



**United Nations Educational, Scientific and Cultural Organization**  
**Organization des Nations Unies pour l'éducation, la science et la culture**  
**Организация Объединенных Наций по вопросам**  
**образования, науки и культуры**

## **EXPERT MEETING**

**Distance Education: Structure, Methodology,  
Staff Development and Legal Aspects**  
*IITE (Moscow), March 23-24, 2000*

## **WORKSHOP**

**Distance Education: Networking and Staff Development**  
*IITE (Moscow), March 24-25, 2000*

## **Collected Materials**



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## CONTENTS

PREFACE .....	4
<i>Prof. Artem ADJEMOV. DISTANCE LEARNING AS A NEW INFORMATION SERVICE OF SOCIAL SIGNIFICANCE (Russian Federation) .....</i>	5
<i>Mr. Marquis L. BUREAU. Open Learning and Distance Education in Canada (Canada) .....</i>	11
<i>Dr. Nicholas C. FARNES. DEVELOPMENTS IN OPEN AND DISTANCE LEARNING (United Kingdom) .....</i>	15
<i>Dr. Margalit GANOR, Rinat GIL'AD. TRAINING DISTANCE EDUCATION STAFF: THE OUI MODEL (Israel) .....</i>	25
<i>Dr. Alexander GOUSTYR. THE FACTORS AND POSSIBLE PRIORITIES OF THE EDUCATIONAL POLICY OF IITE UNESCO (Russian Federation) .....</i>	43
<i>Prof. Sarah GURI-ROZENBLIT. INFORMATION TECHNOLOGIES IN THE SERVICE OF HIGHER EDUCATION: FUNCTIONAL ROLES AND ORGANIZATIONAL INFRASTRUCTURES (Israel) .....</i>	51
<i>Prof. Mikhail KARPENKO. NETWORKING AT THE MODERN UNIVERSITY FOR THE HUMANITIES (Russian Federation) .....</i>	57
<i>Prof. Bruce S. KING. DEVELOPMENTS IN DISTANCE EDUCATION IN AUSTRALIA (Australia) .....</i>	61
<i>Dr. Satoki T. MAHENGÉ. EXPERIENCES OF THE OPEN UNIVERSITY OF TANZANIA IN DISTANCE TEACHING AND LEARNING: STRUCTURE, METHODOLOGY OF DELIVERY AND CHALLENGES (Tanzania) .....</i>	71
<i>Prof. Valery OVSYANNIKOV, Prof. Yuri ZAPAROVANNY. ABOUT INFORMATION MATERIALS FOR AN IITE ANALYTICAL SURVEY ON DISTANCE EDUCATION (Russian Federation) .....</i>	79
<i>Prof. Natalya PANKRATOVA. THE DISTANCE LEARNING IN UKRAINE (Ukraine) .....</i>	91
<i>Prof. Sergey SHCHENNIKOV. SOME FEATURES OF THE OPEN DISTANCE EDUCATION DEVELOPMENT IN RUSSIA ( Russian Federation) .....</i>	99
<i>Dr. Vladimir VERZHBITSKY. DEVELOPMENT OF THE IITE INFORMATION SYSTEM "INFORMATION AND COMMUNICATION TECHNOLOGIES IN EDUCATION: STATE-OF-THE-ART, NEEDS AND PERSPECTIVES OF THE DEVELOPMENT" (Russian Federation) .....</i>	107

## PREFACE

According to the Statutes of the UNESCO Institute for Information Technologies in Education (IITE) distance education is one of its priority areas of activities, and the IITE Governing Board adopted the IITE international project «Distance Education: Structure, Methodology, Staff Development and Legal Aspects». Within its framework on March 23–24, 2000 an international expert meeting was held at IITE. Its central objective was to discuss the main trends of development of the IITE activities in the field of information and communication technologies (ICTs) usage in distance education.

On March 24–25, 2000 the expert meeting was followed by the workshop “Distance Education: Networking and Staff Development”. Its main objectives were to demonstrate existing facilities for networking in distance education and, using the opportunity, to make it possible for the experts from different countries to enlighten for the vast audience their experience in ICTs usage in networking and staff development for distance education.

8 experts, 4 invited speakers and 15 observers, all in all 27 nominated participants representing 9 countries (Australia, Belarus, Canada, Israel, Italy, Russian Federation, Tanzania, Ukraine and United Kingdom) and the European Distance Education Network (EDEN) attended those events. They represented open universities of Israel, Russian Federation, Tanzania and the United Kingdom, as well as centres specializing in distance education and/or its support from Australia, Belarus, Canada and Ukraine. The representatives of the Commission of the Russian Federation for UNESCO and the Ministry of Education, Ministry of Communication, Ministry of Science and Technologies of the Russian Federation attended the meeting and workshop.

At the end of the meeting the Recommendations on discussed issues addressed to IITE were adopted. It was recommended that UNESCO following numerous requests of the participants of the General Conference of UNESCO expressed at its 30<sup>th</sup> session should pay special attention to the development of distance education and in particular to assistance in implementation of ICTs in distance learning/teaching. Several particular proposals concerning main trends of the IITE activities were made, including the analytical activity and the development of an Analytical survey on distance education in the world; the establishment of the information sub-system “ICTs in distance education/learning” as a part of the entire IITE information system within the framework of the IITE international project “ICTs in Education: State-of-the-Art, Needs and Perspectives”; elaboration of a set of training and re-training modules on the use of ICTs in distance education.

During the workshop “Distance Education: Networking and Staff Development” 17 invited speakers took floor and presented their materials to about 100 learners who attended the meeting personally. During the first session of the workshop the educational telecommunication systems used by the Moscow Technical University of Communication and Informatics and the Modern University for Humanities operated and made it possible the on-line presence at the workshop of about 50 thousand students from 157 places in 7 countries. Different models of networking in distance education were demonstrated; as well as various approaches to the staff development were explained.

The Final Report on the expert meeting and workshop is published, and one can get it at IITE, as well as see it at the IITE Web-site ([iite@info.ru](mailto:iite@info.ru)).

These Collected Materials are compiled from the papers, presentations and their summaries placed at the IITE disposal by the participants of the expert meeting and workshop.

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**DISTANCE LEARNING AS A NEW INFORMATION SERVICE  
OF SOCIAL SIGNIFICANCE**

History of the development of telecommunication shows the sequential transition from elementary modes of message transmission to much more complicated ones. Herewith the form of transmitted information is being changed considerably. If in the beginning the forms were simple, such as: an alarm signal, text and so on, then later the opportunities of audio- and video information transmission have appeared. At present, some ideas and even practical applications for transmitting smells and other information that is perceived to some extent by a man due to his available sensual abilities – are being spread. Thus it is clear that there are basic achievements of current telecommunication means that make for “humanization” of forms, methods and means of communication of people that are in the far distance to each other. Hereby the role of computer technique and other information resources that provide the realization of the above mentioned tasks should be emphasized.

The opportunities of transmission of texts, audio-, video and other kinds of information have formed the notion of services offered by the telecommunication means.

At present, one of the most important, from the social point of view, new information service is Distance Learning. Its significance for the human society can be hardly overestimated. At the same time, being the product of hi-tech information technologies, this service has to foresee the solution of system-forming factors, namely: technical, organizational, educational, methodical, economic, juridical and personnel’s factors.

Hence, if to correlate the traditional telecommunication services such as telegraph, telephone and others with the new information service of Distance Learning, then the polyhedronity of the latter is obvious; as far as both different infotelecommunication systems and teaching staff offering different educational products on these systems basis are involved.

The given technology is emphasized to contain all the signs of “industrialization” which characteristic features are: plurality of participants, high level of labor mechanization, standardization and others. In addition to the mentioned social significance the given service brings reasonable revenues to those who offer it. As the analysis shows, the revenues are quite material for telecommunication companies since tariffs paid by the consumers of the named service are growing.

To illustrate the market of educational services one can refer to [1] that stipulates that according to the data of the International Council on Correspondence Education there are about 10 million students taking correspondence courses. If to add this figure to the number of people that take correspondence courses at other levels of education and also participate in advanced training, then the number will increase several times. Taking into account that the present Correspondence Education with the usage of the modern infotelecommunication opportunities is in fact that what is called Distance Learning, then the number of people who are able to apply for the new information service and create an additional traffic for telecommunication companies – may be estimated from 10 to 1000 million people per a year. It is necessary to underline that this is the real solvent sector of economy. In this case, however, in condition of using the distance learning technology, there will be redistribution of the money flows. In a traditional situation these funds were forwarded to payments for accommodations and physical travels of trainees from the city N to the city M; and with the distance learning technology these funds will be used to pay the traffic of the telecommunication companies, that is to pay for the storage and transmission of information from the city M to the city N. Besides, the use of the current infotelecommunication opportunities for training makes the population access to educational sources much wider; also it shows higher efficiency and drive. Indeed, let’s imagine a situation when the engineers and technical staff maintaining a complicated telecommunication equipment due to some changes in the operation part of software adapt their knowledge to a new software version. The technology of Distance Learning will obviously suit the situation the most and make for the fastest and most effective training. But pointing to the positive features of DL, one should not

mechanically oppose to or replace the traditional internal education with Distance Learning. With regard to quality, it can look like the situation if someone would try to abolish studying of addition, subtraction and the table of multiplication in school replacing all these with calculator.

The technology of Distance Learning intends to use all means of telecommunication including such comparatively expensive ones as videoconferences. The expenditures for creation and maintenance will be hereby compensated by places and centers of joint use that are set up on the basis of existing educational establishments or on the basis of post offices\* in small inhabited localities.

