. All these effect to the curricula backgrounds and to our tasks for teaching: the basic values, tasks and goals. A teacher plans his/her activities and goals based on this framework and one's own values and personal background history, constructed constructively (Kovanen, 2010).

The framework for the actual music philosophy can be built from two main philosophies, partly side-by-side, but mostly as obverses to one another: 1) the music aesthetic philosophy, represented by the American Bennett Reimer and the Englishman Keith Swanwick, and 2) the musical praxial philosophy, created by the Canadian (more strongly effected in America), David Elliott and the American Thomas Regelski. Both Reimer and Elliott emphasize the meanings of strong philosophical grounds for a subject value and importance.

The value of music education lies in the value of music itself, as music as an aesthetic phenomenon has many valuable and significant characteristics, lying deep down in the structures, forms, emotions and aesthetics of music. That is why the aesthetic philosophies of music looks at music as an object, as a goal (Reimer 1989; Swanwick 1987). Music has abilities to use by means of music education, like supporting the development of our natural (esthetical) sensitivity, throughout which an aesthetic experience can be achieved. Enjoying and being around esthetical, refines our emotions to be a part of human development and the growth of one's self. Aesthetic philosophy of music education emphasizes the symbolic emotional meanings of music that can be understood when practising to recognize the laws of music. (Honkanen 2001; Swanwick 1987; Reimer 1989.) Central issues in achieving an aesthetic experience are musical activities throughout composing, active listening and performing, and conceptualizing and analyzing music itself (Reimer 1989; Swanwick 1987). The most ultimate, profound, deepest (musical) experience is called flow (Csikszentmihalyi 1990), which could be set as a main goal for aesthetic experiences (Marjanen 2009), despite of the philosophical emphasis of the background philosophy of the music educator's work, being aesthetic or praxial.

The praxial music education philosophy was created because of many opposite opinions to the aesthetic music education philosophy. The praxist viewpoints achieves for a wider understanding of music and music education as the aesthetic philosophy is considered as too narrow an approach. The praxists consider various kinds of musical experiences important for an individual, even if one's musical skills or talents would be meaningless when thinking about the aesthetic philosophers understanding of music, as artistic masterpieces collections. For the praxial music education philosophers, based on the thoughts of Elliott (1995) emphasizing pure aesthetic musical experience makes a listener's role passive, forgetting all the interaction between music and a person. Music is observed as something that people actively do; it is context-based and intentional activity. The meaning and value of music is connected to the benefit or additional value the musical praxis produces to one's life. The values of music (education) are determined by musical activities connected to their meaning and achievements. (Elliott 1995; Honkanen 2001; Regelski 1996.)

In this framework the praxial music education philosophy is drawn on in as a main philosophy for music education as a support for language teaching and learning, performed throughout four musical dimensions: 1) doer/musicer, 2) some kind of doing/musicing; 3) something done/music and 4) the complete context in which doers do what they do (Elliott 1995, 39-45).

## 2. MUSIC AND LANGUAGE – MUSILANGUAGE?

Ethologists have emphasized the reciprocal interaction between an organism and its environment at every stage of life. The role of restrictions, conditions, meanings and evolution for learning and behavior is stressed. (Hinde, 1997). When thinking of fetuses and a creation of a new life, our approach to nature is even closer, combined with the Ethological Theory and Relationships Approaches (Hinde, 1997), which are well suited to this framework of music and language, together with the actual "Musilanguage" theory (Brown 2000). Knowledge even about a fetus' development helps us understand the nature of experiences, affecting the ways of learning. In this paper, the theories of Hinde (1997) and fetal development, anyhow, are not described, but if necessary they can be read about e.g. in Marjanen (2009). According the "Musilanguage" theory, on the basis of the analysis of phrase structure and phonological properties of musical and linguistic utterances music and language have evolved from a common ancestor, a "musilanguage" stage. These are the five models of the evolution of the shared properties of music and language:

1. Parallelism model: music and language have developed from completely independent ancestors of protolanguage and protomusic, and the development processes have been independent.
2. Binding model: music and language have developed independently from the separate ancestors, but at a later stage have started to communicate with each other.
3. Music outgrowth model: protolanguage has been the source, and music has developed and separated from it later.
4. Language outgrowth model: protomusic has been the source, and language has developed and separated from it later.
5. Musilanguage model: shared properties of music and language have attributed to a common precursor, the musilanguage stage (Brown, 2000:276; Marjanen, 2009:22.)

