

Abstract

The reasons for the decline in students' interest in science have been studied for the last decades. The key question is how to stimulate this interest and motivate students and pupils to study science. Part of this thesis was testing the influence of practical courses on upper secondary school students' motivation toward studying biology. To start with, it was found out how many practical courses were taught for each biology topic at Czech upper secondary schools. Molecular biology and genetics emerged as one of the topics with the lowest number of practical courses. Therefore, molecular biology practical courses have been proposed and tested. It was shown that these practical courses can increase students' motivation scores. The possible influence of age, gender and number of practical courses during biology lessons on motivation was tested as well. Motivation of Czech students was compared to motivation of New Zealand students. Younger students and boys were more motivated to study biology in both countries. New Zealand students were more motivated than Czech students. Motivated students like the participants in the Biology Olympiad, Students' Professional Activities, biology summer course and optional biology courses were used to describe the origin of their motivation toward biology.