At primary stage, this obviously will be the most effective way of implementation and promotion of comparatively expensive telecommunication services. In fact it resembles the situation of implementation of telephoning of some decades ago when telephone was not widely spread and had, in this conformity, rather high cost.

Examining Distance Learning as a new information service, it should be mentioned that this service is in good conformity with the adopted directions of telecommunication development in the world, namely globalization and personification. Actually, the Distance Learning technology is able to afford personally to every individual citizen of the Earth getting an easy access through telecommunication means to global educational resources of different institutes and universities based in different cities and countries according to his wishes and possibilities. Hence, there is being created the common educational environment that provides the promotion of modern complex equipment of different countries including the personnel aspect.

For Russia and CIS countries, taking into account large territories, rather moderate density of population and concentration of educational resources in large cities, – Distance Learning has a special importance. Then recently a large number of equipment that was manufactured overseas and requires specific knowledges of maintenance staff has been put into operation especially in the telecommunication industry. Training of the staff in the European training centers is extremely expensive and has no long perspective since there is gradual modernization of equipment and software. But in this situation continuous keeping the staff qualification at the required level is necessary. Solution of this problem can be reached by creating open networks of Distance Learning based on existing educational centers and setting up a vast structure of multiaccess end-points equipped with appropriate infotelecommunication devices.

Considering the above mentioned and according to the decision of the CIS Telecommunication Administration, RCC Executive Committee supported by ITU carried out the first stage of work on creating the interstate system of Distance Learning in the CIS countries in 1999. Representatives of all Telecommunication Administrations, higher educational establishments and colleges participated in this work. Moscow Technical University of Communication and Informatics (MTUCI, Moscow, Russia) and the Ukrainian State Academy of Communication (UGAC, Odessa, Ukraine) were the main executors. One of the outcomes was generalized information on topology of DL networks disposed in the Internet MTUCI server ([www.mtuci.ru](http://www.mtuci.ru)) that allows to get access to educational resources of different institutes and universities in the CIS countries where the Distance Learning centers are set up. Simultaneously the topology takes stock of Distance Learning points as the multiaccess end-places where population can get educational services. Informational material on DL network topology, DL network itself as well as on opportunities offered by the DL centers and points in the CIS countries – is presented in the Internet at the mentioned above address in the hierarchical succession, and the person involved in this matter can get exhaustive information moving successively in the Internet from the map of CIS countries to the state, city and, at last, to a DL center or point.

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\* Let's notice that students taking correspondence courses are used to send and receive educational materials through post offices. That's why it's quit perspective for small localities to use post offices that have appropriate rooms, telecommunication means and stuff. Besides, it'll bring additional revenues to the post industry.

First of all, the worked out project took into consideration the interests of national telecommunication companies and Telecommunication Administrations in training and refreshment of personnel. However, the principle of being open to population of CIS countries was taken into account for them to get easy access to educational services offered both on the domestic market and abroad. Besides, the principle of "being open" expects easy operating in the forming DL networks of the CIS countries by higher educational establishments participated in the project as well as by any other educational establishments that are able to offer their educational services on the market.

The important constituent of the worked out network is also the offered method of structuring the information space of the Internet in a form of the "Information City", which implemented example can be found at the address: <http://moscow-infocity.mtuci2.ru>.

The main concepts of the offered "Information City" are the unification of the name including the name of the real city, sign "-infocity" and its state domain. For example, if one needs to find some information in the city Tula, then the corresponding address will be: Tula-infocity.ru. If it is necessary to learn something with the help of the Internet about the city of Paris, then the address will be: Paris-infocity.fr.

Besides, while implementing the "Information City" the commonly used in the everyday real life, comfortable for a man communication with the information environment was taken as the basis. The same ground was used to build up the technology of access to the information educational materials at the MTUCI DL center. For instance, if one dials the MTUCI address in the Internet: [www.mtuci.ru](http://www.mtuci.ru) and then presses the "DL Center" button, he or any other person operating his home computer or at any DL point will get to the Distance Learning Center of MTUCI. Here one can get acquainted with all the necessary materials to realize his training at the university with the help of the DL technology. Having solved the general organizational questions, one needs to choose the "Training Courses" button and enter the working room to receive the educational materials.

For general presentation there is a demo-version and a corresponding "Training Courses (demo)" button. Having pressed the button, the potential trainee or a student observes the facade of the main building of MTUCI.

It looks like a real life when a man comes to the university to get education. Naturally, entrance to the university is realized through the doors. The same happens in the demonstration where one should "click" the MTUCI doors.

However, behind the doors there is a virtual watch. One should dial his name and a password as if he shows his documents. (In the demo-version the name is *kmv* and the password is *deteckmv*). Only after this the man gets an access to corresponding educational resources displayed in the working room.

Every subject in this room has its functional earmarking. Lecture synopses are in a wardrobe. Mathematical problems are in a chest of drawers below the picture. Laboratory works are in a computer and so on. So everything is done as if a man is sitting at the table in a room and studying the necessary for him disciplines using all currently available educational-methodic materials.

There are also opportunities to take a rest. For example, if one "comes up" to a window and "looks out" of it he will observe a pictorial landscape and listen to a sweet melody.

Surely, all mentioned above doesn't give the full impression of the opportunities of the DL system, described in the this article. That's why in order to get more detailed information, one can be recommended to apply to the mentioned here addresses in the Internet. Then, special courses, targeted to those involved in a problem of creation and maintenance of the DL system, are arranged in the MTUCI Institute of Advanced Training (address to: [www.mtuci.ru](http://www.mtuci.ru). then press the button "ИПК").



Considering Distance Learning as a new information service, certainly it is necessary to have the suppliers of the given service in addition to the infotelecommunication environment. Even without a detailed analysis it can be stated that at present in practice all leading higher educational establishments of Russia, are ready to offer educational services to population with the use of the DL technology. For the detailed consideration of this matter one can be recommended to refer to the journal "Distance Education" and e-mail addresses <http://de.unicor.ru> and [www.fcde.ru](http://www.fcde.ru).

Thus Distance Learning as a new information service of social significance is the existing reality that will have great perspectives in future both for population and those who are the suppliers of this service.

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*Canada*

**OPEN LEARNING AND DISTANCE EDUCATION IN CANADA**

## SUMMARY I

- Many Canadian institutions have figured prominently as pioneers of distance education and open learning.
- Despite severe geographic and socio-cultural constraints, Canada has developed unique communications expertise which has contributed much to the strength of the country's various educational systems.

## SUMMARY II

- This variety of systems exists because education in Canada is decentralized:
  - Each province and territory administers its own educational and training programs. Notwithstanding such diversity, Canadian institutions share one central value:
  - The desire to make education and professional development accessible to all, in a spirit of democratic development.

## SUMMARY III

- Today, governments and educational institutions across Canada are focusing increasingly on the development of a more effective workforce that will meet the challenges of unrestrained competition brought about by the globalization of the economy.
- Canada's successes in these areas carry with them the obligation to take up a number of challenges having as much to do with economics and politics as with education, society and culture.

## DESCRIPTION I

- Canadian Educational System:
  - The Diversity of Canada
  - Educational Systems

## DESCRIPTION II

- Distance Education in Canada:
  - Background
  - Informal Distance Education
  - Other Players in Post-secondary Distance Education

## A WORKING DEFINITION

- Distance Education in the Canadian Context
  - Open Learning
- In summary, most of these institutions have "open" admission conditions. The majority also offers some flexibility in their programs and allows learners to participate in some decision-making committees. However, learners do not have much choice regarding course requirements.
  - Distance Education
- "Distance education involves a remarkable paradox: it has affirmed its existence but it cannot define itself." (*Shale*)

## **A FUNCTIONAL DEFINITION**

- “We define distance education as an educational practice promoting a learning process that brings knowledge closer to the learner. Learning is considered here as an interaction between a learner and an object, which leads to a mental representation that constitutes a tool for understanding the world (reality), adapting to it or modifying it through action.
- The process used by distance education to achieve learning is characterized by:
  - accessibility,
  - contextualization,
  - flexibility,
  - diversification of interactions, and
  - knowledge transfer.” (Deschknes)

## **EDUCATIONAL CHARACTERISTICS**

- Post-secondary Canadian Distance Education:
  - Programs, Courses and Disciplines Educational Methods
  - Learner Support in Distance Education

## **RECOGNITION**

- Transfer of Credits and recognition of Experience
  - Recognition of Experience Transfer and Recognition of Credits Among Institutions
  - Other Approaches

## **PAST AND FUTURE**

- Past Successes and Building Towards the Future

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*United Kingdom*

**DEVELOPMENTS IN OPEN AND DISTANCE LEARNING**

## DEVELOPMENTS IN OPEN AND DISTANCE LEARNING

- Generations of ODL
- Legislation
- Quality assurance
- Staff development
- 4th Generation ODL
- Knowledge management
- International Networks

## CHARACTERISATION OF INDUSTRIAL AND EDUCATIONAL DEVELOPMENTS

Mode of production	Stages of educational development	
	Conventional education	Distance education
1) Pre-industrial	Craft model, Oxbridge tutorial, apprenticeships	Pre-distance education, independent learning from books
2) Industrial, Pre-Fordist	Mass elementary, expansion of secondary education	1st generation single media distance education
3) Fordist	Mass secondary, expansion of further and higher education	2nd generation multiple-media distance education
4) Post-Fordist	Mass higher and continuing education, mixed mode networks of opportunity	3rd generation computer based open and distance education,

