

NEW EDUCATIONAL MODELS: UNIVERSITY CONSORTIUM, TELEUNIVERSITY, VIRTUAL UNIVERSITY (THE AUSTRALIA AND USA EXPERIENCE)

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Abstract. The article discusses the activities of new institutional models of university education, such as: a consortium of universities, teleuniversities and a virtual university, which are commercial enterprises that provide communication and administrative services for the provision of training courses developed by traditional universities included in the consortium, for distance learning based on a variety of educational institutions and technologies. The experience of university distance education accumulated in Australia (OLA), the activities of the US National University of Technology (NTU) and the CASO Internet University are summarized.

Key words. New educational models, university consortium, teleuniversities, virtual university, OLA, NTU, COMPUSERVE, distance education, television programs, information technology, - Higher Education Contribution Scheme.

An important new institutional model of university education that has begun to develop in recent years is the consortium of universities (from Latin consortium - complicity, community). It is a commercial enterprise that provides communication and administrative services for the provision of courses developed by the consortium's traditional universities for distance learning based on a variety of educational technologies.

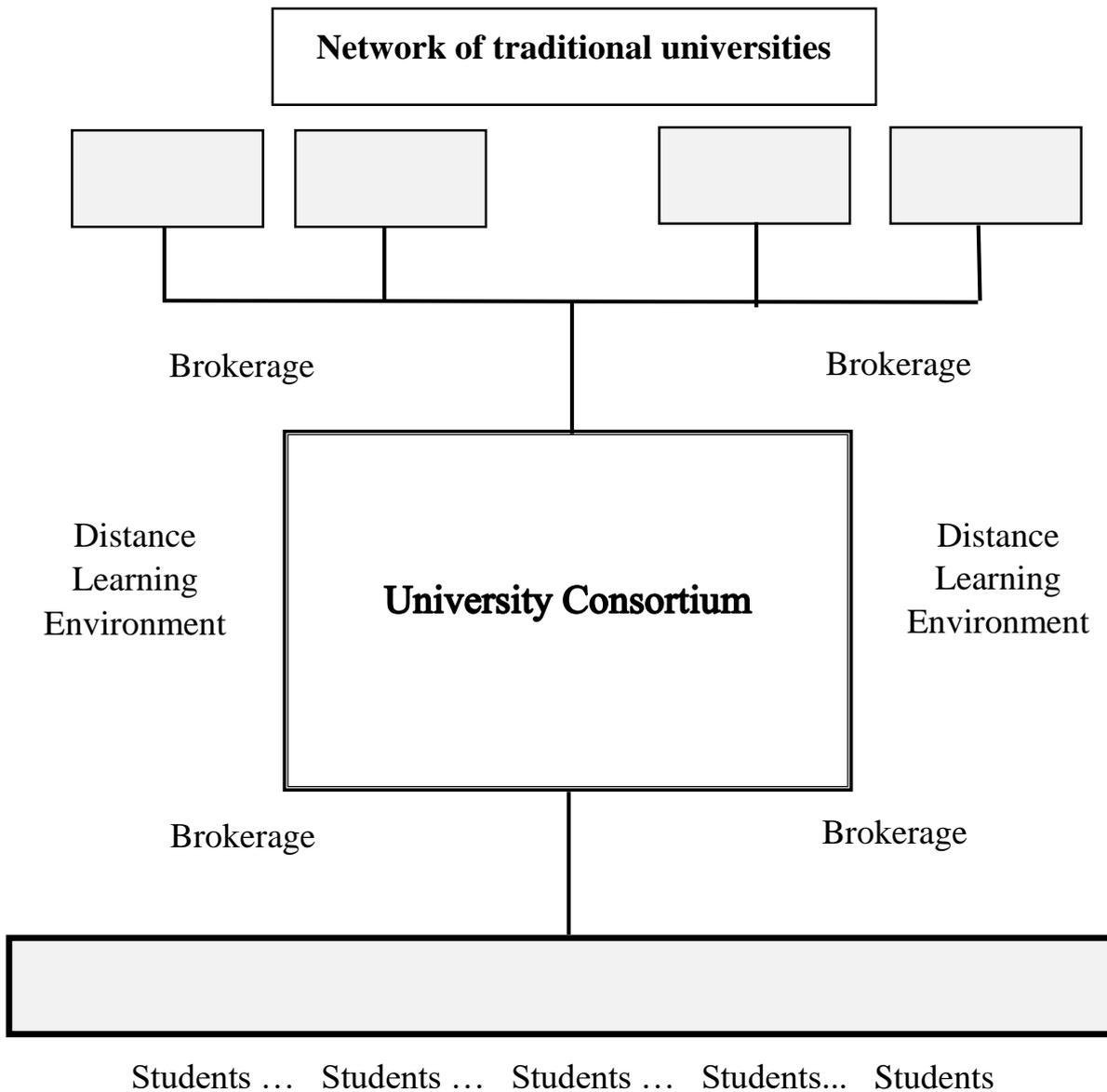
Thus, the consortium of universities unites and coordinates the activities of several universities on the basis of modern information technologies. It can be said that a consortium of universities is brokering a link between students and traditional universities for distance learning. A consortium of universities can provide both higher education courses and doctoral courses, continuing education programs and preparatory courses for applicants. Most importantly, the consortium of universities provides the opportunity to remotely obtain degrees and certificates from those universities that are members of the consortium.