In this paper, the musilanguage stage is considered as a main theory for understanding and being able to work based on the connections of music and language. It is still necessary to clarify the facts and details to show us how they are connected, based on the components of music and language.

### 2.1. THE COMPONENTS OF MUSIC AND LANGUAGE WITHIN INTERACTION

Music and language are viewed as reciprocal specializations of a referential emotive precursor dual in nature. Music emphasizes sound as referential meaning at the power of the properties of lexical tone, combinatorial phrase formation and expressive phrasing mechanisms, such as the modulation of basic acoustic properties for the purposes of conveying emotional states, emotive meaning and emphasis. Music and language are seen the obverse of one another: music transmits the musically meaningful emotive meanings and language conveys for propositional phrases and referential meanings, when observing both as purely acoustic embodiments of a sound from which a verbal song is formed (Brown: 2000).

According Patel (2008), all human newborns enter a world of two separate sound systems:

1. Linguistic (vowels, consonants and pitch contrasts of the native language);
2. Musical (timbres and pitches characteristic of the culture's music).

Even without guidance, most infants develop into adults proficient in their native language and enjoy the music of their own culture. Our native sound system leaves an imprint on our minds, which leads to a construction of a mental framework of sound categories related to our native language or music (Patel 2008).

The most obvious difference in the sound systems of music and speech lies in the basic elements of them both. Although pitch (e.g. as in the use of intervals and chords) is the primary basis for sound categories in music, timbre (e.g. as in the production of vowels and consonants) is the primary element for sound categories in speech. Speech and music organize timbre and pitch in separate ways (Patel 2008).

The musical qualities of a sound are pitch, length, loudness, timbre, and location (Patel 2008). This could be compared to the more often-used definition by continuing the list after the concept of timbre: … tempo, velocity, harmonies and forms (described e.g. in Marjanen 2008); but of course, the difference is connected to the definition context: if it concerns just a sound - or music/piece of music. The physical correlate of pitch is frequency, and the height of a pitch is reported in Herzes (Hz). The perception of musical pitch and timbre are multidimensional: pitches separated by an octave, a doubling of the frequency, are heard as very similar and in most cultures are typically given the same name. Individual pitches can simultaneously be combined to create new kinds of sonic entities, such as intervals and chords. Pitches can also be organized for a musical scale, which serves as an important reference point when creating musical patterns (Patel 2008).

What is of interest here and also essential when we think of children's songs, is the existence of a tonal center, because of the existence of the scales. According Krumhansl (1990) and Rosch (1973, 1975), cited in Patel (2008:21) a tonal center forms a cognitive reference point for pitch perception, which again makes learning and remembering complex melodic sequences easier. Children's songs, of course are usually rather simple, and in early childhood music education pitch qualities are usually taught children step-by-step with the support of movement and emotional experiences to hear differences between high and low, which is cognitive learning supported by emotional and bodily experiences (Marjanen, 2009).

Timbre is as important a perceptual feature of music as a pitch, aesthetically. Cognitively: timbre differs sharply from pitch: the former is rarely the basis for organized sound contrasts. It is timbre qualities that distinguish the sound of a trumpet from the sound of a flute playing the same tone, when pitch, loudness, and duration are identical (Patel 2008).

Rhythm, as a musical component found in both, music and speech, must also be considered in this paper. When speaking of rhythm, the concept denotes periodicity, which means, a pattern is repeated regularly in time. It is good to keep in mind, though, that although all periodic patterns are rhythmic, not all rhythmic patterns are periodic. No universally accepted definition of rhythm can be found, though it can be defined as a systematic patterning of sounds in timing, accent, and grouping (Patel, 2008).

Speech and music both contain systematic temporal, accentual and phrasal patterning. The importance of rhythm in speech can be discovered when trying to learn a foreign language. Speaking a language with native fluency requires mastering its vocabulary, phonemes, and grammar, but besides that mastering the patterns of timing and accentuation that characterize the flow of syllables in sentences as well: each language has an individual rhythm that is part of its sonic structure. An implicit knowledge of this rhythm is part of a speaker's competence in a language, and a foreign accent in speech is a consequence of failure to acquire the native rhythmic features (Patel, 2008).