## LEGAL ASPECTS

- Economic and political, global, regional policy (eg. EU)
- Educational restructuring, amalgamations, upgrading, privatisation, competition
- Expansion of student numbers and demand
- Finance, funding and fees
- Accreditation, quality assurance
- Staff development, accreditation, registration
- Credit transfer, recognition, modularization
- Status of distance, part-time, continuing education and lifelong learning
- Telecoms, media

## WHY IS QUALITY IMPORTANT FOR ODL

- **Scepticism** from conventional education, policy makers, public
- **Poor reputation** of correspondence education – low status
- **High drop-out**
- **Open entry** and second chance
- **High visibility** of ODL materials, books, broadcasts etc
- **Large numbers** of students – mega universities
- **High expectations** for ODL to
  - provide access
  - solve educational problems
  - meet urgent needs
- **Costs** – high investment costs, low variable costs
- **New technology** – broadcasting, video, CD-roms, computers, Internet

## WHY KNOWLEDGE AND COMMUNICATION TECHNOLOGY

- **Key asset** – Knowledge is the key asset for economic and social development, and KCT is affecting all areas of life
- **People** – have knowledge, computers process information
- **Sharing** – communication technology enables people to access and share their knowledge on an unprecedented scale
- **Learning** – new technologies enable people to create, capture, manage, model, interrogate, discover, innovate, comment and reflect on knowledge
- **Earning** – people's jobs and wellbeing are increasingly dependent on KCT

## HOW DOES KCT AFFECT TEACHING INSTITUTIONS

### *Direct and indirect involvement with KCT*

- **Curriculum** – research, scholarship, new knowledge, publications, databases, literature search, communication, collaboration
- **Administration** – publicity, recruitment, admission, record keeping, scheduling, allocation, mailing, management information
- **Course development** – shareware, electronic publishing, web-based resources, bulletin boards, multimedia
- **Course delivery and student support** – web-site access, Internet resources, downloading, CMC, peer and tutor contact
- **Student assessment** – participation, assignment submission, marking and feedback, online examinations, group assessment
- **Evaluation and quality assurance** – registration and progress data, participation logs, online questionnaires, feedback

## WHY IS QUALITY IMPORTANT FOR KCT

- **New technologies** – no tradition, flexibility, rapid development, hype
- **Complexity** – requires planning, coordination, support, management
- **Access and equity** – for whom, inclusion or exclusion
- **Costs** – to institution and student, high initial and support costs
- **Low visibility** – resource use, collaborative learning, and tutor interaction
- **Credibility** – plagiarism, downloading, lack of structure, group assessment
- **Lack of quality** – on Internet, navigation difficulties, unstructured, page turning
- **High expectations** for KCT to
  - provide access
  - solve educational problems
  - meet urgent needs

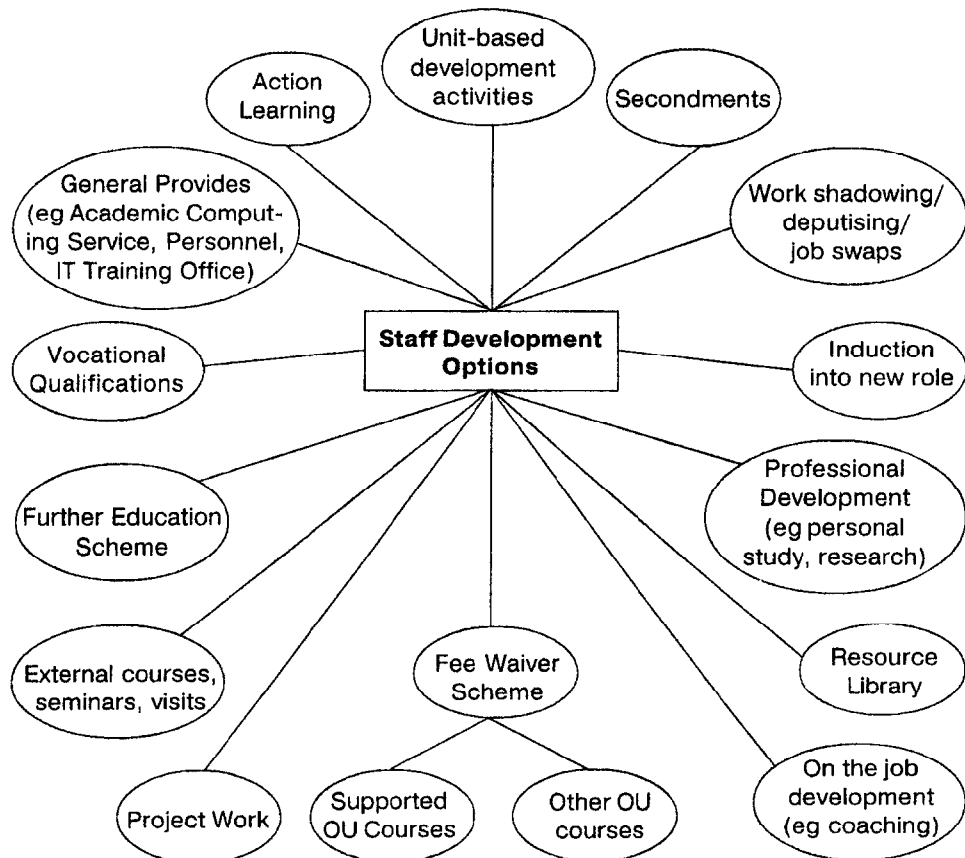
## APPROACHES TO QUALITY

- **Traditional approach** – academic autonomy, selective entry, elite staff and students, internal standards, cottage industry;
- **Quality control** – industrial approach, performance indicators, mechanistic correction, mass production, inspection, accept/reject, hierarchy;
- **Quality assurance** – systemic approach, continuous improvement, data processing, organic, procedures, team work;
- **Human resource development** – staff quality and training, regulation and professionalisation of teaching, sharing good practice;
- **Knowledge management** – systemic approach, dependence on KCT, learning organisation in a learning society, mass customisation, communities of practice, networking.

### RELATIONSHIP BETWEEN ODL GENERATIONS, APPROACHES TO QUALITY AND TECHNOLOGY

Generation	Quality approach	Technology
<b>First</b> Single media	Traditional, cottage industry	Word of mouth, paper
<b>Second</b> Multiple media	Quality control, industrial Quality assurance, systemic	Mainframe computer, data processing, surveys, statistics PCs, spreadsheets, data synthesis, procedures
<b>Third</b> Computer based	Quality assurance  Professional development	Networked PCs, websites, databases, interaction and resource use logs, online feedback Portfolio, online sharing experience, reflection, peer support, good practice database
<b>Fourth</b> Intelligent computing and networking	Knowledge management	Automatic data collection, navigation and interaction logs, online sharing, reflecting, knowledge construction, data mining, artificial intelligence, knowledge modelling, discovery and innovation

### SOME DEVELOPMENT OPTIONS OPNRN TO ALL STAFF





## **PROFESSIONAL DEVELOPMENT IN EDUCATIONAL TECHNOLOGY**

### *1–2 day workshops*

- The design and development of self-study materials for ODL
- Dealing with copyright
- Open and distance learning systems evaluation
- Putting your course on the Web
- Quality assurance in open and distance learning
- Teaching and learning with media
- Presentation and evaluation of self-instructional materials
- Implementing open and distance learning

### *Virtual seminars*

- Assessing open and distance learners
- Language concepts for user interface design
- E-moderating: the key to successful online teaching
- Delivering digitally: managing the transition to the knowledge media
- Student support in open and distance learning
- Towards the virtual university: resource-based learning and the Internet

## **POSTGRADUATE QUALIFICATIONS IN OPEN AND DISTANCE EDUCATION**

A programme of courses from the Institute of Educational Technology at the Open University offers a unique opportunity to study the theory and practice of open and distance education with guidance from the experts. By taking these courses at a distance and through the Web, students experience the very concepts they are studying.

### *What qualifications do we offer?*

- Certificate – one 9 month (60-point) course
- Diploma – two such courses
- MA – three such courses

### *What courses are available?*

- Foundations of Open and Distance Education (H801)
- Applications of Information Technology in Open and Distance Education (H802)
- The Implementation of Open and Distance Learning (H804)

## **CENTRE FOR HIGHER EDUCATION PRACTICE**

### *Post Graduate Certificate in Teaching and Learning in Higher Education*

The courses lead to professional qualifications in teaching in higher education and to a Post Graduate Certificate in Teaching and Learning in Higher Education. They are designed for new and experienced higher education teachers.

The courses are:

- Teaching in Higher Education
- Course Design in Higher Education
- Teaching and Course Design in Higher Education

Lead to accreditation to a national standard.

Tutored by specialists in the teaching of particular discipline areas.

Detailed guidance on how to develop their Portfolio for assessment.

Range of other resources is provided to course participants

## GENERATIONS OF OPEN AND DISTANCE LEARNING

- **First Generation** (1840 – ) Single media
- Correspondence teaching – Text books and written correspondence
- **Second Generation** (1970 – ) Multiple media
- Single Mode – Integrated multiple-media with print, radio/audio, TV/video
- Dual-mode – Multiple-media, smaller scale, audio and video
- **Third Generation** (1990 – ) Computer based
- Computer resources and conferencing, Web pages, CD-ROM, multimedia
- **Fourth Generation** (2000 – ) Intelligent Computing and Networking
- Knowledge management, global networking, collaborative learning, artificial intelligence, models, databases, ontologies, broadband, mobile

## MANAGED KNOWLEDGE COMMUNITIES

4th generation learning opportunities

- ***New pedagogic paradigm*** – involving participation in managed knowledge communities applying advanced web-based software to develop knowledge.
- ***Knowledge work*** – participants act as knowledge engineers and work together to analyse and create knowledge resources; identify key concepts, actors and resources, their linkages, and to map the field.
- ***Develop knowledge*** – They develop and evaluate ontologies and knowledge structures as part of a larger co-operative enterprise to capture, articulate, model and develop knowledge.
- ***Managed community*** – Sharing the enterprise are academic staff and other experts, who manage knowledge development activities, provide feedback and guidance and assess participants contributions for the purpose of accreditation.

