

coordination and incentive systems in HEIs' schools and departments. Their collective choices in making decisions on university international activities may vary a lot, but generally lead to cross-functional conflicts. All the participants of university international and transnational programs, be they consumers or producers of educational services, are involved into the economic cooperation with a set of rules and norms that assign to them sanctioned property rights. In our case and in the widest sense of the term, these rights include the right to use and gain benefits from intellectual performance of participants, the right to use physical (material) objects as well as the right to follow certain rules in international cooperation relationships on individual, departmental, school, and university levels. The latter can be defined as contractual relationships that are governed by agreements among economic agents of educational programs, which are launched with the help of such coordination devices as vertical and horizontal restraints, bilateral and multilateral agreements of cooperation, information and franchising networks, etc.

Finally, the typical governance structure of international cooperation in Russian universities is far from ensuring a configuration of intellectual property rights within partnerships. The traditionally value oriented mechanism of the structure has been gradually replaced by value rational approach, which now lacks administrative and management instruments to enforce the rules. Though there are vivid examples of positive solution of the problem (mainly in Moscow, St.- Petersburg, Saratov, Nizhni Novgorod, Voronezh and some other Universities), these rules exist mainly in the form of "orders and prescriptions" initiated by the university administration or international office. Since these institutional attributes are not faculty and staff's collective choice, they are not interiorized by them that may leave institutions waiting for some kind of external effects of the international cooperation. The situation is not acceptable in principle especially in the context of Russia's attempts to integrate into the European higher education area. There's an urgent need to realize the necessity of building a multi level system of relationships among all the participants and economic agents of international academic cooperation. The uncertainty of individuals' possible behavior in this type of academic activity may be considerably reduced with the help of international academic exchanges norms, rules and sanctions, established by law, organization and contract, as well as by custom, tradition, habit, ethical and moral principles.

## CONCLUSION

The institution of international academic cooperation develops market and non-market exchange of educational services, ideas, methodologies, human capitals, even ideologies and fads, is of obvious importance. It

serves as a source of innovation and institutional change in Russian universities, providing a basis for cross-functional interactions in their internal environment. The transformation process regarding the rationalization of organization and management of international cooperation in Russian Universities that began in 1991 with the liberalization of universities' external economic activity (The Decree..., 1991) is now acquiring a new institutional dimension which is inseparable from their economic performance on the international market of higher education.

## BIBLIOGRAPHY

- BULGAKOVA, N., *Sorbonne, Bologna, Further on - Everywhere?* Poisk (in Russian). 27.01.2003.
- DAVIES J.L., University Strategies for Internationalization in Different Institutional and Cultural Settings. A Conceptional Framework. In *Policy and Policy Implementation in Internationalization of Higher Education*. EAIE Occasional paper. Amsterdam, 3-18, 1995.
- DUDINA, I., Institutional Mechanism of HEIs' International Cooperation in the Russian Economy Transformation and Globalization. Dissertation of Candidate of Sciences (*Economic Theory*). Volgograd State University (in Russian), 2003.
- FURUBOTN, E.; RICHTER, R., *Institutions and Economic Theory: the Contribution of the New Institutional Economics (Economics, Cognition, and Society)*. University of Michigan Press, 2000.
- KNIGHT, J., An Introduction to the IQRP Project and Process. In *Quality and Internationalization in Higher Education*, ed. by J. Knight and H. de Wit. Paris: IMHE/OECD, 1999.
- LEBEDEVA, N., *Institutional Mechanism of Economics: Essence, Structure, Development*. Volgograd: Volgograd University Press (in Russian), 2002.
- NORTH, D., *Institutions, Institutional Change and Economic Performance*. Cambridge: Cambridge University Press, 1990.
- SIEGFRIED, J., *Encouraging Policy Oriented Research on the Economics of Higher Education*. Forum Futures. EDUCAUSE, 2001.
- TEICHLER, U., *Internationalization as a Challenge for Higher Education in Europe*. Tertiary Education and Management 5, 5-23, 1999.
- The Decree of the President of the Russian Soviet Federal Republic (November 27, 1992). Liberalization of External Economic Activity. November 15, 1991. No. 213. *Rossiiskaya Gazeta* (in Russian).
- WIT H. de, *Internationalization of Higher Education in the United States of America and Europe*. Westport, Connecticut - London: Greenwood Press, 2002.