### 2.1.1. Musical interaction

Interaction starts in the form of mother-infant interactions, which are composed of elements that are, not just metamorphically, but literally, musical. The prosody of motherese - also known as ID speech - like music, is melodic. It uses rhythmic regularity and variety, including pauses and rests, with dynamic variation in intensity (stress and accent), volume (crescendo and diminuendo), speed (accelerando and decelerando), and alternations in vocal timbre. (Papoušek, 1996) Ellen Dissanayake (2000) has stated that mothers and infants do not synchronize their rhythms so much as coordinate and respond to each other's alterations of these rhythms. In Marjanen's study (2009) it was found anyhow, that prenatally shared musical experiences had impacts on the postnatal mother –child rhythmic and melodic syncronization occurrences at the very early stage of interaction, around two months. The words that a mother uses, with real semantic meanings, are presumably experienced by the baby as holistic combinations of sounds, not as verbal messages, but as musical features and relations (Dissanayake, 2000). A sense of timing is crucial in both, non-verbal and verbal communication. For the child, fetal and infantile experiences have layed the foundation for the development of motor skills, and for perceptual, cognitive and linguistic abilities. Even premature infants have an intimate knowledge of timing in interactive exchange. They are able to listen attentively while awaiting their turn to step into the flow of interaction at the appropriate movement, joining the synchronous expressions with adults (Condon & Sander 1974; Stern et al., 1985; Trevarthen, 1974).

All the other components of music (velocity, harmonies, tempo and musical forms), which were not described by detail in the previous subchapter, must be included in teaching as well, as a part of the framework when planning the musical activities for a group of children, in order to create a musical experience as a support for language learning. Velocity, harmony and changes of tempos and musical forms can be regarded and used in music education as elements phrasing the experience of periodicity, which musical forms intrinsically lead us to do. We should as well keep in our minds, that music and music education are about interaction. The capability of being able to listen to even the tiniest musical motifs from a piece of music or a song is a skill which does support us in recognizing the motifs within interaction, and playfully improvising with them through repetitions, rhythmic and melodic variations or developing questions and answers out of them, in the meantime taking care of blowing life into the session, and making music musical. Due to the fact that all musical listening occurs in individuals who have both shared and unshared knowledge structures, it is quite possible that two people listening to the same musical passage will hear it quite differently (Lipscomb 1999).

# 3. CHILD DEVELOPMENT

Development is a process of qualitative change, a set of transitions and transformations throughout life, in contrast to learning, which can be comprehended a quantitative change. The relationship between the two, learning and development has been debated for decades. They are combinations of biological and maturational factors complemented with environmental and learning factors and of interaction between the two (Jordan-Decarbo et al., 2002) In this paper, child development is described as a logical continuum of the prenatal period, and considered constructing of parallel developing areas of holistic development, musical development, and brain development, which are briefly described in the following subchapters. Children enter from before birth into networks of relationships, crucial to their subsequent holistic, that is: cognitive, social and emotional development. The effects of these early relationships may persist into adult life (Hinde, 1985.) Vocal development, as a part of musical development, is a fundamental area of an individual's development. Musical development also serves as a supportive bridge from fetal to postnatal development (Marjanen, 2009).

The prenatal period can be considered as a formative one. The physical body is formed including all essential organs, hormonal glands, immune system, and the nervous system, which together determine a great degree of the quality of an individual's life (Chamberlain 1996b). Infants possess a wide range of skills that can be described as musical: musical taste, listening and perceptual skills; performance skills; musical memory and intense interest in expressive musical performances (Trehub, 1996). A belly-baby is exposed to music during the prenatal period, familiarizing with the internal sound patterns of its mother's body and associating these patterns with her emotional and physical state. The origins of a child's musical skills may be found on the prenatal level (Parncutt, 2006).

## 3.1. HOLISTIC DEVELOPMENT: THE SEEDS FOR ACQUIRING LANGUAGE SKILLS PRENATALLY

The human sensory system starts to function before birth (Hepper, 1992). As a factor of physical development, proprioception (the sense of relative position and motion of parts of the body) affects us (Parncutt, 2009). The acoustical stimulation, to which the prenate is exposed, is more diverse and carries more information relative to the other factors of development, corresponding discriminatory abilities of visual, tactile, olfactory or gustatory (biochemical) stimulation. In this respect, hearing can be regarded as the dominant sensory modality during the prenatal phase, when during infancy a transition from auditory to visual dominance can be observed (Parncutt, 2009).

