

Sistemātiska pieeja treniņprogrammas izveidei sniedz iespēju diskutēt par dzirdes uzmanības treniņprogrammas elastīgas pielāgošanas iespējām, iekļaujot to dažāda tipa un veida izglītības iestāžu pedagogu un psihologu darbā.

THE INTERACTION BETWEEN AURAL ATTENTION COMPONENTS AND MUSIC PARAMETERS BY USING THE COMPUTERIZED TRAINING PROGRAM *AUT*

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Summary

Attention, being a precondition for any cognitive process, has always been of the utmost importance for teachers. Teachers who work with musically gifted children also face problems with insufficient concentration, and an inability to listen attentively.

The research is based on conclusions about aural attention processes, the role of music parameters in the activation of the attention system's functions, as well as the cognitive processing of acoustic information as a result of structured training. During the research a system of structures was created and it included two music parameters – pitch and rhythm. This system serves as a basis for its computerized model – the training program *AUT*.

By including the standardized aural attention test *AUDIVA*, research measuring the effectiveness of the newly-created *AUT* program was conducted. The participants of the research were children between the ages of 7 and 8 (N=85) – pupils at a school where they were learning music-related subjects in-depth. Three groups were created: pitch (n=30), rhythm (n=30), and a control group (n=25).

The research concludes that in 7 and 8 year old children who study music-related subjects, significant differences can be observed in the activity, persistence and distribution of attention. Structured pitch and rhythm training activates the attention system, but the effect of this activation and persistence differs. This has been confirmed by the differences revealed in the analysis of the effect in both experiment groups. The results of the training program's effectiveness analysis point to flexibility in the most important aural attention components – activation and alertness functions – during structured and level-based acoustic training. Structured pitch and rhythm information activates the attention system, however, the activation and persistence of this effect differs. This has been proven by the disparate results of the effect's analysis in both the pitch and rhythm groups. A possible explanation, obtained from literature, could be that pitch and rhythm parameters not only have a discrepant localisation of cognitive processing in the

cerebral cortex and other brain structures, but they also cause discrepant effects in the process of early attention activation.

It can be concluded, that the knowledge and results gained by undertaking and completing the research offer much broader possibilities for future analyses. The research of the newly-created training tool's effectiveness is based on results which were obtained with the help of the standardised tool AUDIVA. However, during the execution of all 10 levels of the training program AUT, massive amounts of valuable results were obtained. The results of this analysis will provide the ability to obtain knowledge on the effectiveness of separate levels of the newly-created training programme, and the connections separate components of the system of pitch and rhythm structures have with both aural attention and aural memory processes. Continued research, using the current results' base, will offer the chance to discuss the inclusion of an aural attention training programme, either as its full version or separate modules, in the routines of pedagogues and psychologists in a wide variety and different types of educational establishments.

Keywords: Aural attention training, pitch and rhythm structures, AUT program.

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