

## **Abstract**

Attention is a complex ability that contributes significantly to the process of intentional learning. This rigorous thesis is an extension of the original diploma thesis, which at the theoretical level focused on the types and theories of attention related to the effective management of school demands. More specifically, it focused on the developmental period of older school age and adolescence, i.e. on secondary school pupils - this target group was kept in the rigorous work as well. The diploma thesis analyzed the results of scientific studies that dealt with research into attention and its properties (such as stability, concentration or selectivity). The work was focused on examining whether a simple compensatory aid - here it is earplugs - can improve concentration and stability of attention during learning. She also briefly mentioned the physiological basis of the functioning of this cognitive process. The conclusion of the theoretical part of the diploma thesis mapped the current possibilities of attention diagnostics, especially in children and adolescents. Selected disorders of attention (e.g. ADD, ADHD), which (not only) are closely related to learning, were also mentioned in passing. The rigorous work complements the theoretical part with chapters on the topic of music and its effect on the acquisition of new knowledge, and also adds the phenomenon of noise and its effect on attention and concentration during the learning process.

The empirical part of the diploma thesis described quantitative research, in which several different tests of attention were used. The research question was whether and how the attention (specifically concentration) and possibly also the performance of high school students changed based on their use of earplugs to reduce the perception of disturbing elements from the environment or lack thereof in the process of intentional learning. The research was conducted on the Czech population in the age category of about thirteen to nineteen years. The aim of the work was not to focus on pathology related to attention. In the previous work, attention was approached as a mental process, which is necessary, for example, to transfer important information to working memory, which is very important for learning. This view is shared by the updated form of work. The expected use of the obtained data was still in practice, for example in children with ADHD, whose results could facilitate their functioning in some phases of learning or in general in the performance of tasks requiring a higher degree of concentration. The empirical part of the rigorous thesis also works with the topic of attention and concentration during the learning process, but brings to the original research a view obtained again in a quantitative way -

for data collection, however, this time the method of online questionnaire was used. With regard to the state of quarantine, the electronic questionnaire was supplemented with questions detecting noise at home, thus providing a relatively innovative survey of the work environment in education. The questionnaire focuses on both the subjective perception of the degree of disturbance and the objective assessment of noise in individual activities, including the identification of individual disturbances. In addition, the questionnaire battery is supplemented by an attention deficit questionnaire, which allows you to search for the relationship between individual factors and the intensity of the perception of disturbance.

**Keywords:**

Attention, the effect of noise on learning, concentration, music, cognitive function, earplugs