

ABSTRACT

The term of evolution and its understanding by students of secondary schools and high schools

This Master's thesis deals with the conception of evolutionary topic in schools and textbooks. It introduces education systems and curricular documents of England, Scotland and the Czech Republic. Based on this information an analysis of biology textbooks was made, which was focused on the theme of evolution. The research included 62 textbooks distributed by 27 different publishers. Comparative SWOT analysis of these textbooks has shown that the concept of biology in general is presented differently, what is also reflected in the interpretation of the studies of evolution. The questionnaire research based on those findings was done in the Czech Republic. It is focused on secondary school and high school pupil's knowledge and their personal opinions about this topic. 586 pupils took part in this research. It was found that in the context of evolutionary processes the pupils have problems to use commonly known biological, or evolutionary terms (e.g. adaptation, evolution of the organisms). On the other hand some pupils can easily define some more complicated evolutionary topics such as Neo-Darwinism. Pupils have quite various personal opinions on the issue of the evolution. Some of them are not interested in this area; the others have many questions about the topic of evolution. Some questions are relevant, but some of them just emerged from a misunderstanding of the principles of evolution. Based on this information, the teaching material was created. It has form of textbooks, worksheets, presentations and special methodical manuals for teachers. These materials follow various biological topics such as ecology, genetics or ethology and they should help to understand evolutionary patterns more in complex.

Key words: evolution, the textbooks analysis, curriculum, education system, England, Scotland, the Czech Republic, a questionnaire research, teaching materials.