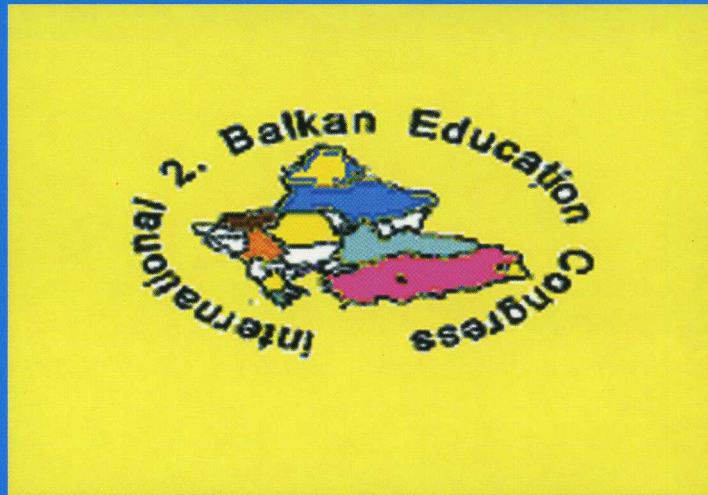


# 2<sup>nd</sup> INTERNATIONAL BALKAN EDUCATION CONGRESS



## SEARCHING EXCELLENCE IN EDUCATION

8-9-10 October 2004



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# EMERGING MODEL FOR A WEB BASED DISTANCE EDUCATION ENVIRONMENT -WBDEE

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Solza GRCEVA<sup>1</sup>

## ABSTRACT

In this article a concept of a pilot model is shown for the implementation of ICT in a potential system of Distance Learning environment: WBDEE. Three main modules are shown: Content Presentation, Interaction and Evaluation. Also it was worked on: Service & Support and Media & Tools.

The main effort is focused and dedicated to the module *Interaction* where rules of interaction are given and communications are looked over separately: learner-content, learner-instructor, learner-learner and learner-interface(web). The challenge is to develop strategies and techniques for establishing and maintaining "learning communities" among learners separated by space and/or time. Multiple-levels communication like e-mail, web based discussion forum, chat, audio-video conferencing are also used.

Implementation of new technologies in the process of education is very important. Our WBDEE model shows that ICT has enormous potential and possibility for implementation in the educational process, mostly in the Distance Education.

## INTRODUCTION

In this article a concept of a pilot model is shown for the implementation of ICT in a potential system of Distance Learning environment: WBDEE.

The concept of "Distance Learning" has a very broad meaning on the aspect of used technologies. So at the beginning of the 21<sup>st</sup> century whenever you mentioned Distance Learning you always thought about computer, Internet and Web technology. The challenge to integrate Information and Communications Technologies - ICT in the educational process of all stages of education, is an enormous potential benefit.

During the work of this article we had in mind the problems which appeared. The biggest problem, especially present in the economically undeveloped regions, the low rate of technological development appears. There are two meanings: low level of ICT equipment and illiteracy in using ICT. Other problem which should not be underestimated, and is directly connected to the previous one is the barrier which exists at the potential users of these "Distance Learning Systems" in the sense of the way of using ICT hardware and software and the habits for traditional approach towards education.

Here simplified environment for development of Distance Learning Systems is presented, in which role of teacher is moving from provider of knowledge to facilitator of learning process and role of learner is moving from passive to active learner. It results into a possibility when students feel that they are part of a community of learners and they are more apt to be motivated to seek solutions to their problems and to succeed. Developing strategies and techniques are presented for establishing and maintaining of "virtual learning communities" among learners separated by space and/or time.

In the second section General Web Based Distance Learning System is shown. WB-DEE is main part of this system.

In the third section basic concept of the WB-DEE is shown. There are three main modules: Content Presentation, Interaction and Evaluation. There are also presented modules: Service & Support and Media & Tools. In the module *Content Presentation* procedures for instructional design, development and delivery of an educational content are worked on. Procedures for assessment and measurement, shown in the module *Evaluation*, are found critical on aspect of absence of face to face interactions.