Opinions differ about the dominant senses in childhood: a child's learning is focused on the development of the vestibular system, and the vestibular abilities and skills such as balance, movement and coordination of visual sense and movement during the first 15 months (Hannaford, 2004). Individual, unique neural networks are constructed. Personal experiences influence the way one learns and comprehends things. Paul Dennison (1985) has developed a way of measuring individual dominance profiles, to identify the dominant. Unique learning styles are created based on information about dominance profiles, which can be visual, auditory, verbal, and kinesthetic (Hannaford, 2004).

Prenatal development is more specifically described in Marjanen (2009), but it can be observed throughout the developmental areas of the Ear vs. vestibular system, the kinaesthetic sense, the tactile

sense: touching and listening as a part of a modal prenatal experiences (the theory of twelve senses has been represented by Chamberlain, 2003), visual sense, taste and smell. Given such a large variety of senses, the amodality of fetus' experiences is reasonable (Chamberlain, 1996; 2003).

Touch can be considered even the cornerstone of humanity, communication and experience, beginning in the prenatal period (Montagu, 1962.) All cranial nerves lead to the ear, which is why it is considered our most primary sense organ. Embryonically, the skin can be thought as differentiated ear, and we listen to with our whole body. This is also the reason for music being so effective especially when combined with the touch (Thaler, 1994).

## 3.2. PREMUSICAL EXPERIENCES AND MUSICAL DEVELOPMENT

Colwyn Trevarthen (1999/2000) sees musicality as rising from a psycho-biological source, as a talent inherent in human beings, shown in their bodily movement, and in the ways they experience the world, and behave to one another. The pressure of social intelligence and the evolution of human bipedal locomotion are thought to even have set free a new polyrhythmia of motive processes, generating the fugal complexes of the Intrinsic Motive Pulse (IMP), with radical consequences for human imagination, thinking, remembering, and communicating. Images of awareness, rhythmic narrative expression and gestural mimesis are regulated by and also regulating the dynamic emotional processes from the foundations of musicality and of human intersubjectivity. The conventions of musical culture and the acquisition of musical skills are animated by this significant core process in the human mind. The parameters of musicality are intrinsically determined in the brain, and necessary for human development, and they express the essential generator of human cognitive development (Trevarthen, 1999/2000:155).

### 3.2.1. PRENATAL FORMS OF MUSICALITY: AMODAL SENSES

The development of musical abilities begins prenatally, to be continued throughout one's life (Marjanen 2009). Information processing is able to begin prenatally, once sensory systems have emerged and are functioning (Fifer et al., 1989). Musical development is biased in different ways depending on age: in Anttila et al. (2002) it is described, that in childhood musical activities support the individual in singing, acquiring a sense of rhythm, in differentiatig sounds and in the practicing of tonal memory, whereas in adulthood development is aimed at expressional musical abilities and emotional connections (Anttila et al., 2002). However, on the basis of many theories (see Marjanen 2009) and results of Marjanen's (2009) investigation, the amount and meaning of emotional experiences, and the level of emotions during the prenatal period and in the beginning of the postnatal life cannot be denied: the beginning of life might be the most emotional period of all.

Papoušek (1996) describes pre musical experiences on the basis of certain musical components (pitch, melody, duration and rhythm) revealed by infant-directed speech from the mother and with all the senses by mother and baby. There are three aspects of early musical experience: i) a pre linguistic alphabet or code in the form of musical elements: pitch and the melody, temporal patterns and rhythm, loudness and accent, and timbre and harmony. Both infant- directed speech and infant vocal sounds have those in common, ii) the presence of a common elementary musical code. Parents adjust their vocal, visual, facial and tactile stimulations in the ways that correspond to the baby's capacities (early competence and the infant's auditory input) and thus support the infant's early musical

competence, iii) Vocal production and perception of musical elements, embedded in multimodal patterns of preverbal communication: in tactile, kinesthetic, and vestibular forms of stimulation (Papoušek, 1996).

