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FUNCTIONS OF MUSIC THAT SUPPORT A CHILD'S DEVELOPMENT

Introduction

The role of music in human life was already underlined by Aristotle, who added a theory of musical education to his treatise 'Politics' in Book VIII. Assessing the opinions related to the role of music in the life of an individual and a community, one can list the following functions and aims that music can attend to: education, pleasure, relaxation and entertainment, spiritual purification (catharsis), and music treatment (music therapy; Sudak, 1996, p. 47). Plato, too, made music one of the primary conditions of educating a good and decent citizen: "the basic components of music, beauty and harmony, brought forth wisdom, courage and prudence" (Jabłońska, 2014, p. 36).

The fundamental purpose of education is a child's development. Education is nowadays based on using one's own potential instead of reaching an ideal model. E.E. Gordon underlined that "a child should not develop in a defined direction in order to achieve a prearranged type of a human being, but that they should increase their natural resources" (Ławrowska, 2003, p. 46).

According to Sacher (2003, p. 31), supporting a child's development depends on proper stimulation through the family and the educational environment. It is a process in which attention must be paid to external factors, the possibilities of the educational environment and the upbringing environment, and internal factors – the possibilities resulting from the personal genetic endowment. Artistic education is treated as complementary to a child's intellectual development. Its main purpose is the development of interests and musical capabilities, but it also uses artistic and aesthetic values to raise children's awareness and to direct their daily activities (Wojtanowska-Janusz, 2014, p. 36).

In this article, the author highlights the supportive functions of music in a child's development. The theoretical implications are validated by numerous research examples.

Functions of music in a child's development.

Cognitive function of music as a support to a child's intellectual development

Jean Piaget defined the stages of cognitive development as such: sensorimotor intelligence stage (0–2 years of age), pre-operational stage (2–7), concrete operational stage (7–11), and formal operational stage (11–15 years of age and up). They present the characteristic features of a child's understanding, which are the foundation of musical interactions and the proper selection of exercises and games (Wadsworth, 1998, p. 39). Scientists who are looking for answers regarding the influence of music on a child's cognitive processes, and the share of musical education in a child's development, indicate the complexity of this issue.

Przychodzińska (1989, p. 52) defines the educational functions of music, an element of which is the cognitive function. According to some psychologists, music can lead to the improvement of children's cognition processes. A great number of things and phenomena surrounding us possess aural aspects. Each aural phenomenon presents a process, a change, unlike a visual phenomenon. A careful perception of aural phenomena is associated with noticing the changing features of sounds. Musical activities frequently based on contrasting examples of musical works in which a child recognises many details. To illustrate musical objects or phenomena a child must make a selection among the aural means.

Improving the processes of cognition and thinking is the main task in children's mental development. Musical activity is accompanied by thinking processes – focusing attention, perception, remembering, comparing, thinking abstractly, analysing, and generalising. Music is “the aural phenomenon happening in time” and owing to this fact it is an abstract material for thinking operations (Ławrowska, 2003, p. 46).

Cognitive processes – selected research presented subjectively

For two years the academics Schlaug, Norton, Overy and Winner (2005) conducted research on the effects of musical training on children's brain

development and cognitive processes among 9–11 year old children. The aim was, among others, to answer the question whether beginning to play a musical instrument between the ages 5 to 7 leads to the improvement of cognitive functions and stimulates defined areas of the brain. The research was conducted on a group of 50 children. Most made the choice to play the piano while the rest chose string instruments. After one year no significant changes in the activity of the brain were noted.