# A model of self-developing virtual learning environment for foreign language higher education

NINA BUHANTSEVA<sup>1</sup>, VILENA BRYLEVA<sup>2</sup>

<sup>1</sup> IT Centre. Volgograd State University

<sup>2</sup> Linguistics and Intercultural Communication Faculty, Volgograd State University  
Universitetsky Prospekt 100. Volgograd, Russia, nina.buhantseva@volsu.ru

## Abstract

The article describes the experience of developing a model of self-organizing virtual educational environment within Volgograd State University (VolsU) electronic resources for the needs of distributed learning and integrating a smaller environment of Linguistics Faculty into it upon the basis of education portal technology.

## INTRODUCTION

Internet community in Russia nowadays is a dynamically developing society involving a wide range of ages and occupations. New communication technologies are being rapidly implemented in education and prove to emerge as an effective tool in the teaching-learning process.

Comparing e-communication with traditional classroom, where verbal communication is still put a premium upon, we assume that the first is already attempting to compete with the latter, creating new forms of pedagogical interaction.

Computer-mediated communication is a new tool providing comfortable interaction in a teaching-learning process. It is not replacing traditional face-to-face class but adds to it new opportunities.

Modern progress in education technologies is impossible without the implementation of user centered learning and knowledge management systems that will provide a high quality of educational material presentation and retention thus enhancing the learning process and ability to create and share knowledge.

## EDUCATIONAL PORTAL AS A KEY TO THE PROBLEM OF RESOURCE INTEGRATION

The number of educators and learners using IT for their education needs in Russian province is objectively small, lack of convenient readymade software and network technologies for active interaction in educational environments being one of the main problems, preventing the rapid growth. Readymade software decisions of national IT companies are rare or not satisfying, foreign tailored systems are too expensive for state educational institutions and hard to support as they can not be easily adjusted to the needs of local education process. Development of "home made" virtual educational environments is one of the most urgent tasks to attempt nowadays.

The key position in this process belongs to Educational Portals - web based systems, consisting of information databases, providing education process with access to learning and research material, and of an individually adjusted e-learning shell-like environment with various services.

Major functions performed by such portals, aimed to support a highly technological education process, should have one important feature that can produce a salutary effect on the development of an educational environment. It is integration.

Volgograd State University has accumulated a sound number of scientific, research and educational electronic resources, which, unfortunately, do not form a unified virtual structure. This structural dissociation and isolation of resources now thwarts the process of their integration into a selfdeveloping information system that would form the basis of the virtual educational environment for the University and the system of local institutions.

## ADVANCED DISTRIBUTED LEARNING SYSTEM FOR LANGUAGE LEARNING

We decided to start solving the problem of integration with the modernization in the sphere of language education at VolSU, namely with integration of electronic resources of Linguistics and Intercultural Communication Faculty (LaICC) into a university virtual environment. Language education seems now to be one of the rapidly developing fields implementing IT in traditional class. Combination of portal technology and the new generation of language software systems allow creating a new real-time teaching-learning model that provides high quality and flexibility of educational process. This is the model of Advanced Distributed Learning which combines traditional face-to-face class with a number of IT and distance learning techniques. The result proves to be more effective than traditional class alone can provide.

A good amount of research in the field of IT usage in language education has popped up recently with the booming development of the Internet in Russia. Scholars show a growing interest in the field and contribute their ideas to conceptualization of major pedagogical issues in distributed learning theory.

Polat (POLAT EU, 1998) outlines some conceptual principles for distributed language learning:

- learner's foreign language self practice;
- active interaction between educator and learner;
- effective feedback;
- various kinds of self education techniques with particular stress on new pedagogical methods, e.g. project work.
- The following methodological principles are considered relevant for distributed language learning:
  - communicativity, consciousness
  - demonstrativeness
  - native language support
  - apprehensibility
  - positive emotional background

Distributed learning can realize its potential in language education and radically change educational system only when technologies are improved to a level able to provide appropriate decisions. These technologies shall comply with a number of requirements:

- provide a platform for 3 main modes of language education: asynchronous group work, synchronous group work, individual work. All three shall support multimedia opportunities for language practice speech, writing, listening and reading. The platform should integrate all three modes into one learning environment;
- provide all scales management and administration tools not only for creating and managing academic groups and courses but also admission and registration process, data storage and planning — all these functions, performed by a faculty in the real world, are to be performed by a virtual dean's office too;
- support open standards so that all processes of creating lecture courses, reading lectures, teaching, testing, managing and administrating could be shared by the faculty's departments, who should supply the content and manage it independently upon the basis of platform services and readymade decisions.

To satisfy these needs our VolSU IT Centre experts have developed the e-learning Shell for the University Educational Portal. Its self-organizing and self-developing structure, determined by its information content, will allow the Portal evolve from a corporate informational web-source through the transitional stage of a shell-like structure for cooperative work to a regional intellectual system integrating various services into one Educational Portal.