Uterine muffling (Parncutt, 1996) does not affect prosody or intonation (pitch contours), the timing of phonemes (rhythm), accentuation (variations in loudness) or variations in pitch register, including the difference between male and female voices (Smith et al., 2003). The timbre of a mother's speech, including both the vowels and consonants, is strongly affected, however. The relative salience of pitch in prenatally audible speech, as opposed to timbre, may somehow explain why infants are more interested in maternal singing than in maternal speech (cf. Trehub et al., 2001; 2002). A further possibility would be that learning is facilitated when expression, in any modality, is exaggerated (Masataka, 1998).

Alfred Tomatis (1963; 1997) claims the function of the ear is radically different from traditional assumptions. It cannot be regarded as an instrument solely for hearing and listening, nor as an organ for equilibrium and verticality. For him, above all, it is a generator of energy for the brain, intended to give a cortical charge, which is then distributed throughout the body "with the view to toning up the whole system and imparting greater dynamism to the human being" (Gilmour et al., 1984). Hence the importance of suitable sound stimulation, which will lead to vocal expression, listening and thinking (Whitwell, 2006) as components of language learning as well. Human development, music and sound are intricately interwoven (Whitwell, 2006).

Humans are among mammals with the capability of prenatal hearing (which all mammals don't have). Three following possibilities are suggested of this: i) prenatal sensory learning could provide a foundation for future sensory learning ability, or ii) prenatal exposure to sounds might speed up postnatal active language acquisition, or, iii) according to Hepper (1992; 1996:57) among others, the capability of hearing prenatally indirectly promotes postnatal bonding, or attachment between a mother and her baby, which in turn promotes infant survival. This may explain such phenomena as prenates' ability to recognize people speaking their mother tongue compared to some other language (Moon et al., 1993). These are evidence for a sophisticated prenatal ability like memorizing complex sounds and patterns, such as music or language. According to Childs (1998) and Karmiloff et al. (2001) the ability to process gestural, intentional and emotional aspects of language (prosody, intonation and contour), really do begin before birth (Parncutt, 2006).

### 3.2.2. PRENATAL FORMS OF MUSICALITY: BODILY EXPRESSION

To understand the meaning of bodily elements in teaching, it is good to know, the fetus' motor activity as a way of expression starts remarkably early, and can be observed from 10 to 15 weeks (Tajani & Ianniruberto, 1990). Prenates move in response to a mother's coughing or laughing, spontaneously and gracefully, not merely in a reflexive or mechanic way: these movements can be regarded as a vehicle for interest and self-expression (Chamberlain, 1996b). Bodily gestures and movement are very innate and thus natural ways for supporting learning.

Connected to movement, Tomatis (1963; 1997) sees the ear as a receptor of movements. The ear is probably the most developed sensory organ before birth (Whitwell 2006). The inner ear is constructed of two parts, the cochlea, and the vestibular system, which controls the balance and body

movements that render the rhythm of music-making in the vestibular system of older origin (Lecanuet, 1996; Whitwell, 2006). It is because of the vestibular system that music seems to have an effect on the body (Madaule, 1994).

### 3.2.3. PRENATAL FORMS OF MUSICALITY: MUSICAL TALENT

Talent is related to musical performance skills, and irrelevant to fetuses. Fetuses do vary in their musical potential, however, in terms of giftedness, talent, propensity, musicality and aptitude. If musical potential is genetically determined, it exists prenatally and is likely to influence the prenatal perceptual-cognitive abilities of hearing, processing, memorizing, recalling, recognizing pitch-time patterns, and associating these with emotion – as a bridge from musical skills to language skills. Musical abilities emerge because of interaction between genes and the environment, starting as soon as the fetus is able to hear. Personal aspects must also be remembered also during prenatal development (Parncutt, 2006.)

Music to the fetus is not music, as we perceive it. Fetuses have no language or reflective awareness with which to process music. Music perception also depends strongly on previous musical experiences. Music, as an integral part of human culture, is hardly relevant for fetuses, for whom it has not been initiated any more than the parallel phenomenon of the acquisition of language (Noble et al., 1996), which starts about one year after birth. Fetuses experience music in the form of tempos, or other musical parameters like the beat. Prenatal musical experiences are not to be understood in the sense of human musical culture (Parncutt, 2006.)