## COLLABORATIVE KNOWLEDGE CONSTRUCTION

*Collaborative knowledge construction might involve*

- pedagogy based on knowledge management
- extensive knowledge base and knowledge resources
- advanced navigation, visualisation, retrieval and access tools
- knowledge capture from documents, media and own experience
- formatting, elaboration and evaluation of knowledge resources
- keyword and concept analysis, coding systems construction
- clustering, mapping, linkages, modelling and discovery tools
- assessment of change, developments in knowledge base
- overview, review and meta-knowledge
- ontology construction and evaluation
- group and shareware for discussion, comment, annotation
- collaborative authorship and knowledge resource construction
- structured feedback within teams,
- input from a network of experts
- feedback from intelligent software
- tutor feedback and advice
- controlled assessment and accreditation

## INTERNATIONAL CENTRE FOR DISTANCE LEARNING

*What is ICDL?*

### **An International Centre:**

- **for knowledge management**, acquisition, sharing, visualisation, discovery and modelling
- **to support research**, scholarship, development, practice, teaching, consultancy and publishing
- **in open and distance learning**, learning systems and technologies and the development of learning opportunities.

## INTERNATIONAL CENTRE FOR DISTANCE LEARNING

*Databases*

**Online** – through <http://icdl.open.ac.uk>

- literature on ODL – 10,000 entries
- institutions, providers – 1,200 entries
- ODL courses and programmes – 31,000 entries

**Searchable** – by subject, author, country, region, date, subject, educational level, institution and other ways

**Available** – every item listed and abstracted is held as full-text, hard copy in the library

## INTERNATIONAL CENTRE FOR DISTANCE LEARNING

*Library*

### **Literature**

Largest collection of literature on ODL in the world

- 15,000 items
- obtains copies of all new publications on ODL
- subscribes to all specialist ODL journals
- receives institutions newsletters
- mainly in English

### **Institutions and courses**

Largest repository of information on institutions and courses across the world

- institutional documents
- courses descriptions
- prospectuses, calendars
- all educational levels

## INTERNATIONAL CENTRE FOR DISTANCE LEARNING

*Who uses ICDL?*

### **Online users**

- 1.2 million hits over 12 months
- 120,000 addresses in 160 countries
- US and network hits 50.0%
- Western Europe 22.3%
- 10.4 average hits per address
- 300 online users in 1996 to 120,000+ now
- 90% access institution and course information

## DEVELOPMENT OF ODL THROUGH NETWORKS

### *National*

#### **Open University**

- SRPP Database, IET Knowledge Network <http://iet.open.ac.uk>

#### **Multi-partner, UK**

- Marchmont Observatory/Ufi/KMI <http://www.lifelonglearning.ac.uk>
- Knowledge Modelling, KMI, Brunel <http://icdl.open.ac.uk/knowledge>

### *European*

#### **Western Europe**

- ManageLearn (Socrates) <http://www4.open.ac.uk/Managelearn/>

#### **Central and Eastern Europe**

- PHARE multi-country project (and future), EADTU, EDEN  
<http://www.etf.eu.int/etfweb.nsf/pages/pharedist>
- OUBS partners, Eurocontact, CUB, LINK <http://oubs.open.ac.uk/>

## DEVELOPMENT OF ODL THROUGH NETWORKS (CONTINUED)

### *Multi-Regional*

- Commonwealth, COLINKS <http://www.col.org>

### *Global*

- World Bank, DistEdNet <http://wbweb4.worldbank.org/disted/>
- Institutions and courses <http://www.icdl.open.ac.uk/icdl/instcou.htm>
- Literature <http://www-icdl.open.ac.uk/icdl/lit.htm>
- IET MA <http://iet.open.ac.uk/ODLBrochure/ODL.html>

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## **TRAINING DISTANCE EDUCATION STAFF: THE OUI MODEL**

## INTRODUCTION

### TYPES OF DISTANCE EDUCATION INTERACTIONS

Distance education is implemented around the world to provide learning opportunities for people who cannot or do not wish to take part in classroom studies. The concept of distance education is characterized by separation between student and teacher. However, the features of distance education vary from one place to another (Holmberg, 1995). In fact, we may speak of a "distance teaching continuum", from "very distant" to "slightly distant" (Moore, 1983). Communication at the most distant end of the sequence is negotiated to a great extent through various intermediary agents, while at the least distant end it includes a considerable degree of face-to-face interaction. Thus, on the one hand we may find distance education institutions in which the independent study of recommended materials, with or without special guidance, is expected and, on the other, institutions in which specially prepared study materials are provided and there are regular contacts between students and tutors, either individually or in groups (Holmberg, 1995). The entire distance education system, however, is based on the precept that the most important thing is the student's activity, namely learning (Holmberg 1995). This means that the system focuses on guidance, through interaction, rather than actual teaching.

Moore (1993) identifies three different types of distance education interactions, learner-content, learner-learner and learner-tutor. Learner-content interaction is a feature that defines all education – an intellectual process that results in changes in the learner's understanding, point of view, or cognitive mental structures. In distance education learners interact with the content through radio, television, videotapes, audio-tapes and computer software, as well as through textbooks and tutors. Learner-learner interaction – either alone or in a group setting, and with or without the real-time presence of a tutor – has taken on a new dimension in distance education that is gradually acquiring greater importance. Learner-learner interaction may prove to be a valuable resource for the learning process. Today's advanced technology facilitates the advantages of both peer group and individual interactions.

In learner-tutor interaction, distance tutors try to attain goals that are common to all educators. They plan or administer study programs, outline content matter for study and clarify difficult points, and attempt to stimulate the students' interest in the study materials. They also support and reinforce the students' cognitive learning process through the implementation of the knowledge and skills required for tasks, which are then reviewed and marked by the tutor, along with comments, explanations and suggestions. The tutors evaluate the students' progress and decide whether to change their instruction strategy. In addition they provide the students with criteria for judging their learning needs and, by means of appropriate grades, their progress (Holmberg, 1995). Throughout all of these they provide guidance, support and encouragement to all learners, the extent and nature of which vary according to the learner's ability, the tutor's philosophy and personality, and other factors.

In addition to the above cognitive-didactic role of the tutors, they also have a psychological role. These roles complement each other: in the affective domain, they influence their students' motivation, their confidence in their competence with respect to learning in general and the relevant course in particular, their satisfaction with the university, and even their loyalty towards it; the students' positive feelings in return, reinforce their learning. There are other psychological aspects that are relevant to students' learning performance, such as choice of courses and examination anxieties. The regular tutor sometimes handles these problems, but when the need arises, a special team of personal tutors and counsellors comes into the picture.

Highly regarded tutors serve as role models, and students strive to meet their tutors' expectations. A "Pygmalion" type tutor who believes in his students' abilities communicates high expectations, which they absorb subconsciously. As a result they have greater belief in their own competence, make a greater effort and thus accomplish more.

Such expectations make the tutor's role a quite demanding one. They are required to create a delicate balance between being personal on the one hand, and distant and objective on the other.

Distance tutors are therefore expected to plan more interactions of all three types – learner–content, learner–tutor, learner–learner – and to utilize their own expertise as well as that of communication experts, both in the traditional media and the newer media (Moore, 1993). Through a combination of the didactic and affective elements of tutoring, together with open communication and a service approach, tutors may make the distance teaching and learning system somewhat less distant.

## THE FUNCTIONS OF THE DISTANCE EDUCATION STAFF AT OUI

The Open University of Israel is a unique distance education institution in that it is based on an open admissions policy as well as on the basic principles of distance learning and teaching. Since its establishment in 1974, the OUI has never functioned on the "very distant" end of the distance education system (Ganor, 1992). At first the system was based on distance learning through specially written study materials (with a built-in learning process specially designed for independent study), monitored assignments and telephone contact between students and tutors according to the students' needs, as well as optional group tutorials once every few weeks. Today study materials also include computer software, multimedia, videotapes, TV programs, and other technological means. Tutor-student contacts have expanded to include more frequent group tutorials, usually weekly, interactive tutorials via satellite in which course coordinators give real-time lectures to students concentrated in groups at various learning centers, or even alone at home (an experimental program at present), and communication through the Internet.

A basic premise in distance education is that the most important element is the students' activity, namely learning. Therefore, rather than teaching per se, distance teaching focuses on the attempt to develop independent learning skills, thus paving the way for the students' own activities. At OUI many people are involved in the teaching of each course – from senior academic staff, through course developers, planners and coordinators, to tutors – a "multi-teacher system". The senior academic staff supervises and is responsible for both the academic and the didactic aspects of the courses, and oversees the work of the course coordinators. The teaching coordinators operate the course: they compose assignments and final exams, and they hire, train and supervise tutors. The tutors' function is to create conditions that facilitate independent learning (Holmberg, 1995). They are the direct link between the student and the institution, and are expected to maintain a didactic dialogue, or "two-way communication" with their students. This is carried out through such means as the telephone, tutorials, written evaluations of assignments, and computer-mediated communication.

