# ABSTRACT

This bachelor's thesis characterizes and examines the level of coordination abilities of pupils in the 5th, 7th and 9th grades of elementary school, i.e. in very different developmental stages. The theoretical part focuses on the definition of coordination abilities and their division, further comparing the period of prepubescence and pubescence and presents various test batteries that examine coordination. Research works with the Iowa-Brace test method at , which was developed for testing students' general coordination skills and docility.

The main goal was to record the changes in the students' achieved coordination abilities during the period of development from prepubescence to puberty. Compare with the results of relevant research. At the same time, this part pursues a partial goal - to assess the differences in the performance of boys and girls. The main hypotheses address this :

- *level of coordination skills differ between fifth-, seventh- and ninth- grade students based on Iowa-Brace testing at two Prague elementary schools - ZŠ Klíček and ZŠ nám. The Curies?*
- *the results of the Iowa-Brace test for girls and boys of the mentioned grades differ based on testing at these two Prague elementary schools.*

The methodological part describes the preparations – survey, piloting, standardized warm-up. Then the course of testing and the characteristics of the research sample, which I obtained at two primary schools in Prague in nine classes (3x 5th grade, 3x 7th grade, 3x 9th grade), a total of 169 tested pupils. The statistical method Student's t-test was used for evaluation.

The results of the measured data confirmed an increase in coordination skills between the 5th and 7th grade pupils, as well as between the 7th and 9th grade. These findings are in agreement with the theory of Prof. Karel Měkota, CSc. (Měkota and Novosad, 2005).

Furthermore, girls showed better coordination skills than boys. While boys had a median of 12 points, girls achieved a median of 14 points. Statistical significance was demonstrated using Student's t-test ($p < 0.05$).

The level of success in individual exercises was put into context with other research that used the results of the Iowa-Brace test. A considerable diversity was shown here, which may refer to the different environments and conditions of the files tested.