## 3.3. BRAIN –BODY CONNECTIONS AND HOLISTIC LEARNING APPROACH

Hannaford (2004) writes about the brain and the connections of brain functioning to learning. She underlines the fundamental role of the body in a learning process. Individual qualities connected to the mind in our thinking never exist separately of the body. The brain is inside the skull, and continuous connection from brain to body is sustained. In our culture, we are used to perceiving intellectual activities separately from the body, which reflects our opinions on life, believing attitudes that physical matters, bodily functions and the feelings and emotions are inferior to brain operation, and not even wholly human. But thinking and learning is, on the contrary, based on the body's part in all learning, which is crucial, from the first moments of life to the last days of our life. Bodily movements during early childhood play an important role in creating the cranial network, the core in learning. No matter how abstract our thoughts are, they cannot be revealed without our muscles, whether talking, writing, counting or playing. It is the body that takes care of all the produced activities (Hannaford, 2004).

# 4. MUSIC PEDAGOGIES: BACKGROUND AND EFFECTS

Musicality is constructed of innate musical capacities and of qualities that can be developed. It appears as musical memory, sense of timbre, sense of melody, musical imagination and sense of rhythm. Musicality is also part of one's spiritual and physical being and of the emotional world of experiences (Marjanen, 2002). Early childhood education is interaction based child education and fostering. Harmonious growth, development and learning are the goals set by educators and parents for early childhood education, because of a child's needs. Growth and development are therefore understood as a process, which at its best include the child's and the educator's knowledge, emotions

and conation (Brotherus et al., 1990). When music is a special feature of education, one can speak of music education. Music education can be emphasized in two various ways: activities and goals set for musical development, learning and growth/music itself and musicality within a child, or, activities and goals set for holistic development, learning and growth/having music as a tool to support the child. In this paper music is considered as a tool for a child's holistic development, especially in the viewpoint of language learning.

According to Wood (1982), the sun's rays are able to touch all areas of development, based on which the following classification for holistic and musical development is presented:

a) Holistic development:

(i) psychomotor development: physical activity created on the basis of psychological processes (e.g. areas of bodily expression, motor skills, balance, coordination and responding, taking contact, rhythmic growth, skills of concentrating/focusing, listening, motor skills for playing an instrument), (ii) socio-emotional development: supporting one's social development connected to moral and ethical growth, social skills and understanding, communicating, supporting one's emotional life, self-concept, feelings of responsibility and self-legistation (e.g. artistic experiences and understanding, sensitivity, empathy, being a friend, abilities of expressing one's feelings and understanding other's, and of using one's voice in a natural way), (iii) intellectual/cognitive development: activities connected to receiving and transmitting information, making choices, evaluating, keeping in mind, remembering, reminding back something already learned, mental/spiritual/intellectual capability; creative capabilities (connected to e.g. musical concepts: beat, rhythm, tempo, pitch and melody, dynamics, form; creating rhymes, telling stories, understanding symbols, vocabulary etc.), (iv) aesthetics: aesthetical thinking, intuitiveness, sense perception and feelings; holistic artistic experiences (e.g. values, attitudes, observing beauty in the nature and wanting to keep it, rich imagination, images, mental impression, vizualizing) (Marjanen, 2009; 2002), (v) fun and happiness, which are classified separately by Wood (1982:26) but can be understood as a part of social, emotional or aesthetical development.

b) Musical development and skills:

aural (rhythmic accuracy and a sense of pulse, good intonation, the facility to know how music will sound without having to play it and improvisational skills), cognitive (the processes of reading music, transposition, understanding keys, understanding the structure of music, memorizing of music, composing and understanding different musical styles and their cultural and historical contents), technical (developing instrument specific skills, technical agility, articulation and expressive tone quality), musicianship (concerned with being able to play expressively, being able to project sound, developing control and conveying meaning), performance (the skills of communicating with the audience and other performers, being able to coordinate a group and performing to an audience) and learning skills (the capabilities of learning, monitoring and evaluating progress independently) (McPherson et al., 2009).