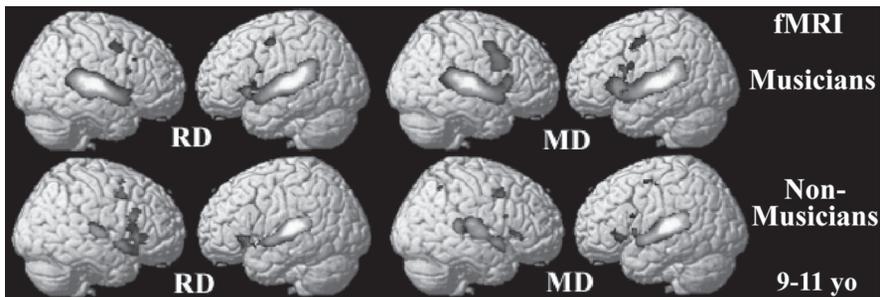


Figure 1. Areas of brain activity of children aged 9–11 who learned to play a musical instrument (for at least 2 years) in comparison to children not learning to play an instrument. Source: Schlaug, Norton, Overy & Winner, 2005, p. 227.

However, after longer musical training (from 2 to 4 years) the areas of brain activity increased in comparison to people who did not learn to play musical instruments, as presented in Figure 1. This relation happens while performing rhythmic discrimination exercises (RD) and melodic discrimination exercises (MD – Schlaug, Norton, Overy & Winner, 2005, pp. 219–228).

Research on the relations between learning to play a musical instrument and cognitive functions were continued by Forgeard, Winner, Norton and Schlaug (2008). Children who played a musical instrument for at least three years (4,6 years on average) achieved better results in areas strictly associated with musical capacities – aural coordination and motion abilities – but also in some non-musical capacities, namely vocabulary and non-verbal reasoning skills (Forgeard, Winner, Norton & Schlaug, 2008, p. 1).

Zuk, Benjamin, Kenyon and Gaab (2014) point out difficulties in defining the influence of musical education on the cognitive processes of a human being resulting from methodological limitations which have arisen in this type of research. An experiment was conducted with the following groups: adults

(N=30) with musical education and without musical education, as well as a group of children (N=27) learning music (playing a musical instrument) or not participating in musical activities.

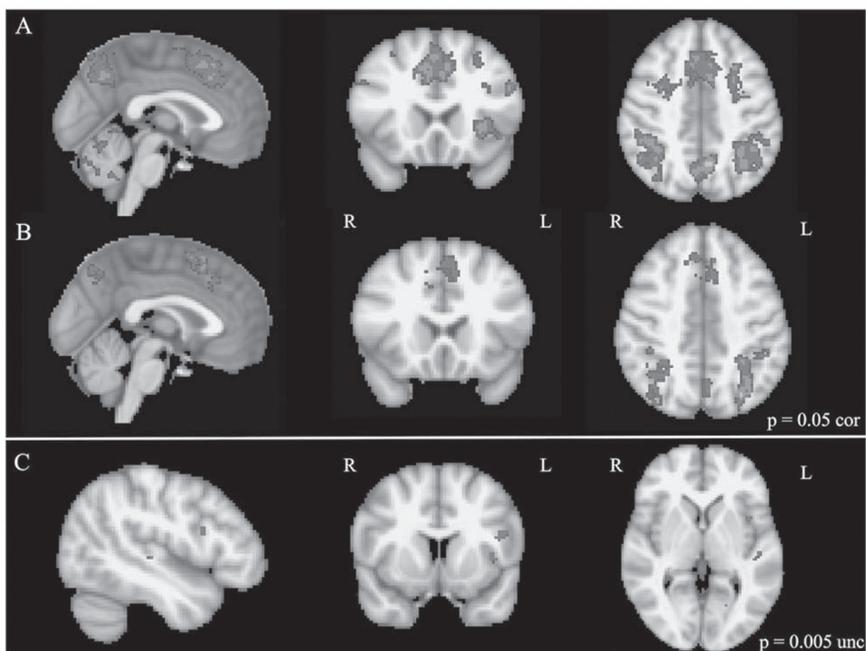


Figure 2. The areas of brain activity during performance of tasks requiring ‘rule representation’. A = adults with musical education, B = persons without musical education, C = comparison of brain activity of children who learned to play an instrument with children who did not learn to play an instrument.

Source: Zuk, Benjamin, Kenyon & Gaab, 2014, p. 7.