This institutional model is extremely relevant for many countries, since it allows to combine the educational resources of many traditional universities.

Significant experience in the development of this institutional form of university distance education has been accumulated in Australia, where Open Learning Australia - Open Learning Australia - OLA - is successfully operating - a consortium of 8 traditional universities that provides an opportunity for all Australians to study the courses of these universities using not only printed materials and mail, but also new information technologies.



Scheme 1. General scheme of functioning of the consortium of universities



A number of special manuals and videos have been developed that can help students master distance learning methods. OLA, in collaboration with ABC, has produced a special television program on mastery of teaching methods, which is shown on ABC at least 1 time during each training period. A detailed printed guide to teaching methods is produced by the UNILEARN consortium and can be purchased along with videos on mastering teaching methods directly from one of the universities that are members of the consortium.

In order to provide a quick postal service to deliver essential books to all OLA students, the Co-op Bookshop has been set up and offers a range of learning guides.

In OLA's activities, cooperation with the ABC television company, which broadcasts television and radio programs that complement many of the OLA courses, is of fundamental importance. ABC also advises OLA on some programming and on the production of new television and radio material. OLA programs are designed not only to achieve certain educational goals, but also to be interesting. Most programs are not just taped lectures, but are conversations with



experts or classes in a setting or environment conducive to learning. Some television programs are shown twice a week, and each radio program is broadcast once a week. All programs, with the exception of programs in foreign languages, have text subtitles for the deaf and dumb. OLA students are encouraged to record television and radio programs and use them as part of the teaching material. Australian students studying abroad must do all the organizing themselves to watch these programmes.

For research or teaching purposes, portions of OLA printed materials or books are permitted to be copied, typically up to 10% of each publication, and OLA television and radio programs may be recorded. It is illegal to record programs for any other purpose or broadcast any recordings.

Educational institutions may record television programs for educational purposes provided that they keep a record of the number of copies made and the number of students and pay the appropriate license fee.

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Watching TV programs is not required. All-important material contained in OLA television and radio programs is duplicated in educational printed materials.

OLA currently offers 150 undergraduate courses covering arts, social sciences, business, technology and applied research. About 100 new curricula are being developed.

The academic year at OLA is divided into four 13-week study periods. Most of the courses are single, i.e. cover 1 study period and cost \$305. Dual courses cover 2 study periods and cost \$610. Two study programs (Mathematics and Statistics) are an exception, each of them is a single study program, but the training lasts 2 study periods, which is related to the number of relevant television broadcasts. The fee charged for each study program covers the cost of teaching materials, library access, proofreading, and student counseling, but it does not include the cost of textbooks.

In exploring the new model of university education, it is important to emphasize that the OLA consortium is not a university and does not itself award degrees. However, many of the universities that are part of the OLA provide the opportunity to obtain degrees in part or in full through training through the OLA. Thus, it is currently possible to obtain a degree in such fields as the humanities, business, applied sciences and information technology, etc.

All universities that offer degree opportunities through the OLA count points (credits) for the corresponding study programs completed at other OLA-affiliated universities.

In many cases, previous learning outcomes can be credited towards a degree through the OLA. These can be curricula already completed at some university (both traditional and distance), as well as completed in the system of continuing education. Thus, OLA has developed a system for transferring credits (points).

The assessment of learning outcomes for each study program is carried out by the respective university and covers the same content and at the same level of complexity as in the case of traditional education. As a general rule, a student must complete at least 2 assignments and pass 1 exam in each study program. Assignments are usually sent and returned by mail, although many curriculums allow assignments to be sent by fax and sometimes by e-mail. All study-providing universities guarantee assignments will be reviewed and returned within 2

weeks of receipt, and some study program coordinators guarantee assignments will be returned within 48 hours for students with fax or email access.