All these details needs a basis for motivation to be fostered during early childhood and even prenatal growth, such as positive attitudes towards music, individual balance and feeling of harmony, keeping and creating cultural traditions, the first implications of common musical knowhow. Practicing music (instrumental skills, singing skills, artistic expression, and musical talent) cannot be done without

motivation. This all develops in close connection to e.g. language, vocabulary, listening and sound discrimination skills (Marjanen, 2009; 2002).

These areas of development are treated from the viewpoint of the curriculum and goal setting (Marjanen, 2009; 2005; 2002; Nurila & Syrjälä, 1998). Besides the thoughts of Wood (1982), Howard Gardner's (1993; 1999) well-known Theory of Multiple Intelligences serves as a foundation for this above-described holistic, goal-oriented way of music education. In the theory, intelligences are described as nine parallel areas: linguistic, logical- mathematical, musical, bodily kinesthetic, spatial, interpersonal, intrapersonal, naturalistic and existential. In the theory, musical intelligence is listed separately, as an independent component of intelligence, which was followed in the classification. It has been shown, that music has a very powerful impact on the other intelligences. Gardner's ideas (1993; 1999) are compatible with Wood's (1982), both standing for holistic impacts of music education on an individual and even on a community.

## 4.1. GOAL-ORIENTED TEACHING FOR LONG-TERM LEARNING: CONSTRUCTIVIST APPROACH

According to Sloboda (1996), there are five different environments essential for high musical achievements: i) musical stimulation during early childhood; ii) long-term engagement in a chosen musical activity, iii) familial support, iv) early education, in which musical entertainment is emphasized, v) possibilities for interaction between emotions and music (Sloboda et al., 1996). Having the interest and attention of a child is also important because of motivation (Brotherus et al., 1990). Colwyn Trevarthen (1999; 2000) emphasizes the innate rhythms in our bodies and in our minds having a powerful impact on our imagination, behavior and understanding. This links with the earlier described thoughts of Howard Gardner's (1993) and Donna Wood's (1982). A general curriculum creates a framework for the educational plans for a subject, such as music or language. In music, it would be good to set goals:

i) for a long-term: musical goals (such as for the academic terms)

ii) for a few periods within an academic term, depending on the age-group and the musical material, and the themes to be learned and discussed about: musical goals,

iii) for each session within the periods: musical main goals, and,

iv) for each musical activity, based on the structure and contents of holistic and musical developmental areas: musical sub goals and holistic goals (Marjanen, 2009; 2005; 2002; Nurila & Syrjälä, 1998).

All these steps are to be interconnected. The pupils' learning must be observed and followed as a group and individually, to be able to respond to what is happening, during the session and when setting the goals for the next session. The constructivist learning approach (Anttila, 2002; Tynjälä, 2002; Vygotsky, 1987; Piaget, 1966) creates a framework for this teaching approach. Through social interaction an individual learns about the "generalized other"; i.e. acquires a comprehension of how others in general, such as family members, friends, and the community look at the individual. When an individual is in interaction with others, he is able to observe his own wishes, goals, expectations and

views in relation to those of others, which enables the individual to construct her-/himself in relation to others and by socializing with external reality (Tynjälä, 2002).

The constructivist approach cannot be considered a coherent theory, as it derives from various sources and includes various approaches. It is a well-known and widely spread paradigm about the being of knowledge. The constructivist approach lays the foundations for research in music education and pedagogies worldwide. An individual always understands knowledge, according to constructivist theory, as a result of construction. Learning is not about passive received information, but about actively and cognitively processed information based on previous experience and knowledge. Constructivism can be divided into two main approaches, individual-central constructivism and social constructivism, which of the first emphasizes individual perceptions as elements of observations, and the socio-constructivist model refers to individual activities and language as a part of information formation (Tynjälä, 2002; Marjanen, 2009).

## 4.2. PLANNING THE ACTIVITIES: MUSICAL METHODS

In early childhood music education teaching is being planned based on five musical methods: (i) using one's voice: singing, saying rhymes, using one's voice in a versatile manner, (ii) listening to music (concentrated/focused listening and creative listening), (iii) Playing body percussion, rhythm, folk, melody instruments or any other instrument to participate in the group, (iv) music and movement/dancing and (v) integrating music into various arts and areas of holistic learning (Marjanen, 2009). Musical goals, connected to musical development and the chosen musical activities during early childhood, are normally set on the basis of musical components: rhythm and tempo, melody, timbre, harmony, velocity, duration and musical form.