The adult musicians achieved better results than the non-musicians with reference to cognitive flexibility, working memory, and verbal fluency. The musically educated children accomplished better results in verbal fluency, processing speed and task switching, as well as rule representation. Differences in brain activity in these groups were noted (Zuk, Benjamin, Kenyon & Gaab, 2014, p. 1; see Figure 2).

Research related to memory

Zwolińska (1997) presented research on supporting a child's development through musical interactions. Nine independent experiments among children aged 6 to 9 were conducted. The research results indicate that interactions with music are more effective than without music because music had an impact on the accuracy and speed of memorising works of poetry (Zwolińska, 1997, p. 131).

Ho, Cheung and Chan proved that learning to play an instrument improves the verbal working memory. However, it has no significant influence on the visual working memory (Ho, Cheung & Chan, 2003, p. 439).

Research related to the concentration

The type of musical education – motion with music – a constant stimulation and breaking of motion through musical signals, improves the readiness to perform fast and precise movements, shapes attention, readiness, endurance and multitasking ability. The focus is essential while playing an instrument, especially during a performance of multi-vocal works and while listening to musical works (Przychodzińska, 1989, p. 53).

The musical programme 'Dźwiękoludki' (*The Sound-mates*) had the main purpose to study impacts on the level of children's musical, cognitive and motor development between the ages 5 and 6. During two years of running this programme, the children's thinking processes were stimulated, which was reflected in better results at attention focusing and in the motor abilities of both arms (Kierzkowski, 2011, pp. 85–92).

Research related to spatial thinking

Media fame was achieved by the work of Rauscher, Shaw and Ky (1993), which presented results called the 'Mozart effect'. Students were divided into three groups: the first group listened to the Sonata in D major, K. 448, for ten minutes, the second to relaxation music, the third, however, were staying in silence. Subsequently, tests of folding and cutting pieces of paper were conducted. A significant improvement in spatial thinking was noted in the group listening to W.A. Mozart (Rauscher, Shaw & Ky, 1993, p. 611).

The research on 'the Mozart effect' was verified by, among others, Nantais and Schellenberg (1999). In the experiment one group of people was

staying in silence, another listened to Mozart's music after which far better results related to spatiotemporal tasks were noted. In a further part of the experiment, the group under research was presented with an interesting story after which the spatiotemporal thinking was tested. The effect was also positive, which allows the conclusion that in this case, the result depends on the listeners' preferences and not specifically the music of Mozart (Nantais & Schellenberg, 1999, p. 370). McKelvie and Low (2002) referred critically to the spectacular effects of Mozart's music. Conducting two experiments, they showed that the type of music, classical or dance (W.A. Mozart, Sonata for Two Pianos in D major, K. 448, and the band Aqua, *Cartoon Heroes*), did not influence spatial thinking (McKelvie & Low, 2002, pp. 241–256).

Computer games with certain soundtracks were used to illuminate the relationship between the type of music and spatial thinking. For this purpose the computer game *Tony Hawk's Pro Skater 3* was chosen, in which a skateboarder avoids obstacles, and which contains (among others) two different pieces of background music: the Sonata D in major, K. 448, by W.A. Mozart and the song *Fight Like a Brave Man* by the band Red Hot Chili Peppers. The analysis of the collected data indicates that the results in this particular game depended on a player's musical preferences and not the particular music type (Cassity, Henley & Markley, 2007, pp. 13–17).

As it was proven, the 'Mozart effect' appears with the use of any other musical piece, not only the music by W.A. Mozart. Kołodziejski (2012) claims that these academic queries and the interest in the 'Mozart effect' in society triggered the popularisation of various forms of contact with music, which positively influences children's cognitive development (Kołodziejski, 2012, pp. 86–89).