A Triad as a Self-organizing and Self-developing Structure of the Portal

The structure of the Portal is formed mainly upon the hierarchy of networked sub-portals (or micro-portals). Each of them is organized upon the triad:

{Subject of activity; Type of activity; Object of activity (target group)}.

Each triad member in its turn has its own hierarchical structure formed by relation of "set-subset" type.

Subject of activity:

*resource content developers* - departments and their subdivisions, scholars groups and associations;

Type of activity:

*research, educational, social and cultural activities* of the University and other research and educational establishments throughout Volgograd region;

## OBJECT OF ACTIVITY (TARGET GROUPS)

*education process participants* - students, schoolchildren, educators, teachers, university staff groups, departments and faculties, various organizations.

Hierarchy among the members of the triad generates a hierarchically networked structure of the triads (or sub-portals) themselves.

Content developers (authors) at the moment of uploading an informational resource by themselves create or mark a triad of a relevant resource and also mark a number of additional features which then help to search and find the uploaded information. So a self-organizing hierarchical networked structure arises from sub-portals and informational resources linked to them.

Apart from full text electronic resources sub-portals contain HTML-pages, news, forums, web-boards, email lists, links to other resources.

The development of the Portal shell software will allow the subjects of research and education process form and structure on their own the content of the virtual environment which becomes the basis of the teaching-learning process via informational system.

## LANGUAGE LEARNING SUB-PORTAL DESCRIPTION

Language Learning Educational Sub-portal (LLES) is a representation of the triads' structure. It can serve as an integrative system that will start a unified and united virtual language educational environment.

Web-based structure of the LLES includes two main units - a specialized language learning information database that provides educational process and an individually adjusted working environment with support of various services.

Information Database (Resource Centre) consists of theoretical and methodical material (e-lectures, HTML of java-based courses, virtual seminars, dictionaries, encyclopedias, links banks, texts and software downloads, etc.) and can be integrated in other university resources – interdepartmental or university information centers.

Working environment of LLES should provide a quick access to the Resource Centre for educators and learners through a user-friendly intuitive interface, which allows good search and find facility, easy make-up, proof and upload of any new information for everyday education needs. The above mentioned e-learning Shell technology for the University educational portal already gives and opportunity of information management for education process participants in conditions of authorized access - for example an educator, creating an e-course, can edit its content in real time and upload new task sheets for students or administer a personal web-page without technical staff assistance; a student can upload a project or save testing results so that they are available to whoever they may concern.

Individually adjusted working environment of the sub-portal allows a student specify the content of a chosen course considering education objectives of a certain specialization and the significance of the course in the curriculum. A student has an opportunity to choose: forms, methods, means and strategies of studying language or theoretical material; time and tempo of self-study; time and form of tutoring and group work; time and form of crediting and assessment, etc. Thus a growth of subjectivity shows itself in the education process.

On the other hand, individual adjustment of basic parameters by a student can bear not only dynamic, but also static character, as their surname, academic group number, faculty or department objectify the education process.

Major function of LLES is thought to be project and research work support and provision of language practice via the Internet on the basis of selected and classified web- and software resources. Project and research activities along with language practice creates authentic situations of communication in target-languages and improve the students' professional

language and liberal arts skills, combining academic work with hands-on training for real jobs. Besides, virtual communication environment added by the opportunities of joint intercultural language research projects enable educators and learners to work cooperatively in real-life intercultural communication.

LLES can also support communication inside the faculty research and learning (local forums and boards, discussions, lists, e-journals, etc).

## CONCLUSION

Modern top-professional network-oriented world already sees computer-communication skills as basic among the rest of a person's qualities. Communication proficiency nowadays necessarily includes a number of skills - good writing style, effective electronic information processing, critical evaluation of information resources, joint activities coordination, presentation and self-presentation.

These skills can be effectively trained within the frame of a distributed learning system, build on educational portal technology.

Our experience in developing portal technology helps outline the relevant parameters of a good learning shell for a sub-portal as follows:

- adjustability
- structure transparency

- authorization and authentication opportunities
- thoroughly planned but upgradeable navigation
- easy navigable upload and information search

The process of Implementing system-forming elements of distributed learning system at VoISU has shown that students, using the Educational Portal, develop not only positive motivation towards learning and new interests and skills, but also elaborate active and creative life positions which form the basis for their conscious self-controlled personality development.

In conclusion we would like to say that the technology of Educational Portal can enable the transition to a system of open education and gives a start to gradual personalization of education process participants, especially students, in this system.

