

ABSTRACT

Information and communication technologies (ICT) are a daily part of everyone's life. Therefore in this work I continue in topic of my thesis, in which I created and verified in practice educational program (software) "Microbiology". The aim of this work was to create, publish and verify in practice educational programs for teaching microbiology, mycology and protozoology at lower and secondary schools. I tried to unify terms used in these scientific areas and to create high-quality sources of information. Due to its easy availability (CD-ROM, internet), interactive sections, a number of images, texts, experiments, fun games, quizzes and other attractions educational programs can enhance traditional teaching mechanism of biology in all types of schools.

This work includes a content analysis of biologically oriented educational programs currently available in the Czech Republic. It describes my own programs ("Microbiology", "Mycology" and "Protozoology") and processes the results of evaluation of programs by teacher lower and upper secondary schools. Teachers' opinions I statistically evaluated using questionnaires. The results show that lower secondary schools teachers use educational programs more often than upper secondary schools teachers. It is also showed that the most teachers use education programs during common frontal teaching.

KEYWORDS

information and communication technologies, ICT, educational software, multimedia tools, e-learning, motivation, microbiology, mycology, protozoology, science, biology