Forgeard et al. (2008) presented that the contact with music enhances linguistic, mathematical and spatial abilities. She underlines that children who were learning to play an instrument for at least three years achieved better results in applied vocabulary, motor capacity, as well as aural and thinking capacities (Forgeard et al., 2008, p. 1). The pupils learned to play various instruments: keyboard, piano, violin, viola, cello, double bass, which indicates that the instrument type has no influence on the research result (Forgeard et al., 2008, p. 3). The authors of the article underline that they will continue the research in order to unambiguously exclude the non-musical factors which impacted the results, including family environment (Forgeard et al., 2008, p. 7).

Research related to creativity

Being one of the top competences of the 21st century, creativity was the research subject of Ritter and Ferguson (2017). The relation between listening to music and creativity was researched. 155 respondents participated in an experiment to listen to classical music grouped by mood (joyful, sad, calm, frightening), in addition to a group staying in silence. The biggest increase in creativity was noted in the group which listened to the 'joyful' music (The Four Seasons, 'Spring', Allegro, A. Vivaldi; Ritter & Ferguson, 2017, pp. 1–4).

Research on the influence of musical education on a child's development, conducted as part of MA studies at the University of Silesia in Cieszyn, confirms the supportive role of music in forming children's creative activity and pupils' social functioning. This research was described by Danel-Bobrzyk in the work quoted by Sacher. Danel-Bobrzyk refers to music's influence on a child's creativity: "Creative activity, achieved through music interactions, was often 'transferred' to other areas of the child's mental activity (the so-called transfer rule)" (Sacher, 2015, p. 110).

Research related to mathematics

Przychodzińska (1989) underlines the integration of musical and mathematical thinking through the application of familiar issues related to musical rhythm and the comprehension of mathematical formulas related to fractions, multiplication, and integrals. Experiencing the canon (rhythmical, melodic, music-motion) facilitates the understanding of figures in geometry (Przychodzińska, 1989, p. 54).

Zhan (2008), in her article about the correlation between music and mathematics, searched an answer to the question whether music helps with learning mathematics and which part of the brain is stimulated during this process. The author underlined that research shows that an improvement in mathematical abilities is caused by a particular type of musical activities. These activities include playing with the rhythm, tonal changes, and pitch level (Zhan, 2008).

Based on research conducted among pre-school children who learned to play the piano over six months, Grandin, Peterson and Shaw (1998) presented that these children achieved better results related to spatiotemporal

and linguistic-analytical thinking. The spatiotemporal thinking was employed during a game of chess which requires the anticipation of future moves, whereas the linguistic-analytical thinking was essential for solving equations and performing calculations. The researchers proved that music can support the teaching of mathematics (Grandin, Peterson & Shaw, 1998, p. 11).

Łuczak (2016) presented the research about effects of mathematical education of children in second grade during music lessons. The musical activities aimed at supporting the formulation of mathematical concepts, such as geometrical figures, sets and their classification, arithmetic exercises, and practical skills (Łuczak, 2016, pp. 129–139). Sample exercises connected with geometrical figures consisted of solmization of the geometrical figure concepts with the cued speech of various rhythmical values in duple meter (Łuczak, 2016, p. 134; see Figure 3).

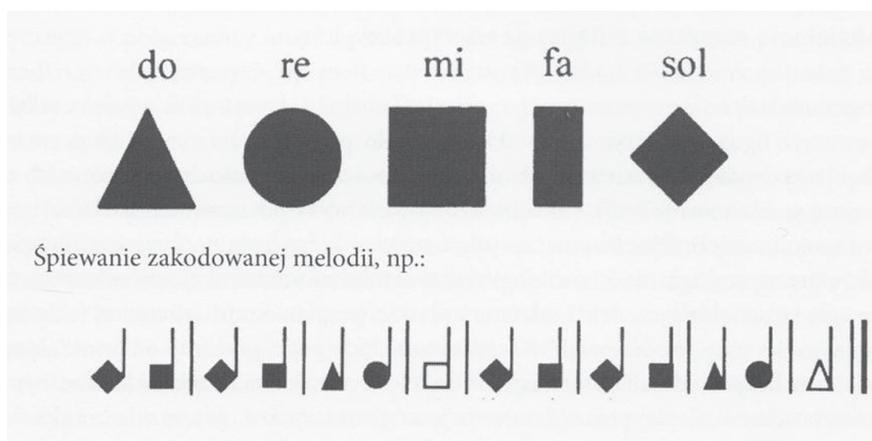


Figure 3. Encoded melody with the use of geometrical figures.

