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Systematic review

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***The Influence of the Factors of Heritage,  
Environment, Age and Gender  
on the Development of Musical Abilities  
of Preschool Children – Theoretical  
Perspective<sup>2</sup>***

**Extended summary**

Within the research in the field of music education, various similar terms are used: musical abilities, music talent, musicality, music aptitude, etc. The complexity of terminology is directly related to the complexity of music as the phenomenon itself which includes different elements, such as pitch, rhythm, melody, structure, timbre, tempo, etc. Neurological research shows that in order to process music, an individual needs to have many different regions of his or her brain activated and develop or acquire different skills and abilities.

The development of musical abilities of children under the influence of different factors has intrigued the experts in the field for decades. The aim of this paper was to examine the attitudes of foreign and local authors, as well as the results of the conducted research, regarding the influence of the factors such as heritage, environment, age and gender on the development of children's musical abilities. Theoretical content analysis was the method applied in our research.

The findings indicate that the debate among the scientists on the impact of genetics or the environment as a primary factor has become relevant once again. Our research also confirmed that the age of children definitely determines the development of their musical abilities. As far as gender is concerned, while this factor is mostly neglected in foreign research, the re-

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search conducted in our country has confirmed the statistically significant difference in terms of a better achievement of girls.

The findings indicate that the debate among the scientists on nature or nurture as a primary factor has become relevant once again. For decades, the opinions that the environment and genetics are both important (Farnsworth, 1974; Wing, 1970; Mursell, 1956; Shuter – Dyson, 1999; Mirković-Radoš, 1983; 1996), or that the environment is more important (Fletcher Copp, 1916; Lundin, 1967; Michel, 1973; Sergeant & Thatcher, 1974; Suzuki, 1983; Zenatti, 1991; Sloboda & Howe, 1991; 1999) were prevailing, but the development of new technologies and methodologies yielded the results confirming the crucial role of genetics (Gagné, 1999; Mosing, et al., 2014; Tan et al., 2014), as the scientists from the end of the 19th century and the beginning of the last century used to claim (Galton, 1869; Seashore, 1938).

In this paper, we categorised and presented the research results related to various music abilities in the field of music perception and performance, and with regard to the specific age – from the prenatal period, until the early primary school. We concluded that the influence of age on the development of musical abilities is unquestionable.

When it comes to gender, foreign research mostly disregards the significance of this factor, while domestic studies have shown statistically significant differences in terms of achievement, with girls performing better than boys.

There are several possible pedagogical implications of this paper, and some of them are listed here: even if we accept the conclusion of some researchers that genetic factor plays the most important role, Serbia does not have competent music pedagogists and experts at the preschool level of education who could evaluate and identify talented individuals. Therefore, the curricula for the preschool music education must be constantly improved so that a more stimulating environment can be created in which all children, including those with a bigger predisposition, could fully develop their potential; in order to enhance the development of music abilities, the preschool curricula in Serbia should take into account the stages of musical development of children in the field of both music perception and performance, and the educational outcomes should be defined more precisely so that a challenging and stimulating environment can be created; preschool teachers should be trained to make positive discrimination in terms of including boys in activities related to music, or at least not to make a subtle, negative discrimination, in order to provide the same opportunities for the development in this field for all children.

More research in the field of preschool music in general should be conducted in Serbia, informed by pedagogical practice and in line with the current research conducted in other parts of the world, in order to improve music education in Serbian preschools.

**Keywords:** music abilities, preschool music education, gender, age, nurture, nature.

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