## BIBLIOGRAPHY

POLAT EU, Nekotorye conceptualnye polozheniya organizatsii distantsionnogo obucheniya inostrannomu yazyku na baze komputernyh telekommunikatsiy// - *Inostrannyye yazyki v shkole* - N 5, Moscow, 1998.

# The "next generation" GLOBE Program

CRAIG G. BLURTON

Director, The GLOBE Program FL4, 2104

3300 Mitchell Lane Boulder, CO 80307, USA, craigh@globe.gov, www.globe.gov

## Abstract

*The Global Learning and Observations to Benefit the Environment Program (GLOBE), which began on Earth Day 1994 and is funded by NASA, is a remarkable and unprecedented collaboration of thousands of individuals worldwide primary, secondary, and tertiary students, teachers and teacher educators, scientists, government officials, and others to improve education, increase environmental awareness, and reach a more complete understanding of the Earth System. The heart of the GLOBE vision is an integration of education and scientific research where everyone contributes and everyone benefits. This paper will discuss the Program's first 10 years, and what is being planned for the "Next Generation" GLOBE.*

## INTRODUCTION

The GLOBE Program ([www.globe.gov](http://www.globe.gov)) is a remarkable and unprecedented collaboration of thousands of individuals worldwide primary, secondary, and tertiary students, teachers and teacher educators, scientists, government officials, and others to improve education, increase environmental awareness, and reach a more complete understanding of the Earth System.

The heart of the GLOBE vision is an integration of education and scientific research where everyone contributes and everyone benefits. Students, teachers, and scientists work together in the community to understand and appreciate the world around them. GLOBE supports scientific research, promoting our understanding of the Earth as a system and building our knowledge to address and solve important societal problems. GLOBE students from different countries and cultural backgrounds learn to work together in the field and classroom.

## HISTORY

The initiative for the GLOBE Program was first announced on Earth Day, April 22, 1994, in the United States (U.S.) by then-Vice President Al Gore. The National Oceanic and Atmospheric Administration (NOAA) was designated as GLOBE's lead agency. Along with NOAA, the National Aeronautics and Space Administration (NASA), the National Science Foundation (NSF), and the Environmental Protection Agency (EPA) provided funding, and the Department of State, although not a funding agency, was involved in the development and implementation of the international aspects of the program. The U.S. Agency for International Development (USAID) and the Peace Corps have also provided support to GLOBE in other countries.

GLOBE started up with just a few hundred schools and teachers but quickly grew over the years largely through the efforts of the growing number of International Partners and U.S. Partners such as universities, school districts and others. To date, over 28,000 teachers from 107

countries, including Greece which joined in 1995, have participated in GLOBE workshops. More than a million primary and secondary students in 15,000 schools have taken part in GLOBE and students using GLOBE's scientific protocols have reported over 12 million environmental measurements from around the world.

Russia became GLOBE's first international partner in December 1994. The U.S. Government has in place bilateral agreements with 106 countries that specify that the GLOBE Program will provide certain services to its foreign partners. In addition, the GLOBE Program has existing "partnership" agreements with approximately 100 organizations in the United States. In both the international and U.S. agreements, the organizations involved commit partners to recruiting, training, and supporting teachers who then implement the GLOBE program with students. The GLOBE Program is obligated to provide specified services and resources to partner organizations and teachers in return.

The United Nations (UN) General Assembly passed a resolution in December 1994 endorsing GLOBE, encouraging nations to participate and requesting UN agencies to support its implementation. GLOBE subsequently signed agreements covering collaborative activities with the United Nations Educational, Scientific and Cultural Organization (UNESCO) in April 1996; the United Nations High Commissioner for Refugees (UNHCR) in May 1996; and the United Nations Environmental Programme (UNEP) in June 1999.

In September 2002, NASA assumed lead U.S. federal agency responsibility for GLOBE and shortly thereafter issued a Cooperative Agreement Notice to solicit proposals to assume responsibility in assisting NASA in the management of the GLOBE Program, including both worldwide implementation and coordination in the U.S. A Cooperative Agreement between NASA and the University Corporation for Atmospheric Research (UCAR) was signed June 16, 2003.

## SELF-STUDY AND IMPROVEMENT EFFORTS

When management of the GLOBE Program was turned over to UCAR in October, 2003, the Program Office began a self-study - known internally as the "baseline study" - to better understand the status of the program as it was inherited from NASA. While many impressive successes were identified in GLOBE, the baseline identified important areas of the Program that could be improved such as teacher retention rates, data reporting participation, research into the educational effectiveness of program materials and activities, Web site usability, communication between schools and scientists, and so forth.

The GLOBE Program Office solicited input starting at a GLOBE Community Meeting held in January 26-28, 2004, and ending with a