Source: Łuczak, 2016, p. 134.

Having completed the experiment, a higher level of understanding geometrical figures was noted, compared with arithmetic exercises, sets and their classification, as well as practical knowledge and competences. The experiment indicated that the music-teaching model supported the formation of mathematical concepts in children (Łuczak, 2016, pp. 176–177).

Catalan and English scientists presented proposals which aim at combining the contents of mathematical and musical education. These are, among others,

their blogs: *Matemusicant*¹, *Sumado*², *Musicomatics*³. Here the teachers present verified, tested exercises, ideas and articles (Viladot et al., 2017, p. 17). The international academics pointed out the necessity to support fellow teachers by organising inter-subject courses and providing access to educational platforms. For instance NRIC⁴, an internet database of mathematical exercises run by the University of Cambridge, aimed at enriching mathematical experiences so that all pupils could experience and express their ideas in this area (Viladot et al., 2017, p. 18). Similar is the National Centre for Excellence in the Teaching of Mathematics Education (NCETM)⁵, which has the purpose of increasing of the level of mathematics at schools and informing teachers of projects focused on combining mathematics and music. Furthermore, the platform *Sing Up*⁶ contains mainly singing activities, which integrate music with other school subjects including mathematics (Viladot et al., 2017, p. 19).

Other school subjects – research

Finding the relation between musical abilities and achievements in the Polish language was one of the main purposes of Suświłło's (2001) research, which was conducted among pupils from first to third grade. Children presenting a high level of audiation⁷ achieved the best results in tests of grammar and spelling. Moreover, a noticeable relation between musical abilities and school achievements was noted in social and environmental education (Suświłło, 2001, pp. 225–228).

When compared to other pedagogical fields, there is little research on the ways of music learning or its impact on other spheres of a child's development, which is underlined by Viadero (1998). She refers to research conducted by Gardiner (1996), published in the magazine 'Nature'. Pupils of the first grade

¹ Website containing the samples of games combining the issues of music and mathematics, <http://matemusicant.blogspot.com.es/>.

² Website containing the samples of games combining the issues of music and mathematics, <http://sumado.blogspot.co.uk/2010/05/matematicas-vs-musica.html/>.

³ Website containing the samples of games combining the issues of music and mathematics, <https://musicomatics.wordpress.com/>.

⁴ Educational platform of the University of Cambridge, <http://nrich.maths.org/>.

⁵ Educational platform, <https://www.ncetm.org.uk/>.

⁶ Educational platform edukacyjna, <https://www.singup.org/>.

⁷ Audiation – the ability to hear and to understand music without its physically present sound.

participated in the project. In four rooms lessons of music were run with Kodaly's method and in another two rooms in the traditional, typical method. After seven months the group which learned music according to Kodaly's method achieved better results in reading than the other groups. Despite the quoted research, Viadero doubts whether only listening to music, without active work, improves thinking processes (Viadero, 1998).

An interesting example of the use of music in teaching a foreign language was presented by Pamuła (2002). In her teaching programme, she used the integration of a foreign language with artistic subjects in early-school education. The musical exercises supported learning the phonic material, developed phonetic hearing and made the pupils sensitive to new linguistic code (Pamuła, 2002, p. 120). In her summary, Pamuła underlines that the role music plays as stimulation for learning a foreign language allows for the diversification of educational techniques, expansion of the vocabulary, and introduces real-life situations of linguistic communication, which boosts the educational effects (Pamuła, 2002, p. 133).