The role of the tutors at OUI is didactic and to some extent psychological. They are called upon to fulfill various functions in the following aspects:

- Content-related – teaching the course's academic material; developing the students' thinking in the terminology of the relevant theoretical materials.
- Didactic – conducting tutorials; developing learning aids; developing a variety of tutoring tools (exercises, experiences, etc.).
- Affective – encouraging motivation for learning; enhancing confidence; psychological support; academic counseling; stress relief, etc.
- Administrative – reporting about tutorials; maintaining contact with learning centers; sending back marked assignments, etc.
- Representational – represents OUI's values, demands and policies vis-a-vis their students and the regional centers and institutions.

Thus, the entire education staff are active partners in a multi-faceted dialogue with

the students. However, many of them, even if they are excellent academics in their own fields, are not equipped to cope with all of the above aspects of distance teaching. Their inability to guide them can diminish the students' ability to cope with their studies, and to thus persevere in the system (Ganor 1981). The OUI therefore trains its education staff for their complex role.

## THE SPECIAL NEED FOR DISTANCE EDUCATION STAFF TRAINING AT OUI

Training is one of the main tools used by institutions to develop their most important resource – their personnel. Goldstein (1980) defines it as the systematic acquisition of skills, concepts or standpoints, resulting in improved performance in the work environment. Today many organizations in Israel and abroad, both private and public, acknowledge the major importance of training and allocate considerable resources for this purpose. Employees from many organizations take part in a variety of training programs intended to equip them with new knowledge and skills, or to alter views, attitudes, values, beliefs and feelings, and thereby improve performance at the workplace. Many managers believe that training workers will help them achieve these goals, and therefore justify the large sums of money invested in it. Thus, training is a managerial tool that organizations can use to help them improve the processes, and the products, of their organizations, and to implement managerial decisions. The specific goals of the training process must be derived from the organization's objectives, and be determined by the management and in collaboration with it.

Training is intended to alter behavior on three different levels:

- *Cognitive*: Providing the basic knowledge necessary for performing the tasks involved in the job, the logic of the job, and the results expected.
- *Skills*: Developing and reinforcing various skills (e.g., communication, service, management or even motor skills) associated with on-the-job tasks and duties.
- *Emotional*: Shaping attitudes, values, emotions and motivations.

Since the purpose of training is to improve performance, the first stage in training development is to identify training needs. These needs must be derived from the disparity between the current situation and the management's targeted requirements and expectations. The course of the training program and how to achieve the desired goals must then be determined. At the end of the training, the results must be evaluated. The degree to which the goals have not been achieved defines the gap between the new current situation and the desired one, thus leading to additional training activities, if necessary.

The need for training the teaching staff of distance education systems varies from one organization to another, due to varying didactic and structural features as well as to different objectives and dissimilar student populations. However, the unique combination of characteristics shared by most distance education systems creates the need for special and extensive training of academic staff in the majority of these systems. These features, which are found at OUI as well, are related to the following:

- *The study method* – This is based mostly on distance learning, which includes advanced teaching methods, some of them utilizing innovative technologies.
- *The student population* – The student population is very heterogeneous insofar as age, years of education, occupation, marital status, learning abilities, etc. are concerned. Most of the students work in addition to their studies, and find it difficult to invest a lot of time and effort in their courses. Some of the students of the introductory courses have relatively poor learning skills. Moreover, in recent years the composition of the student population has changed and now includes a large number of students who prefer more face-to-face teaching. This increases the teaching staff members' need for teaching skills.



- *Characteristics of the teaching staff* – Both course coordinators and tutors usually lack didactic training in general, and distance teaching skills in particular. The model with which they are familiar is the face-to-face teaching known from schools and regular universities. The difficulty of adjusting to the principles of distance teaching may affect the students' achievements, as well as their perseverance and survival in university studies.
- *The system's structure* – Most distance education institutions, including OUI, are complex. Their structural features are similar to those found in certain other organizations known as "loosely coupled systems" (Weick, 1982), typified by a division into largely autonomous and yet highly interdependent sub-systems. This creates a need for rules that protect the autonomy of each sub-system, and yet ensure the integration and unity required for preserving the overall system. Loosely coupled organizations have certain disadvantages, some of which amplify the importance of training activities.

In OUI, as in other loosely coupled systems, coordination and cooperation are based on the social and occupational unity of its members. In order to attain such unity, suitable staff must be recruited and unsuitable candidates filtered out. This should be followed by various educational and training activities regarding the workplace's customary work methods and behavior standards – namely, socialization. Those who recruit and filter the future employees must be trained to do so, and the future employees must be trained to perform their tasks and to feel part of the organization. Such training must be provided to both new and veteran employees (Bar-Haim & Lev, 1993).

Another difficulty at OUI, as in other loosely coupled systems, arises from the "partial participation" in a system of many of an organization's members (Allport, 1933, in Katz & Icahn, 1978). Since such employees are only partially involved in the system, their behavior may likewise only partially reflect the organization's standards and expectations, of necessity something of a compromise between the two. Miller and Terborg (1979) concluded that part-time employees, who are also usually involved in other systems as well, participate less than full-time employees in the social-organizational system and, as a result, are less tolerant of the organization's requirements than the full-time employees.

All of the above is true of most members of the teaching staff at OUI. The level of their participation is sometimes low, and this in turn reduces their sense of commitment to the system. Given this state of affairs, training programs that can improve didactic skills of our teaching staff imbue them with the "spirit of OUI" and strengthen organizational commitment and involvement is called for.

## **OUI TRAINING PRINCIPLES**

The training of all OUI academic staff, including its tutors, is based on the principles of active participation, analytic discussion, continuous activity, and verbal persuasion.

### **ACTIVE PARTICIPATION**

In order to provide learners with a significant learning experience, active participation is indispensable (Rogers, 1967). This principle is also applied when the "learners" are staff-in-training. Concentrated, experience-based workshops can, in the long run, be both interesting and effective, providing the trainees with an opportunity to experience the material first as learners, and later as teachers who pass on to their students what they themselves have learned (Ganor, 1992).

Because active participation elevates the self-efficacy of the trainees, many psychologists consider it essential. Self-efficacy is defined as "peoples' judgments of their capabilities to organize and execute courses of action required to attain designated types of performances (Bandura, 1986). Enhancing self-efficacy is an

important element in training staff because of its significant positive influence on performance (Gist & Mitchell, 1992; Gilad, 1999). Bandura (1986), who calls this participation "enactive attainment", claims that it provides the most influential source of efficacy information, because the person learns to control his or her behavior. Latham (1988) claims that active participation which leads to accomplishment is extremely important: when the skills acquired in the workshop experience allow the trainee to master a situation earlier found threatening, the fear of failure is diminished and self-efficacy increases. Kraiger, Ford and Salas (1993) explain that when difficult tasks are broken down into manageable components and trainees are able to develop competency on simpler tasks before proceeding to more complex ones, they are likely to develop stronger self-efficacy, along with greater skill capacities.

Experience-based workshops also influence trainees' self-efficacy through "vicarious experience", that is, through observing the behavior of others in the workshop. Acquiring information in this way is also called "modeling". When the "model" successfully performs a certain behavior, the observers' self-efficacy may rise since they assume that they now have the ability to perform that same behavior successfully. Gist, Schwoerer and Rosen (1989) report that training through vicarious experience enhances feelings of self-efficacy significantly. The power of the modeling intensifies in accordance with the similarity the trainee identifies between the model and him- or herself. The contribution of vicarious experiences to enhance self-efficacy in special training courses for tutors is considerable, since the observers in this case are other tutors, usually with a similar degree of tutoring experience, who fulfill or will fulfill the same function in the same organization.

Thus, training in experience-based workshops should provide trainees with opportunities to observe several models performing new, not-so-simple tasks (tasks that are difficult for the models as well), and should also give the models the opportunity to explain how they performed the task.

## **ANALYTIC DISCUSSION**

Each training activity must be accompanied by an analytic discussion of the activity. In tutor training, this discussion sheds light on various aspects of the tutor's performance, and suggests ways for applying the training experience in contacts with students. For successful application, the emphasis is on analysis rather than on criticism.

## **CONTINUOUS ACTIVITY**

The learning experience is not a one-shot activity and a workshop, even the best of its kind, is only one brief experience. Therefore, it must be backed up by monitoring the tutors' on-the-job performance and by the evaluation of their performance.

## **VERBAL PERSUASION**

The workshop includes "verbal persuasion", providing the trainees with confirmation of their ability to successfully perform tasks such as those learned in the training program. This reinforces their sense of self-efficacy.

The effectiveness of the verbal persuasion depends on the trainees' perceptions of the instructors' expertise (Bandura, 1986). Although verbal persuasion is considered less effective in encouraging self-efficacy than success in performing tasks and vicarious experiences, it is still considered an important strategy. Bandura lists three things that affect the success of verbal persuasion: the reliability and expertise of the instructor; general agreement amongst several instructors; and the instructor's familiarity with the job requirements. The perception of professional expertise and reliability is reinforced when instructors teach in their own specific field, are familiar with both the job requirements and the institution, and

have previously conducted similar courses. Such instructors are also thoroughly familiar with trainees' needs, as well as with the organizational limitations they must face. These elements increase the effectiveness of the instructors' verbal persuasion, which in turn promotes feelings of self-efficacy.