The taught material is introduced and opened up to the children by musical pairs of contrasts, developed from musical components (e.g. slow-fast, high-low). The teaching is process - and interaction - oriented. The individual child, or the group of children together create(s) the starting point and the focus for the learning process and for what is taught: the needs are observed individually and incorporated when planning the following actions for the group, moving up constructively from level to another one, towards the set goals. Music teaching starts always with rhythm, using one's own voice and body (Marjanen, 2009). Music learning, or learning through music, in the context of early childhood education, is always based on the senses and skills of listening and touching, and the influences reach both conscious and unconscious levels (Nurila et al., 1998), which can be considered one of the reasons for the wide possibilities of music used for education purposes. These basic facts to-start-with serve in an excellent way for language leaning purposes as well. In music learning, theoretical knowledge is to support practical solutions: theory and practice are not obverses to one another. The areas of affective (emotional) and psychomotor development are emphasized when structuring theoretical information to the direction of cognitive goals. (Linnankivi et al., 1988) Through musical methods, education becomes creative, lively and rich, impacting individually on a child in holistic ways (Nurila et al., 1998).

There are different theories and practical guides for music education, based on various pedagogical views, such as the Kodály, Orff, Dalcroze and Suzuki methods etc. In the 1970s, Katalin Forrai (1988) proposed a model of rhythmic growth as described by Perkiö (1994) (Marjanen, 2009:59).

Rhythmic development is understood as a life-long process, starting from the fetal and early postnatal experiences of rhythm through the mother, and ending in the ability to make musical questions and answers, including the ability to improvise, which one can never be completely ready in or too young or inexperienced to learn and try (Marjanen, 2009).

## 5. TIPS OF MUSIC EDUCATION FOR LANGUAGE TEACHING

In language learning one can create a basic understanding, to start with, of a child's natural way of learning one's mother tongue. The second language learning could be nurtured by these thoughts, even if the basic working methodology would derive from the theories of languages and methodology of language teaching. In this paper, the focus is on vocal and oral skills, languages as we hear them - these are close to music teaching and learning: writing or grammar is excluded here.

Vocal skills create the primary framework for producing speech, and they can be practiced by using the voice in various ways: singing, saying rhymes and using the voice playfully, in a versatile manner. This is based on courage, open mind and spirit: willingness to get one's vocal possibilities well known. Oral skills, as a natural way of language teaching, are practiced by listening to music, either by focusing on the given musical task or by ways of creative listening, like combining music listening with painting or moving. Even bodily skills are important in the framework of language teaching, as practiced by moving to music, dancing or body percussion. Besides blowing life and motivation into the classroom by the use of body rhythms and rhythm instruments, it helps the pupils to hear the rhythm of a foreign language, and supports them as well in the sound discrimination abilities together with the variety of the sounds of human voices. But as new challenges are always needed, other instruments or more difficult rhythms can also be added later, depending on the group in question. As a separate section of musical methods integrating music with various arts and areas of learning can as well be taken into account, to capture the pupils' attention and interest.

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Dr. Kaarina Marjanen is a specialist of music education. Because of her continuing study themes she was expertized on musical interaction and music teacher's professional training especially with the focus on the early childhood field. Music and language integration and artistic learning in a dialogue with wellbeing also create the core understanding for Kaarina. Her education and professional qualifications include those of a kindergarten teacher (1980), an early childhood music teacher (1995), and a one subject music teacher (Master of Arts, 1999). Kaarina continued her studies on music education, being a a Licentiate of Philosophy (2005) and a Doctor of Philosophy (2009). Kaarina is a member of Eapril, SIG Prime, CREAT, ISME, ECME, CCE Finland, and Teosto/NCB Finland. Currently Kaarina Marjanen works as a senior lecturer in Laurea UAS, Southern Finland (1.10.2014-). Her working life career includes experience in many Finnish universities. International collaboration, with many projects, insights on professional education development, and the development of a new Multisensory Musical Design –research project (MMD) supported with the construction of an EMP-Arts – consortium, are currently under Kaarina's focus. Her approach to musical integration derives from the understanding of learning, with its multimodal sense-based connections and transversal nature. She explains the basis for integration from the prenatal learning processes and the construction of early interaction.