

## **Abstract**

The dissertation deals with the usability of alchemy in chemistry education at secondary schools – especially grammar schools. In the research part it monitors the differences in educational outcomes for pupils who performed the same experiment with the alchemical approach and those who did it in the classical manner. The basic objective was to confirm or refute the benefits of a completely different approach to the experiment - an alchemical way.

The starting point of the paper is alchemy itself. First, it was necessary to describe it and then find and define what is useful in teaching. I chose its spiritual dimension. This phenomenon is then transformed into the framework of pedagogical-psychological speech in order to set a certain didactic method on that basis that will be accessible to pupils, realizable at schools and efficient.

The theoretical part focuses on the definition of alchemy in particular. It is based on the research available in Czech and world literature. It monitors the evolution of alchemy from its ancient beginnings to the 20th century because the development of this doctrine is as important as its foundations themselves for its definition. Given that there is currently no clear view of alchemy in terms of its true objectives, the paper watches both physical and contemplative goals. That is why the spiritual alchemy is tried to be proved in other chapters on the basis of available original texts and studies.

The practical part includes two research studies. The first study examines the relationship of the public and teachers to alchemy and the second one is the research of the use of alchemy while teaching at grammar schools itself. The results of the first study clearly show the interest in alchemy for both the public and educators. Thus, this topic turns alchemy into highly motivating curriculum. The results of students who performed alchemical practice show a tendency to achieve better results than the students practicing classical school experiment.