Teachers, while teaching, are facing some sections of schoolwork which make serious problems to understand. The main task of this diploma thesis is solving the issue of organic chemistry on the field of Gymnasium. The pedagogical attitude was chosen for the selection of problem parts. New educational materials were purposed on the basis of gathered information and thanks to the research the efficiency of teaching the organic chemistry and its problematic parts should augment the understanding of the problematic parts as well as the bettering of education.

Theoretical part of the diploma thesis looks into the methodology of pedagogical research, curriculum documents, didactic methods and forms and literature exploration of defined problem parts of textbooks of organic chemistry for the high schools. Consequently, the practical part exposes results of the performed pedagogical research and the analyse of schoolbooks. Including noticed facts, the main output of the dissertation is the package of the new educational materials and various methods of education focused on the specific parts of the curriculum of organic chemistry, specifically the set of the new instructional backgrounds solving the circumstances of organical chemistry. These educational materials and the proposed methods of education were also discussed with high school teachers. The new materials suggest different methods which offer the alternative to the commonly used practices of taught chemistry topics.