In the fourth section the module *Interaction* is shown, where rules of interaction are given and communications are looked over separately: learner-content, learner-instructor, learner-learner and learner-interface (web). Multiple-levels communication like e-mail, web based discussion forum, chat, audio-video conferencing are also used.

Section five concludes paper.

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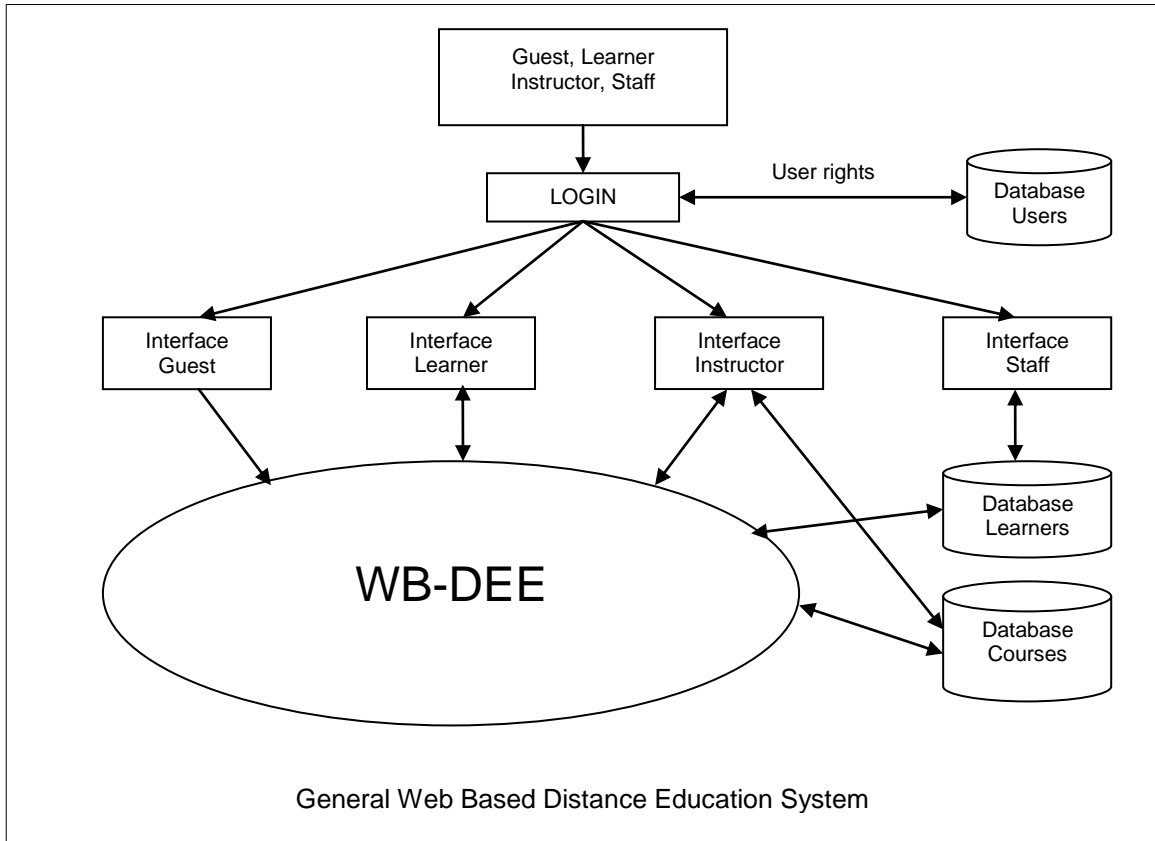
## GENERAL WEB BASED DISTANCE EDUCATION SYSTEM

There are three levels.

The first one is classical logging in the system where DBMS "Users" controls the access of the users in the system and separated them into Guests, Learners, Instructors and Staff.

In the second level, depending on users rights, the users have different possibilities. The Guests can observe the system, the Staff have access to Database "Learners", the Learners and Instructors can use the services of WB-DEE.