## OUPS TRAINING PROGRAMS

A proper training program should be derived from the staffs' function. Since there is considerable diversity among the roles of staff in different distance education systems, the training programs must vary from system to system and from course to course. In view of the needs of OUI's academic staff, its training program is geared to provide an adequate background in the following:

- Organization – acquaintance with the institution and its administration
- Academic – knowledge of course materials
- Cognition – acquaintance with learning processes
- Didactics – session tutoring, conducting discussions, constructing lecture plans, individual tutoring, group tutoring, assignment correction and evaluation
- Communication – conducting effective relations with students and OUI staff
- Attitudes and values – favorable attitudes toward the course material and the system; commitment, loyalty and imparting the values of OUI
- Technological – familiarization with theory and practice of state-of-the-art technology in distance teaching

Below we present the modular training program, structured in levels that relate to the various aspects of the functions of OUI's academic staff. The training program we describe is the broad, comprehensive one to which we aspire; the scope of the existing program is more limited. It is structured in accordance with the university's teaching system and includes basic training programs for new staff members and somewhat different ones for veteran members.

## TRAINING NEW TUTORS

*Goals of the training program:*

- To provide information about the activities and principles of OUI
- To ease new tutors' adjustment to their job at OUI, and alleviate apprehensions
- To teach skills associated with the tutors' work
- To promote identification with the institution and a sense of commitment towards it
- To guide tutors' activities according to the principles and spirit of OUI
- To strengthen tutors' confidence in their ability to tutor at OUI

*The training program includes:*

- General guidance by the course coordinator when the tutor is hired: information regarding the system, the nature of the job, and the main contents of the course.
- A manual for the new tutor, containing descriptions of the system's principles, the nature of the tutor's role, various administrative procedures, the tutor's status, etc.
- A training course – described below.
- Personal guidance – In the first semester on the job tutors need a great deal of support with regard to the course (content, tutorial planning, exercises and hands-on experiencing, assignment correction and marking), as well as to the various institutional departments with whom they will come into contact. This support may be given either by the course coordinator or by an experienced tutor of the same course.\*

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\* In order to conduct this training properly, it is essential for the course coordinators to understand their role as the tutor's guide, and to utilize their managerial and didactic skills. To reinforce these aspects, it is also important to train them properly, as described in the section "Training course coordinators".

## THE TRAINING COURSE FOR NEW TUTORS

### *Level A: The tutor and OUI – organizational orientation*

Training tutors before they begin their work is essential. The first objective is to provide the tutors with the necessary knowledge with regard to their job definition, their authority, and how they can do their job effectively. The second is creating a sense of identification with and commitment to the university through acquaintance with and an understanding of its values, goals and educational principles.

In the first training session, the participants discuss their perceptions of the tutors' role and the preparations needed for assuming responsibility, the fundamental concepts of distance teaching and the tutors' incorporation into the system in general and the teaching chain in particular. In addition, this is an opportunity to present OUI's role and policy within Israel's higher education environment and future development trends and teaching strategies, as well as the institution's central work norms and organizational values.

#### **Main topics in the session:**

- Acquaintance with the system: objectives of OUI, fields of operation, the vision and uniqueness of OUI, structure of the organization
- The place of OUI in Israel's university network
- Understanding the distance education system
- The role of the tutor at OUI: understanding the nature of the job and the students and the university's expectations of them
- Planning the first tutorial
- General principles of work in the system
- Mutual relations between tutors and various functions in the university
- The system's statement about the importance of the tutor's role
- The tutor's employment status, salary and social benefits

#### **Framework**

An instruction day for all new tutors before the beginning of their first semester. This includes an experience-based workshop that focuses on the tutors' first encounter with the students and the first tutorial session.

### *Level B: "Two-way communication" through assignments*

The reciprocal relations between tutors and students take place through the written assignments. The manner in which the assignments are evaluated and the tutors' ability to write comments that lead to the improvement of learning skills and understanding of the content are therefore significant aspects of the tutor's function. In many courses the assignments and the final examinations are the students' only mandatory requirements.

Marked assignments, which constitute individual teaching, serve several purposes:

- To promote students' learning by guiding them to the appropriate emphases in the study material, and to clarify the study material.
- To provide feedback to both the students and the system, as to whether the material has in fact been learned and absorbed.
- To evaluate the student's achievements.

Training new tutors in marking assignments is carried out in two ways:

- Instruction in an experience-based workshop.
- The course coordinator examines several assignments reviewed by tutors before they are handed back to students. These are discussed privately with the tutor; in some cases, a general comment is distributed to all course tutors.

### *An experience-based workshop on assignments*

#### **Main topics discussed in the workshop:**

- The goals and importance of feedback on assignments
- Grading criteria
- Evaluation principles of written feedback

#### **Process**

The workshop focuses on the criteria for grading and on offering comments on real answers to authentic assignments. This is accompanied by an analytic discussion of three aspects of the exercise: the role of assignments in distance learning; the grading criteria and the comments of each tutor on a model assignment; reactions to the grading and specific comments. The session ends with a discussion that may lead to definitions and generalizations of all aspects of written communication, which constitute the criteria for evaluating the answers in assignments. This is done in relation to the course contents and cognitive requirements – the “course map”. As to didactic topics, the workshop provides a variety of constructive tips that can lead to the improvement of learning skills and processes and increase motivation.

#### **Framework**

Separate courses are conducted for tutors of the sciences and for tutors of the humanities. The workshops take place around the third or fourth week of each semester, before the first assignments are received for evaluation.

#### *Level C: Tutoring skills at OUI*

The tutors' role in tutorials is a very complex one. A degree of confusion arises from the perception that most distance teaching includes written study materials that contain all of the required course content, explanations, questions and answers, and reading materials for independent study. And yet, about 50% of the regular students voluntarily take part in the tutorials that are offered as part of OUI courses. An OUI in-house survey indicates that some of the students attend the sessions because certain study materials are not clear enough, or because they themselves are not sufficiently fluent at academic reading. Others come to meet co-students and receive feedback from them and from the tutor, or even to get a sense of learning discipline (Ganor, 1992).

However, the purpose of the tutorials is to offer students personal assistance in tackling the study materials. The tutorials are supposed to include:

- Enhancing students' knowledge and examining their grasp of the study materials.
- Improving students' learning skills by doing example exercises together.
- Contacts with other students.
- Discussions about problems that arose during independent study and that the students were unable to solve.
- Development of learning abilities by improving the students' learning skills.

Training in tutoring skills occurs in three different ways:

- Workshops for new tutors.
- Observation by course coordinators of tutorials at learning centers, followed by analysis of and feedback regarding tutors' performance (this form of guidance is given to both new and veteran tutors).
- Students' responses to a tutor-evaluation questionnaire: The data from the questionnaire is processed by the Department of Evaluation and Staff Development and the results are passed on to the course coordinators, who then discuss the findings with the tutors. The assumption is that tutors' awareness of these findings will improve their performance in class. This form of guidance is given to both new and veteran tutors.

**Main topics discussed in the workshops:**

- Criteria for identifying suitable study topics for tutorials
- Criteria for the construction of a "course map"
- Constructing tutorials
- Opening and closing tutorial sessions
- Using diverse "teaching" methods
- Non-verbal communication in class
- Handling resistance
- Group processes in the classroom

**Process**

Workshop activities focus on "micro-teaching". Several tutors present parts of a tutorial session, which is videotaped and then analyzed in detail by the entire group of tutors. The individual performances are analyzed in order to define subjects such as effective structures of a tutorial session, tutoring methods, types of simulated questions, the importance of listening to the students, types of group activities, how to conduct discussions, etc.

**Framework**

Workshops in small groups take place four to six weeks after the start of the tutors' first semester in OUI, after they have had some experience in OUI tutorials.

**Level D: Advanced teaching methods (optional)**

Tutors who use advanced teaching methods in their courses receive differential training according to the specific teaching method they use. This is meant to provide them with knowledge and tools to use these methods correctly. A more detailed description of this level may be found in the section "Training course coordinators".

## TRAINING VETERAN TUTORS

**Goals**

- Acquisition, enhancement and updating of knowledge in the course content
- Refreshing and expanding tutoring skills
- Promoting companionship, mutual enrichment and group support
- Overcoming the limitations of "partial participation" in the system
- Reinforcing commitment to the university

**Framework**

- Workshops for the university's entire tutoring staff.
- Workshops for tutors of specific courses, or for all tutors of an entire academic department.
- Personal guidance by course coordinators (telephone, face-to-face, feedback on tutorials).

Veteran tutors at OUT are offered advanced training in the entire range of areas included in earlier levels. The advanced training is adapted to changing needs and permanent ones (e.g., refreshing skills) identified by the coordinator, head of the academic field or department head, in collaboration with a training consultant. This is done by mapping the training needs. The advanced training supports the promotion and development of the function of tutoring, and monitors the tutors' performance. The course coordinators are therefore advised to hold at least one advanced training course each semester, while academic departments are advised to hold such courses at least once a year. In these advanced training courses, topics associated with the contents of the course or the academic field are combined with didactic and enrichment topics.

**Main training topics**

- Work on academic content of a specific course or of the academic study area.
- Constructing the course framework; clarifying central goals and subjects.
- Internalizing new study materials (chapter/essay/book).
- Clarifying and enhancing knowledge of central theories/topics.
- Clarifying complex and significant subjects in the study material.
- Integrating the written study materials.
- Developing case studies/exercises/experiences suitable for the course materials.
- Enrichment in topics associated with course content (e.g., recent research) as well as topics regarding application of theories to case studies.

