

INTRODUCTION

The global transformation from industrial to information society as well as social and economic changes taking place both in Poland other European countries have necessitated reforms in many areas of government responsibility. In this respect, the priorities include reforming the education system, involving the implementation of modern educational technologies and modes of tuition.

Distance learning, due to such advantages as flexibility, ease of access, modular character, quality, cost-effectiveness, state-of-the-art technology, large audiences, social balance, global reach, the new role of the teacher, positive effect on the learner, has become a leading mode of tuition and instructional technology practically at all levels of the education system.

Distance learning can cater to the needs of practically all categories of recipients and users of education services, starting from secondary school and university students wishing to continue improving their skills and acquiring more knowledge, through adult learners from all walks of life, especially teachers wishing to continue in-service training or to pursue lifelong training, and ending with the unemployed, disabled and all other people looking to improve their skills and knowledge.

Nowadays it would be hard to come across a higher education institution (faculty), school, kindergarten, vocational training institution, teacher training centre or other educational institution that does not maintain its own website. More and more educational institutions are launching distance learning systems or components thereof in response to the needs of both learners and teachers. The implementation of distance learning is being facilitated by increasing availability of information tools and means which, in turn, are being developed as a result of advances in information and communication technologies, and particularly web-based technologies. All of these developments have contributed to the emergence of multi-functional, quite reliable, user-friendly distance learning tools.

These include more advanced tools such as content learning management systems (CLMS's), including open source systems (MOODLE, Claroline, Dokeos, Atutor and other systems) supporting practically all phases of the learning process as well as content management systems CMS (e.g. Mambo, Joomla!, Nuke PHP Apache), enabling users to quickly launch vertical portals such as educational portals, featuring various services, including those with return

email links but requiring initial configuration and subsequent maintenance by an IT specialist. Solutions developed using Web 2.0 technology (Blogs, Forum, Wiki, Chat, WWW, RSS, CSS projects, open repositories of audio and video materials, etc.) are also available; they can be used by all users, including those without any special IT training. Web 2.0 is not a new worldwide web or the Internet; it is a new method for using the Internet's existing resources. Web 2.0 is the informal designation of Internet sites and services launched after 2001 which primarily rely on the content generated by users visiting the site or service. Web 2.0 was designed to facilitate interactive information sharing, to enable Internet users to use personalised web pages. Generally, websites have become more user-centred. It is hard to overestimate the importance of CLMS systems and Web 2.0. services in efforts aimed at achieving educational goals nowadays as the underlying principle of education is shifting towards personal-oriented education, focussing on the learner and on the development of the learner's mental faculties, creative abilities, personal qualities as well as the ability to think creatively and critically. The most popular and fast-developing MOODLE system, based on tenets of social constructionism and the concept of micro-worlds (enabling learners to explore course environments), implemented by Jean Piaget and Seymour Papert, has yet to realize its broad educational potential. Thanks to its open code and broad spectrum of resources offered, MOODLE can be flexibly developed, adapted and modified to meet the various needs of learners, teachers and educational institutions.

The Web 3.0. project, which is also fast-developing and promising technology, exemplifies the evolution of both the Internet and other tools and ideas towards the conversion of the present system for imparting knowledge into a broadly defined database model. The idea behind Web 3.0 is to convert web page content into a format readable by various applications (including those that are not web browsers), systems utilizing artificial intelligence, semantic solutions as well as software capable of visualizing and processing data within a three-dimensional space. Pages developed using Web 3.0 will be able to identify the user's intentions based on the data transmission context. This will enable the user to retrieve necessary data more quickly and easily and use them to effectively achieve her/his educational goals. The Internet2 project, which is expanding globally with more and more universities joining in, offers such elements and services as a global digital library, open education program database, a virtual laboratory to carry out experiments in any science field, a service to transmit 3D images to remote sites (*tele-immersion*). These services and facilities have already undergone preliminary tests and will soon be made available to the global

academic Internet community, offering new advanced educational tools and opportunities for use thereof.

The articles included in the collection of scholarly papers entitled "*Theoretical and Practical Aspects of Distance Learning*" address various current issues relating to efforts at developing most effective ways and methods to use distance education in teaching. The authors of the papers, among whom are both beginning researchers and distinguished scholars with long experience and a rich track record of publications, discuss theoretical and practical aspects of distance learning, examples of good practice in the implementation of distance teaching at various levels of the education system, application of distance learning in teaching humanities and science and in instruction for disabled persons. The papers also cover such issues as the use of multimedia tools and applications, teacher training including the development of teacher competence in computer science and in distance learning, lifelong learning, selection of effective distance education systems, and well-run, purposeful use of Web 2.0 tools in education.

It is worth mentioning that this collection is the result of a collaborative effort by the University of Silesia (Poland), the University of Ostrava (Czech Republic) and Matej Bel University in Banská Bystrica (Slovakia), which have extensive and long-standing experience in delivering e-learning courses and are now working together on an international project, co-financed by the International Visegrad Fund, called "*E-learning – as a Road to Communicating in the Multicultural Environment*".

We hope that the papers included in this collection will prove to be of practical use to those interested in distance learning and will answer questions that teachers, scholars, students, and educators may have while using e-learning methods and tools.

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