Examinations are held in June and November every year throughout Australia, with the exception of some training courses. A national network of examination centers is in place to guarantee reasonable travel time for students to take the exam. Detailed information about the dates and place of the exams is provided by each university. Special arrangements may be made for students who live in remote locations or have health problems. In these cases, a teacher-examiner (invigilator) may be appointed to take the exam in a place and time convenient for the student.

OLA's dedicated advisors help students decide if studying at OLA is right for them or not. They can also help select study courses and provide advice on developing study skills, writing assignments, and preparing for exams.

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Libraries of universities delivering courses through OLA have jointly developed the Open Learning Library Information Service (OLLIS) to provide OLA students with access to library services. Once a student has registered with the OLA, they immediately receive a special OLLIS library guide and special vouchers that can be used at a range of university and public libraries for library services.

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Distance learning is isolated and some students feel the need to contact other students in order to exchange ideas, experiences or information. For people interested in this kind of contact, OLA organizes study groups - lists with the names and phone numbers of people living relatively close to each other.

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The Open Learning Deferred Payment Scheme (OLDPS) developed in Australia deserves special attention. OLDPS was introduced by the Federal Government in early 1994. It allows OLA students who meet certain criteria to defer their OLA registration fees for a semester

(any 2 consecutive study periods) by obtaining a loan from the Commonwealth Government. Based on certain features of the Higher Education Contribution Scheme (HECS), which was introduced in Australia in 1989, OLDPS only affects the basic fee for each study program. Payment for textbooks or other additional services cannot be deferred.

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This scheme can be used by all students who meet the following criteria:

students must be either an Australian citizen, or permanently resident in Australia, or be a New Zealand citizen who, at the time of registration, has been continuously living in Australia for 2 or more years;

the scheme is not applicable to preparatory programs, continuing education courses;

payments must be deferred for at least 3 study programs per Loan Request, with at least 2 study programs in the first of two study periods;

the exam pass rate must be at least 50% in order for the student to continue using this deferred payment scheme.

The loan form is a legal contract between the student and the Commonwealth and requires the student to begin repaying the loan through the tax system as soon as their weekly wages exceed a certain level.

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A Commonwealth Government AUSTUDY financial aid scheme has also been developed and is available to OLA students. AUSTUDY provides financial assistance to needy students aged 16 and over. To get AUSTUDY, students usually have to study full time (not work). This means that OLA students must take a minimum of 3 study programs each academic period. But if the student is receiving welfare benefits from the Department of Social Security (single parent, disabled, etc.), then the number of university courses may be less.

Such an educational model as a consortium of universities seems to be extremely relevant for Uzbekistan.

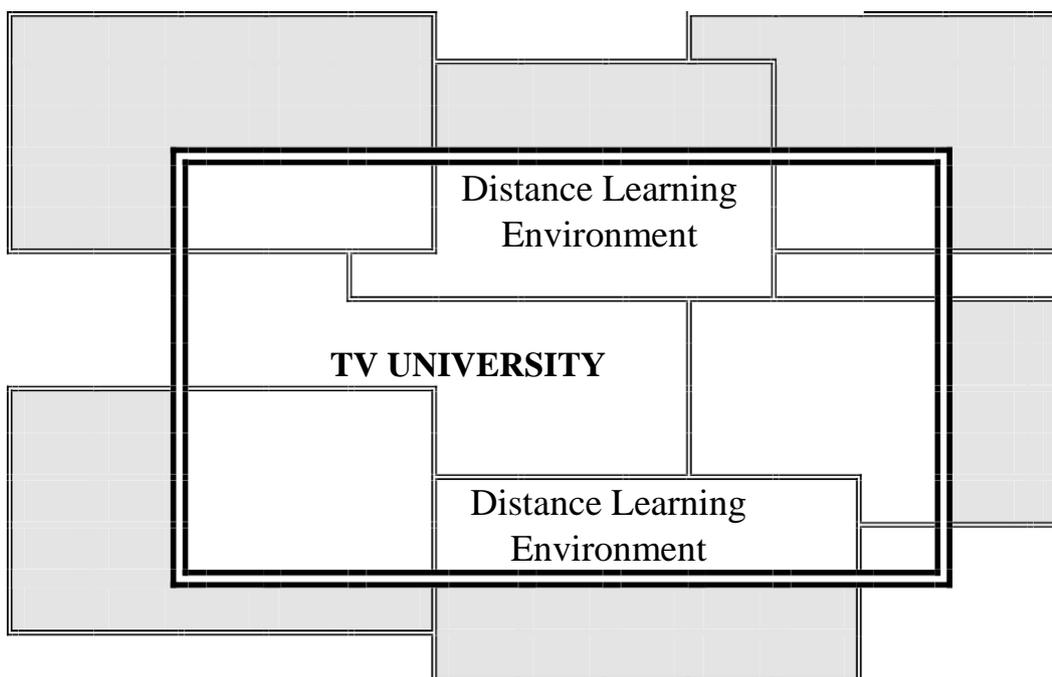
Another new institutional form of university education, the teleuniversity, is also based on pooling the resources of traditional universities, but this pooling is much stronger than in the case of a consortium of universities. Teleuniversity assumes the joint work of a number of independent universities on integrated curricula. Teleuniversity itself develops and delivers courses, awards degrees, issues diplomas and certificates, using the faculty, classrooms and other resources of traditional universities.