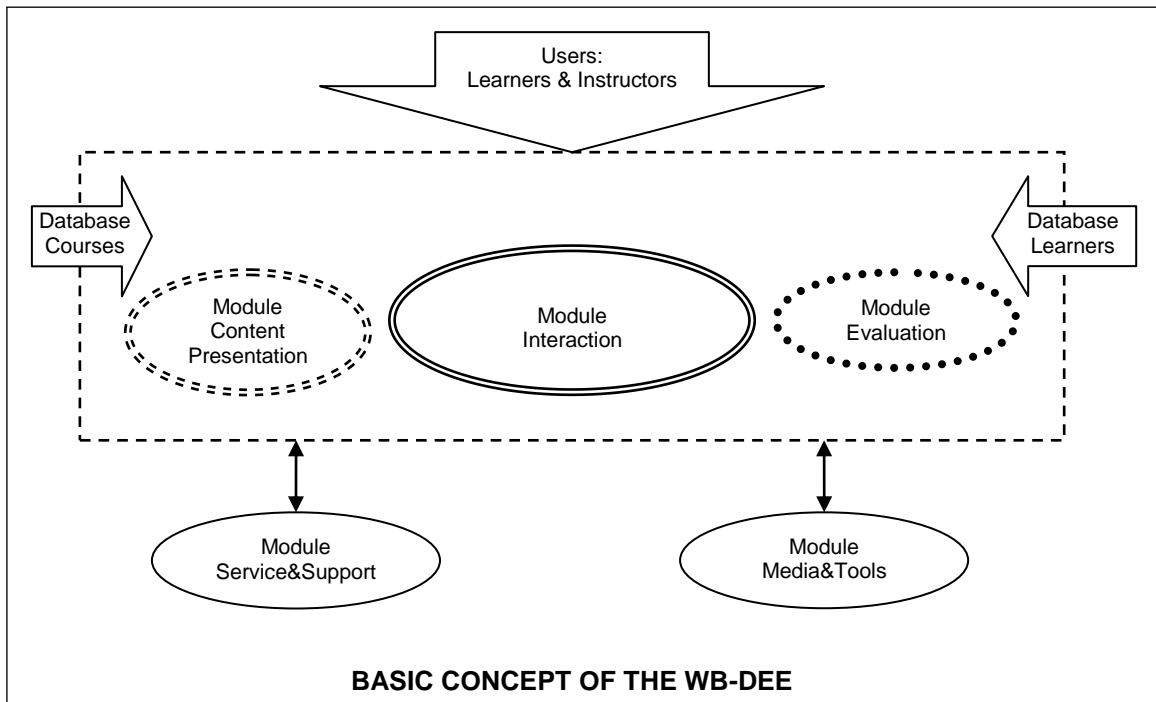
On third level WB-DEE function with the total exchange of the relevant data. Here Guests can receive data about curriculum of the Database "Courses" and for the application conditions in the Database "Learners". The administration has direct access in Database "Learners" and a possibility to maintain the data in portfolios of learners and group of learners (classes).



Most privileged in this system are the Learners and the Instructors. Each learner has access to its own portfolio and access to members-classes portfolios (learner community) and access to the courses curriculum that are learned. The Instructors have access to learners-classes portfolios, access to the courses throw WB-DEE for controlling of learning process, as well as direct access Database "Courses" for preparation of the instructional materials and presentations.

## BASIC CONCEPT OF THE WB-DEE

The basic concept of the model WB-DEE is based on mutual communication of the three main modules Content Presentation, Interaction and Evaluation, on the Database "Learners", Database "Courses" and Learners-Instructors Interface and support from modules Service&Support and Media&Tools.



Module Content Presentation contains sub modules which provide:

- Learning Goals – provide learners with set of learning objectives at the beginning of a course or program of study and provide learners to make “action plans” to demonstrate understanding of Learning Goals.
- Instructional Activities – provide learners with the necessary skills, knowledge and experience required to meet objectives of the education offering.
- Content Access – provide all learners to access to the necessary print, electronic and multimedia resources about course.
- Self Assessment – provide varied methods for low-stakes testing to guide learners success.