Educational function of music and a child's emotional, social and physical development

The educational function of music is also displayed in a child's emotional sphere, it assists them not only with realising their own experiences and needs but also that of their peers. In music the emotions and meanings are not unequivocal, they can be different for each one. It allows for a greater freedom of experience for the recipient, who focuses on their own emotions, as, unlike in literature or theatre, there is no protagonist with whom they can identify (Przychodzińska, 1989, p. 56).

A child's emotional development

Experiencing music aesthetically and engaging in musical activities influences a child's emotional development. Developmental changes in the emotional sphere are connected to expressivity, the control of one's own emotional state, and getting to know one's own emotions and those of others. Emotional development can only take place in social contact with others, in joint activities. Children find it easiest to identify joy, then sorrow, anger and fear (Kielar-Turska, 2012, p. 219).

In the year 2000 Sacher conducted research, in a group of pupils (N=175) from first to third grade, which indicates that musical activeness and emotionality are interrelated. Musical activeness influenced the appearance of positive emotions in the children, a relation that increased along with the continuing process of the musical education and the age of the pupils (Sacher, 2000, pp. 146–149). Sacher (2003) also conducted another research in a group (N=73) of pre-school children, the purpose of which was to define to what extent the level of musical abilities was related to the children's emotionality. It was observed that children who easily performed music-motion exercises felt some joy, and that music-making was much more pleasant to them than to the children for whom it is an intense intellectual effort, which is related to poorer musical abilities (Sacher, 2003, pp. 34–36).

Przychodzińska (1989) discusses research on the influence of school concerts on the development of musical sensitivity in youths. The research showed that for the twelve pieces of music they listened to, the students used 106 adjectives describing the mood of the listened pieces, which proved their great sensitivity to this aspect of music (Przychodzińska, 1989, p. 56).

In the conclusions to her paper Zwolińska (1997) underlines that “memorising the poetic works by Wanda Chotomska or Jan Brzechwa was definitely of the emotional character and in these categories the achieved research conclusions must be considered”. The text in the form of a song has a greater emotional influence than the text as a poem (Zwolińska, 1997, p. 132).

The therapeutic and compensating function of music is associated with a child's emotional development and its purpose is to relieve mental stress through the contact with music:

Music-therapy can, among others, contribute to the reduction of undesirable behaviour (aggression, hyperactivity, destructive behaviour); improvement in the communication with the group, improvement in motion; perfecting the auto-orientation, spatial orientation and hearing, speech, feeling, kinaesthetic and vision; developing imagination, creative expression and cognitive activeness; improvement of self-assessment; forming the identity and the aesthetic attitudes. (Strzelecki, 2010, p. 115)

Kisiel (2007) looked for answers to a question related to the therapeutic features of music: “Can [...] music, play and singing be used in work with children with various educational needs” (p. 163). He proposed a therapeutic-educational project, *‘My portrait’ – the artistic means used to form the picture*

of oneself, in which children aged 3 to 8 participated which had special educational needs, such as severe mental retardation, developmental disorders, autistic features and hyperactivity disorder (Kisiel, 2007, p. 139). Having observed this group of children, it could be claimed that forms of musical education and music therapy improved the relations between children and that positive changes in their behaviour and the therapeutic process were noted. Thanks to the music the children's natural inclinations were revealed, which helped to detect their anxiety, shyness or aggression (Kisiel, 2007, p. 149).

The Tomatis Method was applied by Mojs et al. (2011) to improve the cognitive processes of children with speaking disorders. The training of audio-psycho-linguistic stimulation is a method which involves listening to particular sounds (music) with the use of a specialized device. Through the stimulation of the central nervous system, most importantly the cerebral cortex, improvement of inadequate hearing is achieved. The research results indicate a statistical improvement of all examined functions, especially related to reaction speed, sound localisation and hypersensitivity to sound stimuli (Mojs, Nowogrodzka, Piasecki & Wolnowska, 2011, p. 108).

Singing as the element of speech therapy (logopaedics) was presented by Walencik-Topiłko (2004). The author prepared a programme based on singing which aimed at improving the speech organs of pre-school children. After completion of the research, a significant betterment was noted in the motor ability of the tongue and lips, the lung capacity and the realisation of particular sounds (phonemes; p. 191).