**Work on tutoring skills**

- Developing and enhancing various methods for conducting tutorial sessions.
- Handling tutorial dilemmas and resistance in the classroom.
- Enriching, improving and refreshing tutoring skills learned in the training course.
- The tutor as a generator of emotions: motivation theories and their relevance to the tutoring framework.
- The tutor as a generator of emotions: the "Pygmalion effect" in tutoring and how to be a Pygmalion-type tutor.

**Work on learning skills\***

- Cognitive processes in learning;
- Effective learning methods;
- Emotional processes that hinder learning and processes that enhance it;
- Teaching how to learn.
- In the field of learning skills there is fruitful collaboration between the academic support system, versed in equipping students with learning skills, and the Department of Evaluation and Staff Development, which specializes in training teaching personnel. Activities take two forms: instruction of tutors in courses that incorporate the topic of learning skills within the course curriculum, and the development manuals for specific courses. These manuals are intended for the use of both students and tutors.

**General enrichment in areas associated with the tutoring function:**

- The significance of effective communication
- The tutor as a service provider
- Body language/non-verbal communication
- How to use the vocal chords
- Assertiveness
- Interpersonal communication

## TRAINING COURSE COORDINATORS

**Background**

The role of the course coordinator is extremely important and central to the attainment of OUI's goals. Not only do they have many functions, which have academic, didactic, managerial and administrative aspects, they play a central role in providing the necessary training to tutors, both when they enter the system and throughout their employment. The coordinators have a large number of operational partners, including students, tutors, senior staff members, heads of academic departments, representatives of OUI's regional centers and colleges and various service departments at OUI. The position of the course coordinator is so central because he is deeply involved in the academic and didactic aspects of the course on the one

hand, and with the recruitment and training of the tutors, who are the ones come into contact with the final consumer – the student – on the other. This complexity and centrality of the coordinators' position make it essential to ensure that they have the knowledge and skills required for the task, as well as commitment and a sense of identification with OUI. Thus considerable importance is attached to the training of new and veteran coordinators.

### **Framework**

- Workshops for new course coordinators
- Workshops for experienced course coordinators
- Veteran coordinators instruct new coordinators
- A manual for all course coordinators

### **Training objectives**

- To ease coordinators' adjustment to the system
- To clarify the nature of the coordinators' functions
- To promote socialization, commitment, and activity in the spirit of OUI
- To train for proper management of academic aspects of courses
- To provide the knowledge, tools, and didactic, managerial and administrative skills associated with the job
- To lead to better functioning of the tutors

### **Level A: Orientation**

This phase facilitates new coordinators' orientation within OUI, by delineating the role of the course coordinator and by familiarizing them with the university's unique goals and principles, and with the organizational norms and regulations.

### **Framework**

- Opening session – approximately two weeks before the beginning of each semester (about half a day)
- Introduction rounds – acquaintance with staff members functionaries and administrative bodies in the university
- An orientation manual for new course coordinators

### **Level B: Assignment construction**

This phase deals with both the construction of assignments and examinations and with the instruction of tutors in this matter. Composing assignments and examinations is a central component of the course coordinator's job. This task is complex, and requires academic knowledge in the content of the courses as well as knowledge and skills in the psychometric principles of composing examinations. The great importance and complexity of these tasks, combined with the coordinators' sometimes inadequate didactic experience, makes training in this area vital.

A central place is given to the instruction of tutors in how to provide feedback on assignments through corrections and comments. An in-house study conducted by the Department of Evaluation and Staff Development reveals that students' satisfaction with returned and marked assignments is due first of all to the fact that these assignments help them to understand the course materials and provide feedback about their progress. The study also shows that academic staff, coordinators, tutors and students all attribute primary significance to this role of the assignments (Goder & Ganor, 1998). Satisfactory "two-way communication" between tutors and students about the assignments is therefore extremely important.

### **Framework**

This phase is dealt with in a two-part experience-based workshop. The first part deals with the construction of assignments and examinations, and the second with marking and commenting on them.



### *Level C: Tutoring skills*

This level addresses the skills required for the tutors' work. The course coordinators' expertise in this area is relevant, as they must be able to provide instructive and effective feedback to the tutors whose tutorials they have observed. Principles of providing effective feedback are explained, and relevant exercises are performed.

#### **Framework**

This level is addressed in a one-day workshop.

### *Level D: Advanced teaching methods*

New coordinators of courses that use advanced teaching methods are trained in the principles of working with these methods, and acquire the skills required for using them successfully. Thus, for example, they learn how to organize and conduct a videotaped lesson, how to lecture and interact with students via satellite, group and inter-group processes in a virtual classroom, and the potential of using the Internet in courses. They learn the principles of utilizing the system, such as how to conduct distance discussions, how to motivate tutors and students to use the Internet, etc.

### *Level E: Managing the tutorial staff*

This level addresses the managerial aspects of the course coordinators' role: recruiting, filtering, evaluating, training, motivating and dismissing tutors.

#### **Framework**

The topics of this level are discussed in three one-day workshops. Two of them take place in the middle of each semester, and deal with training and evaluation of tutors, while the third, dealing with recruiting, filtering and dismissing tutors, takes place toward the end of the semester, in preparation for the absorption of new tutors for the following semester.

### *Level F: Dilemmas course coordinators face*

The complexity of the course coordinators' varied functions in the framework of OUI's unique features presents the coordinators with various dilemmas. These include: supervision of tutors of higher academic standing than themselves; excellent tutors who fail to fulfill the system's requirements; handling courses of different sizes; exercising authority with regard to study materials; the need to organize periodical training days for tutors who work on a part-time basis, etc. The main dilemmas encountered by the coordinators are discussed.

#### **Framework**

This level is dealt with in a one-day workshop towards the end of the ongoing semester, or even after the start of the next one, in order to enable the course coordinators to accumulate a sufficient number of the actual experiences that led to dilemmas.

#### **Personal instruction**

A personal instruction program is being planned. In this program, a successful experienced coordinator will instruct a new one regarding all aspects of the course coordinator's job, in accordance with appropriate psychological principles. The experienced coordinator will have at least one day of training regarding this instruction role, so that he may carry it out properly.

## **TRAINING EXPERIENCED COORDINATORS**

With regard to the training of experienced course coordinators, we distinguish between two types of training:

- Going through the training offered to new coordinators; repeating the same training sequence as that provided to new coordinators can augment old, and perhaps even outdated, knowledge with new developments.

- Expanding and enhancing knowledge of topics learned in earlier training, and learning about issues such as providing services, assertive communication, time management, learning skills, academic updating, etc.

We recommend that every course coordinator who has held the position for three semesters be required to attend at least one workshop a year, out of a list of approximately four offered annually by the Department of Evaluation and Staff Development.

### **TRAINING WITHIN THE ACADEMIC DEPARTMENTS**

Each academic department has a training consultant in the Department of Evaluation and Staff Development. The consultant is responsible for initiating, planning and executing training activities at the following levels:

- Activities for the entire staff of each academic department (senior academic staff and all tutors and coordinators)
- Activities for only the course coordinators of the academic department
- Training for experienced tutors according to the specific courses they teach

### **TRAINING TUTORS FOR TECHNOLOGY-BASED TEACHING**

A new element should now be added to our training programs, namely the training of tutors for the incorporation of technological components in their tutoring. Such a program should be based on the same pedagogical and psychological principles of training as outlined above (in the section "OUI Training Principles"). Tutors should be trained through self-experience with every tool they use to interact with their students. This is particularly important with regard to technology, in order to reduce the well-known "fear of the computer" that may exist for tutors as well as for students. The main vehicle of training would be workshops. The hands-on training would be followed by analysis of the experiences within the workshop, and followed up after the tutors interact with the students using the technology practiced.

The content of the training would encompass the following:

- Understanding the psychological and pedagogical contributions of technology-rich components to the learning process.
- Analysis of the shortcomings and obstacles technology brings to the learning process.
- How to use technology to enhance the learning process: understanding distant-students' needs ; how to communicate at a distance; the mediated dialogue.
- How to use technology as a tutor-leader: communication via computer and Internet one-on-one, via computer-conferencing, via chat-groups; preparation and presentation of satellite-communicated tutorials.
- This program is in the planning stage. Some elements of it have already been experimented with.

### **TRAINING THE ACADEMIC SUPPORT SYSTEM**

The academic support system is made up of staff members responsible for counseling, individual tutoring, assistance in learning, and assistance to people with learning disabilities. They work in teams at different learning centers and are therefore relatively dissociated from the OUI center, a typical feature of "loosely coupled" systems.

The academic support staff works directly with the students, offering support and contributing to their learning skills and their perseverance in the system. Their work is conducted at two main levels: individual and group. Their qualifications include expertise in academic counseling, learning disabilities and study skills, as well as skills in personal and group instruction. The team leaders are also required to have managerial abilities.

**The academic support system's training includes:**

- Training of learning-skills instructors – How to present a topic; innovations in learning-skills training; dynamics of study groups; handling resistance; principles of individual counseling; interpersonal communication, etc.
- Training of academic counsellors – How to present a topic to a group, interpersonal communication, advice regarding study programs and selection of courses, etc.
- Training of team leaders of support groups – Management skills, and various topics relevant to the overall work of the instructors.
- Training of local learning – skills instructors and academic counsellors – Issues unique to their specific learning center are worked out; training in subjects relevant to all counsellors and instructors. Apart from providing knowledge and skills, the training contributes to teamwork and to a sense of belonging to the system. Today the department works with one team of counselors and instructors in Haifa.
- Training of personal tutors

**TRAINING THE TEACHING SYSTEM'S ADMINISTRATIVE SUPPORT STAFF**

At OUI, as in other professional bureaucratic organizations, there are two hierarchies: academic and administrative. The administrative staff provides the indirect but essential support services required for the proper functioning of the academic staff's activities. This staff includes various department secretaries, examination administrators, examination observers, etc. The training of the administrative staff should touch upon areas, such as providing services, interpersonal communication, office management, time management, etc.