Module Evaluation should provide objective assessment and evaluation of the knowledge. This module should contains procedures which will provide objectivity in the evaluation in the absence of the face to face contact.

Module Interaction is shown separately in the following section.

The necessary modules which work undercover are modules Service&Support and Media&Tools. Module Service&Support provide feedback mechanism for the monitoring of various cases of success or failure of the system, in the field of technical support. Module Media&Tools provide instructional part for community of learners, they are many multimedia resources, resources for faculty development and resources for instruction design and development. Acceptable technologies are technologies which are acceptable for the wider number of learners, amongst the target group of the educational process and technologies which would not increase the cost of such education.

### MODULE INTERACTION

The main effort is focused and dedicated to the module Interaction. When learners interact with one another, with an instructor, or with ideas, new information is acquired, interpreted and made meaningful.

Effective learning environment provide minimum four types of interactions:

- learner-content,
- learner-instructor,
- learner-learner and
- learner-technology, meaning, learner-interface(web).

In order to provide these interactions in our "Virtual Community" there are few types of "Virtual Rooms":

- Classroom – there are more: *Classroom 1, Classroom 2 ... Classroom N*, in which the members of only one learners-class have access. Also the class instructor has an access.
- Public Hall – there is only one hall (room) in which all learners will have access in the system.

In the Public Hall there are:

- Public information board – on which information important for all community appear and information for individuals like advertisements similar as the faculty information board.
- Administration Room – for administrative communication with the staff about administration.
- Faculty Blog (weblog) Room
- Private Room – communication between two learners which is not available for other learners and instructors of whichever class.

In each Classroom there are:

- Public Room – in which there is public communication among all learners of the class including the instructor.
- Instructors Room – where direct communication (consultation) among the instructor and the learners.
- Class BLog (weblog) Room

In each of these Virtual Rooms as communication technology are used: e-mail, chat, audio-video conference and web based discussion forum. In order to provide all these communications there should be communication between learner interface i.e. the learner should have enough technology knowledge to use it. So the interaction learner-interface is present in all Virtual Rooms.

The Interaction learner-content is performed in the Classroom-Public Room, Classroom – Instructors Room, and in Class Blog Room. The Interaction learner-instructor is available in Classroom-Public Room, Classroom – Instructors Room, and if needed in Administration Room. Interaction learner-learner is performed on all levels except in Administration Room.

## CONCLUSION

In this article, a Web Based Distance Education Environment within General Web Based Distance Education System is presented. The WB-DEE represents environment for developing Virtual Community of Learners and Instructors. An important module "Interaction" is shown, where rules of interaction are given. Different Virtual Rooms within module Interaction are presented.

Next step is implementation of the WB-DEE and testing in real environment.

## REFERENCES

- Zdravev, Z.; Grceva, S. (2003). **Modern trends in using computers and Internet in distance learning technology**. *Vospitanie*, 4/5, 152-162
- Haddad, W.; Draxler, A. (2002). **Technologies for education – potentials, parameters, and prospects**. UNESCO – Paris & Academy for educational Development – Washington DC
- Kimovski, G.; Trajkovic, V.; Davcev, D. (2001). **Virtual Learning System**, In Proc. Of the 2001 Information Resources Management Association International Conference, Toronto, Canada
- Trajkovic, V.; Davcev, D.; Kimovski, G.; Petanceska, Z. (2000). **Web – Based Virtual Classroom**, Santa Barbara, California, USA. In Proceedings of the TOOLS 34, July 30 – August 4, 2000
- The Pennsylvania State University (1998). **An emerging Set of Guiding Principles and Practices for the design and Development of Distnce Education**.
- Sherry, L. (1996). **Issues in Distance Learning**. *International Journal of Educational Telecommunication*, 1 (4), 337-365