Kilińska-Ewertowska (1981) researched the influence of musical motion exercises on children with speaking disorders, their mobility and auditory-motor development. All of the 39 selected children were suffering from speaking disorders such as dyslalia and stuttering. In the experiment, they were subjected to musical motion exercises, and additionally, they received logopaedic and phoniatic assistance when they were attending the Speaking Disorders Centre in Gdańsk (Kilińska-Ewertowska, 1981, p. 23). After the musical motion exercises, an improvement of parameters under research was observed, and general betterment of the children was noted, as well as an improvement of auditory-motor coordination and the performance of the articulation apparatus (Kilińska-Ewertowska, 1981, pp. 108–109).

A child's social development

The social competences are displayed in the ability to achieve social purposes, engaging in social interactions, creating friendships, and gaining acceptance among peers. The most important period for this type of development is the pre-school age, during which children acquire essential social competences which they maintain throughout their life. They learn alternative forms of operation, the prediction of social consequences of their actions, as well as the assessment of action results (Kielar-Turska, 2012, pp. 219–221).

By means of music social reality (past, contemporary, close and far) can be recognized. This educational function of music combines with an influence on ethical viewpoints through, among others, the semantic and emotional interpretation of songs (historical, patriotic, religious) and through the instrumental pieces which link to the educational norms and ideals, and experiencing them in an emotional, profound manner (Przychodzińska, 1989, p. 57).

Supporting a child's emotional and social development through music was shown in the research by Nowak (2014) which described how thinking and behaviour change in children participating in music activities, "and defining the level of their creative activeness in social development" (Nowak, 2014, pp. 45–46). In her data analysis, she confirmed a strong impact of music on children's emotional and social development: the children became more courageous, perceived other people's needs, were more independent, learned perseverance as well as responsibility for themselves and for others (Nowak, 2014, p. 69).

When musical education is analysed, it is not difficult to note the role which it fulfils in the socialisation of children and youths. The organisation and the course of this process is often directed at the social aspect of education. Learning to play a musical instrument is usually organised individually, but in later phases of the education, the opportunity for collective play in an orchestra or in groups is given. Singing, as the elementary form of musical education, prepares children and youths for music-making in choirs. The specific character of the choir activity is closely associated with forming social attitudes among children and youths. The socialisation level and social abilities in a group are the conditional factors for the success of the group.

Belonging to a church choir contributes to the development of musical knowledge and abilities but also to the integration in the group and to building friendships. It is related to "singing for pleasure, emotions associated with

live performances and achievements”, which was underlined by study respondents, former choir members belonging to a church choir (Ławrowska, 2006, pp. 161–162).

Burowska (1972) interviewed 38 pupils of first to fourth grade of musical primary schools about their results in general education and about their behaviour. The research results showed that musical education can have a positive influence on children’s mental development and the development of positive personality features. However, the author emphasises that in order to formulate the final conclusions a bigger population should be researched and additionally the relations between the results in education and the behaviour of other pupils should be presented (Burowska, 1972, pp. 22–23).

A child's physical development

Musical activity influences the physical development of the whole organism. When children are of pre-school age, the physical development is uneven. Great intensification of the developmental process is observed between the fourth and the fifth year. It is a developmental leap – an increase in body height and weight, the overall strengthening of the body (Właźnik, 1996, p. 16).

Early-school age is characterised by a steady tempo of growth. The gain in body mass is initially small in both girls and boys. Higher processes, including cognitive processes (selective attention, speaking, reading, creativity) are developed (Kołodziejczyk, 2012, p. 235).

Movement activates almost all organic processes and exercises shape the body morphology. They intensify the growth and influence the structure of the organs participating in the exercises. What is in effect here is the structure and function correlation law, in which the function forms the build and the build conditions the function. It is noticeable that when a limb is immobilised, e.g. in plaster, it grows thin. When muscles work, they grow (Przewęda, 1973, p. 215).

