

Abstract: The strategic goal of the research presented in this diploma thesis is to contribute to the improvement of the quality of physics teaching at secondary schools. During the research, we focused on the following two questions: Which quality parameters are typical for teaching led by physics teachers whose students continue their studies at MFF UK? How do teachers affect students gifted in physics and motivated for it? A case study was chosen as the research plan. Specifically, we focused on teaching of three teachers, whose students continue to study physics at university to an increased extent. The quantitative part, in which the pedagogical observation of teaching took place, was led as ex-post-facto research. This was followed by a qualitative part, in which semi-structured interviews were used to collect data. Thanks to them the obtained information was put in a broader context. The research results showed that fulfillment of several parameters is common for the teaching of all the teachers (e.g. physics expertise, mathematics model, abstraction, students' expressing), in other parameters their teaching differs (e.g. teaching aids, lecturing, students' interest, use of assessment) and some parameters are almost non-existent in teaching (e.g. work with text, heuristic method). Several research findings also relate to work with students gifted in physics and motivated for it.