

EDITORIAL

The fourth volume of the quarterly scientific journal “Education – Technical Education – Information Technology” consists of six subject chapters and presents research-related topics in technical education as well as IT education issues based on the general education achievements.

The first chapter, entitled *The Problems of General Education*, is composed of eleven research papers that present a number of ideas of the innovative approach to the systems of education. The first article draws on the eclectic approach in the research and the specific solutions it provides in the pedagogy which has domineered the contemporary pedagogy. The successive research papers concentrate on the issues involving students’ motivation management in the public sphere i.e., in school, and some theoretical aspects of teachers’ training in that scope and attribution. The last research paper in this section touches on the issues of socio-cultural change resulting in the transformation of a modern family model. Thus, the education of the young generation is likely to lead to a successful parenthood.

The second chapter, *The Problems of Technical Education*, consists of a series of research papers on the concepts and practical solutions of the technical education at different educational stages. The first research paper presents an analysis of problems stemming from the introduction of innovative technical education in primary schools. It has been observed that the need for the systematic approach to the technical education is crucial as well as the application of the realization solutions. The next research papers deal with the brain mapping application in teaching technical education in elementary and middle schools. A detailed analysis of the students work and survey concerning the new method of learning has also been presented in this research paper. Moreover, a research paper on using blogs as a teaching tool for technical education presents a comparative analysis of various blogs with teachers and students opinions as well as the correlation of the curriculum for the bachelor of engineering studies. The last research paper of this chapter deals with the application of natural and recycling materials in the construction of buildings in the technical education classes.

The third chapter, *The Problems of Teachers’ Education*, contains a series of research papers on the changing patterns of education. Namely, these research papers illustrate the preparation of students for dynamic and productive functioning in the continually changing and highly demanding work environment.

The analysis is based on teachers' viewpoints, students' feedback and the presentation of the opinions of those concerned with the vocational training as well as the pilot study for the didactic software preference.

The fourth chapter, *The Problems of Information and Communication Education* begins with a research paper presenting three basic features of an Internet human being, i.e., *homo interneticusa*, leading to the rapid growth of the functional illiteracy. The next research papers describe various activities of a modern child education in the context of culture and civilization changes as well as the most recent neurobiology findings; the effect of excessive television exposure on child's development and other digital devices. The authors are concerned with the necessity of the key competences development for the modern job market, i.e., team work, creative thinking, continuous learning and IT skills. This can be achieved by utilizing the i-Lab2 and mobile applications used as a didactic means in media pedagogy. This chapter ends with the presentation of a mobile application concept which enhances the process of data collection for the full characteristics of lateral lisp and the verification of information, oftentimes contradictory and incoherent, in the literature of subject.

The fifth chapter, *The Problems of Informatics Education*, starts with a research paper on the development of logic and abstract skills which is crucial for the study programming using *EduMATRIX* app. The proposal for the change of the curriculum for the IT classes, first circle of education, has been presented in the following research papers as well as the possibility of network devices modification conducted by students and pupils in the process of creating their own didactic workstations. The next research paper is concerned with the issues of object classification in the media sphere by means of the algorithm cluster sequencing for the selected objects in the Internet portals represented by the vector of features. Modern virtual reality technology can be then implemented in the process of IT students' education.

The last chapter entitled *The Fundamentals of Technology Education* draws on such issues as the concept of laboratory station for the research on the control system power electronics converters as well as the conducting of the push-pull DC/DC convertor simulation which increases voltage with the series resonant circuit used in the engineering education. The last research paper presents the concept of the USB 1901 ADLINK application for the measurement acquisition and the analysis of the analog data. Hence, a special script has been prepared for this purpose which allows the analysis and research of a signal with an additional application of the fast Fourier transform algorithm.

Thus, we encourage our readers to contribute their critical texts in response to the subjects covered in this volume.