This model of modern university education is most clearly embodied in the activities of the US National Technological University - NTU.

NTU is in the top 5% of all US technical universities, ranked by the number of students enrolled in master's degree programs in engineering and computer science, according to data published in the American Guide to Engineering Graduate Education. In this regard, the question usually arises: how could a new educational institution, which is a little over 20 years old, achieve such rapid progress?

Scheme 2. General scheme of functioning of the teleuniversity

Network of traditional universities that are part of the teleuniversity



The shortest and simplest answer to this question is obvious - thanks to telecommunications technology. A more extended answer is through the pooling of national university resources and, on this basis, the opportunity for working engineers and managers to have access to these resources at their workplaces in corporations, government agencies, other universities through one of the largest digital television broadcasting networks in the world.

NTU was established in 1984 under the leadership of Dr. Leonel Baldwin of Colorado State University and pooled the resources of 8 US universities to develop, deliver and maintain distance courses aimed at graduate engineers, technology and management professionals.

This new distance university, headquartered in Fort Collins, Colorado, was organized as a non-profit institution governed by a Board of Trustees who represented mainly high-tech corporations. NTU was accredited in 1986 when it trained its first graduate.

NTU is now pooling the resources of 46 leading US universities, using their faculty, their courses, as well as their classrooms, to develop and deliver TV-led training courses to more than 300 locations, so-called job sites, belonging to public and private high-tech organizations. This became possible due to the fact that NTU operates one of the world's largest networks of digital compress television. The satellite communication network realizes one-way transmission of video information or two-way transmission of audio information. Network activity is controlled by the NTU Network Control Center in Colorado, which allows broadcasting simultaneously on 14 channels around the clock and all 7 days a week. As a result, the number of broadcast hours on the NTU Network was, for example, 22,702 for university courses in 1994 and 2,980 for uncredited short courses. The area served by TELSTAR 401, a new domestic satellite operated by NTU, covers all US states, extends to southern Canada, northern Mexico and the Caribbean.

Perhaps the most impressive development of the NTU Network occurred in 1992 with the transition to digital compress video (DCV). NTU was the first to use this new telecommunication technology for educational networks. The main reasons for the transition from analog video to digital video were: improving image quality, improving sound quality, increasing the bandwidth of the communication channel, as well as such additional features as facsimile communication, high-speed data transfer, remote operation of VCRs, etc.

Since the main users of NTU services are public and private high-tech organizations, there is a high concentration of NTU work sites in places such as Silicon Valley, Minneapolis, Chicago, Boston, Washington and other technology centers.

There are two ways for an organization to join the NTU Network: joining the entire organization and joining one or more sites belonging to a particular organization. 28 organizations (most of which are large well-known corporations) chose the first way to join NTU. Each of these 28 organizations can have an unlimited number of sites and can have a significant impact on the management of the university and its programs through participation in the NTU Executive Advisory Council.

The second path to gain access to the NTU Network, which is to create one or more separate work sites, has so far been followed by more than 100 corporations, government agencies and universities.

The enrollment at NTU is constantly growing, and now the annual enrollment exceeds 5,000 people.

NTU curricula consist of university curricula and more than 350 short non-credit courses on a variety of technical and management topics. The list of university curricula at NTU contains over 1,000 academic courses in engineering, computer science and technology management. All of these courses are held in the classrooms of NTU member campuses and transmitted over the Web to job sites in the US, Canada and Mexico.

NTU currently offers master's degree programs in 11 subject areas. With programs in almost all areas (except two - technology management and dosimetry), all degree requirements can be fully met as a result of delivering courses via satellite to job sites.

