

## **Abstract**

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 rigorous thesis complements the theoretical part with a chapter focusing on 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 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. Based on the evaluated data, five out of the following seven hypotheses were confirmed. There is a statistically significant connection between school noise levels and attention problems. Noise in the school environment seems to be more disturbing for pupils than noise at home. While at school, they are most disturbed by the noise of technology. Based on the results, the pupils' attention is affected differently by noise depending on the way of information processing and the type of task performed. Regarding 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