Therefore, music motion classes are of great importance in supporting a child’s physical development. The respiratory apparatus is enhanced through the execution of vocal exercises, which also develop the speech apparatus. An important aspect of a child’s physical development is the improvement of small motor and large motor abilities. With relation to this, playing instruments, motion combined with music, and performing cued speech are beneficial. Rhythm-motion exercises improve the arm and the hand mobility. The

efficiency of the legs is enhanced through marching, running and jumping to music, motion realisation of rhythmical themes, and the performance of dance moves. Rhythmical exercises with music in which movements of arms and legs must be performed in a defined way enhance motion coordination (Ławrowska, 2003, pp. 46–47).

Kołodziejski (2015) underlines that while creating and playing music, many areas of the brain are active at the same time. Research indicates that asymmetry in the brain structure of musicians is created as a result of increased communication between the hemispheres. While playing an instrument, e.g. percussion, rapid, fast movements are performed which stimulate the activity of the brain. The increased corpus callosum of violinists and the pianists who began learning to play their instrument before completion of the seventh year of age indicates better communication between the brain hemispheres, which is responsible for the coordination of motor actions (Kołodziejski, 2015, p. 7).

Conclusion

In this article, the functions of music – cognitive, educational, therapeutic, and social were presented in the context of supporting a child's education. Numerous studies indicate the correlation between music and the development of a child's cognitive, mental, emotional, social and physical abilities. Playing an instrument (at least for two years) and participating in musical appreciation activities exerts an enormous influence. However, some researchers underline that the exploration of this field is of great difficulty, since methodological mistakes appear in the conducted experiments, and there are difficulties in eliminating non-musical factors that can have an impact on the research results. The further course and direction of research in this research field is very interesting, as the influence of music on children's development still poses many questions and carries enormous potential.

It is certain that the present achievements of the researchers should be publicised in mass media so that society can appreciate the role of music, and take note of its share in the acquisition of competences important in contemporary society.

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FUNCTIONS OF MUSIC THAT SUPPORT A CHILD'S DEVELOPMENT

Summary: The author presents children's development in the context of the function of music. She underlines the supportive role of musical education in forming children's cognitive, mental, emotional, social and physical functions. She presents a selection of experiments related to cognitive function, memory, concentration, spatial thinking, creativity as well as school subjects (mathematics,

Polish language, foreign languages). Music, which is immanently associated with experiencing, is used for therapeutic and compensation purposes in speaking disorders. Motion is an inseparable element of musical activities of small children and is thus closely related to their physical development. Numerous research examples indicate the correlation between music and children's development.

Keywords: child's development, functions of music, child's development support, music influence on child's development – research review

FUNKCJE MUZYKI W KONTEKŚCIE WSPIERANIA ROZWOJU DZIECKA

Streszczenie: Autorka artykułu ukazała rozwój dziecka w kontekście funkcji muzyki. Podkreśliła wspierającą rolę edukacji muzycznej w kształtowaniu funkcji poznawczych, psychicznych, emocjonalnych, społecznych i fizycznych dziecka. Zaprezentowała wybrane eksperymenty związane z funkcjami poznawczymi, z pamięcią, koncentracją, myśleniem przestrzennym, twórczością oraz z przedmiotami szkolnymi (matematyką, językiem polskim, językami obcymi). Muzyka, która nieodzownie łączy się z przeżywaniem, wspiera rozwój emocjonalny i społeczny dziecka, jest wykorzystywana w celach terapeutycznych i rekompensacyjnych (zaburzenia mowy). Ruch jest nieodłącznym elementem zajęć muzycznych wśród małych dzieci, co pozostaje w ścisłym związku z ich rozwojem fizycznym. Zaprezentowano liczne badania wskazujące na korelację pomiędzy muzyką a rozwojem dziecka.

Słowa kluczowe: rozwój dziecka, funkcje muzyki, wsparcie rozwoju dziecka, wpływ muzyki na rozwój dziecka – badania