Non-credit short courses are also offered, which are called Advanced Technology and Management Programs (ATMPs). Each working day NTU allocates 6 hours on each of the two

channels for ATMP. In 1994, over 100,000 people completed these interactive programs. Corporate and service customers can also use videotaped ATMP courses at their sites outside of North America.

Thus, no less important than NTU's "technological know-how" is its "organizational know-how". A very important organizational achievement is the joint work of almost fifty independent universities on integrated curricula.

In the 1990s, such a new organizational form of modern education as virtual classrooms and virtual universities began to develop.

This educational model fully realizes the potential for restructuring the education system that teleconferencing technologies used for educational purposes have. These technologies allow groups of students and individual students to meet with teachers and each other, being at any distance from each other. Such modern means of communication are complemented by multimedia-type computer-based learning programs that replace printed texts, audio and videotapes. As a result, a person can receive training from many different sources. The emergence of this model of education leads to the fact that learning is carried out not only at a distance, but also independently of any institution.

This model has not yet been fully implemented. It faces significant difficulties, in particular, the problem of obtaining public recognition and the right to issue diplomas and certificates, to assign appropriate degrees (the problem of accreditation of a virtual university).

Overcoming these difficulties and the full development of the virtual university model will mean profound changes in the organizational structure of modern education. The virtual university does not have educational buildings and student dormitories, campuses, does not have offices of administrative workers and assembly halls; it consists of collaborative teams of administrators, course developers, teachers, technologists and learners that are separated by great distances, often national borders, but who work together and learn interactively using modern telematics technologies. Obviously, this model means a lot of progress in terms of the internationalization of education and the accessibility of education.

The experience of COMPUSERVE, a commercial general-purpose computer conferencing system, provides a clear example of how virtual classrooms can be organized on various topics, how to offer students in these classrooms reference libraries, bookstores and other services provided by traditional universities. The success of the CompuServe system has proven that it is possible to serve thousands of students in a computer conference system. He showed how special interest groups could be organized to serve so many users.

An example of a virtual university is the CASO Internet University - <http://www.caso.com>.

Currently, this university, using 87 accredited educational institutions to develop and deliver courses, offers 2738 university interactive courses in 24 subject areas such as aeronautics, arts, economics, medicine, history, foreign languages, literature, law, management, mathematics, psychology, sociology, etc.

Courses are delivered over the Internet using audio and graphics. These courses can be credit or non-credit. The most significant is the possibility of obtaining a degree in this Internet university.

The main mission of this university is formulated by its creators as follows - "We are working to help people experience the revolution in education that is happening on the basis of the Internet ... We are a group of teachers and students of all ages who collaborate while learning via the Internet. Very soon there will be hundreds of new educational institutions with

thousands of online courses...". In the field of additional professional education, the activities of such a virtual university as Spectrum stand out – <http://www.vu.org>.

According to its creators, "our virtual campus on the WWW is the largest online learning community on the Internet, with more than half a million people from 128 countries studying in our virtual classrooms."

The academic year in this virtual university is divided into four quarters. The duration of the courses is from four to ten weeks. Every quarter, 8-20 training courses are offered in a variety of subject areas, such as geography, history, foreign languages, law, computer science, etc. Work is constantly being done to create new courses, taking into account the needs of students.

The virtual university operates on the principles of openness, that is, it does not put forward any restrictions for enrolling in courses (only for the most difficult courses, it is recommended to study the introductory first). The registration fee at the university is 15 US dollars, by paying which the student can study three courses.

Starting January 1, 1998, this virtual university issues state-recognized documents in the field of further professional education based on the system of Further Education Credits. This credit can only be obtained after successfully passing the final exam. If receiving such a credit is not expected, then the student can participate in the educational process, but not do any homework and tests.

Spectrum Virtual University has its own virtual bookstore, where books are sold on the Internet, the catalog of which has about two million titles. Many courses do not involve the use of textbooks - teachers provide educational material and tasks online. Chat Cafe of this university is popular among students, however, the use of real-time discussions directly in the educational process still encounters a number of technical difficulties that will undoubtedly be overcome in the near future.

A virtual university is an extremely rapidly developing new organizational form of modern education. To discuss and find solutions to the problems and prospects for the development of virtual universities, for example, a special electronic newspaper Virtual University Gazette is published – <http://www.geteducated.com>.

Thus, on the basis of modern computer and telecommunication technologies, such fundamentally new organizational forms of university education as a consortium of universities, a teleuniversity, virtual classes and universities are being developed, which are components of a new educational system.

The processes of formation and development of a new educational system are being activated in many countries. The fate of socio-economic development in the coming information age depends on the management of these processes.

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