**EVALUATION OF THE TRAINING**

Kraiger, Ford and Salas (1993) distinguish between two important concepts in training: evaluation and effectiveness. Evaluation of training relates to the degree to which the training program's goals are attained; effectiveness relates to the reasons for the attainment or non-attainment of the training program's goals.

Goldstein (1980) defines the evaluation of training as a systematic gathering of descriptive and discriminative information necessary for making effective decisions with regard to choosing, adopting, adapting, evaluating and changing various training activities. Constructive evaluation of training has occurred when the indices of certain products are conceptually linked to the preset learning goals. The evaluation is meant to provide answers to two questions: Were the training program's goals attained? or, in other words, did "the trainees learn and internalize the study materials; and is the attainment of these goals followed by improved performance at work?

The circumstances dictate the training needs, the training methods and the evaluation purposes, and thus, naturally, the approaches to the evaluation of the training are many and varied (Smith, 1993). Such evaluation is essential, because without documentation of training results, organizations have no way of knowing whether the resources invested in training are being wisely spent (Ostroff, 1991). Even though the concept of evaluation of training is widely appreciated as important and effective, and hundreds of essays, books and seminars have dealt with the subject, it still remains largely misunderstood and incorrectly applied. All too often, training is conducted with no consideration for the need to evaluate it. Even though a very large number of training programs have been carried out, only a few of them have been evaluated, and an even smaller number of studies about the evaluation of training have been published. The lack of evaluation of training programs is particularly noticeable in the public sector. One of the reasons for this is that serious evaluation of training in the public sector is a complex and time-consuming task, which the staff members of most personnel departments prefer not to engage in (Sims, 1993).

In teaching systems the importance of evaluating the training programs is no less important, but these systems experience additional difficulties in carrying out such evaluation, mainly because standard experimental procedures cannot be applied. The equality of the learning opportunities offered to all students within the system must be maintained, and control groups cannot be designated.

The Open University's Department of Evaluation and Staff Development recognizes the importance of training activities. Its evaluation team evaluates training programs by appraising the reactions of trainees, that is, by examining the degree of their satisfaction with various aspects of the training sessions, as manifested in the independent questionnaires completed by workshop participants. At the next stage, the workshop leaders and the participants discuss the results, and a plan for the implementation of suggestions is formed. The evaluation team's work is thus circular: training is followed by evaluation, which is followed by improved training.

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**THE FACTORS AND POSSIBLE PRIORITIES  
OF THE EDUCATIONAL POLICY OF IITE UNESCO**

First of all, I would like to thank IITE UNESCO for invitation and providing me a possibility to take part in this expert meeting and workshop. It is a great honour for me. I would like to express you some ideas concerning IITE UNESCO's educational policy and educational program – "ICTs in distance education", which is one of the principal direction of this policy.

As soon as we are talking about the educational program and not only about the creation of the informational system – ICT in distance education (DE) and the dissemination of information about it, we confront three main and natural questions: **whom** we should teach, **what** they should learn and **how** to teach? To answer these questions it seems important for me to think about three major factors:

The first one is a degree of differentiation and speed of variation of the educational area – systems, models, practice of distance education. The second one is the presence of other universities, research and educational centres, providing similar educational programs and courses, and available sources of information. The last one presents the specific objectives of IITE and priorities and principals of UNESCO in general, formulated in the certain statutes and policy papers and also specific UNESCO's ways of realization of its educational programs.

First factor. Everybody agrees that distance education is a fast growing and changing system and that supposes to produce a wide range of professions in which it is necessary to give education and qualification for maintenance and development of this system. Teams, roles, and a necessary competencies of specialists who are working in a different national systems and in different DE organizations are quite noticeably distinct. It depends on a wide range of things:

- Traditions, structure and normative bases of the national education system in general and also time and level of the development of DE in its frames.
- Type of a DE provider (single-mode, dual-mode, mixed-mode);
- ICT used;
- Level of education – from prep school to postgraduate level;
- Subsystems in which they are working – educational process itself, management, technical provision for education.

It is necessary to add to all this much higher than in the traditional educational system level of the division of labour and specialization, which is normal for a developed DE systems and also more dynamical change of teams and functions of specialists, which is a result of the new technologies in telecommunication and education.

It is clear that it is not possible for UNESCO to prepare full range of specialist who are required for DE in all countries that need it. That means that it is important to narrow the task of preparing a specialist and put following landmarks and priorities:

- First of all, it is important to orient the IITE's educational program ("ICT in distance education", in future I will call it program "A") in direction of not preparing narrow specialists, different and numerous experts who will be used in practical work in some DE institutes, but in preparing comparably small teams of specialists with very high qualification and with wide competence (profile) – researchers, methodologists, consultants, designers, who will help to produce projects and prepare solutions for policy-makers and in the future they will be a nucleus of the national system of DE. They will help to organize a preparation of the national groups of experts in educational practice; also it will be very useful to create a special course "Policy in DE area" for policy-makers of national and regional scale.
- To direct content of the program A text books not on showing whole picture of DE in all its specifications but on structural and functional invariant of the DE systems; it means to construct program A as a basic and normative and that off course does not mean the exclusion of comparative approach.
- In accordance with the methodological principles of DE to orient training not on learning of limited and quickly archived sum of knowledge, but on creating research

and analytical abilities and ability of one's own thinking, with the assumption that course graduates will make their subsequent professional growth by themselves.

Second factor. Certainly the definition of the character and applicability of the DE course which will be offered by UNESCO should take into account other offers of similar courses by different institutions and organizations and in general the present structures of demand and supply in that segment of the educational resource distribution.

The greatest quantity of variable in level and content educational courses and programs in theoretical and practical area of DE is offered by the Open Universities and other major centres of open and distance education of countries-members of the Commonwealth of Learning. In accordance with the Directory of Courses and Materials for Training in Distance Education already in 1995 it was possible to receive qualification in DE area at the Deakin University, Off-Campus Network (Australia), Athabasca University (Canada), Indira Gandhi National Open University (India), Open University of Sri Lanka (Sri-Lanka), Association of European Correspondence Schools, International Extension College, University of Manchester (Great Britain), Open University of United Kingdom. It is also possible to add to this list University of Southern Queensland (Australia), University of South Africa (UNISA), Télé-Université du Québec (Canada) and also it is possible to mention Open University's of Hong Kong Centre for Research in Distance and Adult Learning (CRIDAL) in which the training of specialists-researchers is running not only for Hong Kong but also for neighboring countries such as China. The biggest international center for preparing the specialists of different level in DE as it is now and as it was in past is Open University of United Kingdom or more precisely International Centre of Distance Learning which was created on the basis of the one of Open University members – Institute of Educational Technology.

Several centres of preparing specialists in different areas and directions of theory, organization and practice of DE are existing in the USA. These centres are existing on the basis of educational departments of DE and research centres in some big universities; first of all, it is important to mention University of Wisconsin-Extension where for a long time course of DE was lectured by Charles Wedemeyer and Pennsylvania State University (College of Education) on the basis of which the American Center for the Study of Distance Education was created which is headed by Michael Graham Moore.

Finally, I can mention 3 or 4 European centres of preparing specialists in the area of DE in countries which are not members of Commonwealth of Learning, but which are members of the European Association of Distance Teaching Universities (EADTU). These include Central Institute of Searching in Distance Education (ZIFF) in Fern University in Hagen (Germany) where you can take part in the course of the Grundlagen des Fernstudiums/Essentials of Distance Education, created by one of the classic and devotee of the modern distance education Börje Holmberg, German Institute of Searching in DE of The Tubingen University, which provides consultants and training services in the area of preparing specialists in distance and open education for institutes of higher education, political structures and private companies. Another DE institute is opened in 1997 in the Centre National d'Enseignement a Distance (CNED, France) School of Professional Teaching in the DE area (**Ecole de Formation aux métiers de l'enseignement a distance**) which prepares specialists of different profile in the DE area, first of all, for CNED, in which there are 8000 members of the teaching staff only. Also, it prepares specialists for different institutes abroad where French language is used. Basically, this is a completed list of the European institutes which provides courses or educational programs in DE. Of course I can also add to this list some departments and services of preparing and retraining personal. These departments are presented in all major centres of DE and specialized scientist-searching institutes, which are preparing scientists in the DE area: for example, Universities institute of DE (IUED) in Spanish Universidad Nacional de Educacion a Distancia or Institute of Postgraduate Studies in Portugal Universidade Aberta.

So, it is possible to ascertain that there are quite high quantity of the DE centres which are preparing specialists and different courses and educational programs but they are not equally distributed on the geographical map of the world and what is probably more important on the language map. It is clear that the greatest number of centres are using English language; there are only two which are using French language (TELEUQ, CNED) and from these two one is the School of Professional Teaching in the DE area is providing specialists first of all for CNED's institutes and there is only one institute of international importance which is using German language (ZIFF), which provides only one (but very good) course of the DE basis with main materials translated in English.

Similar situation is with accessible educational and in general with the informational resources which could be used for DE or self learning by using the DE courses. Major part of the published materials such as textbooks, booklets, etc. are published and so are available in countries of COL and USA. The same could be said about the Internet resources which could be used for supplying of the DE course. Probably, the best Web site with the materials which contents thoroughly classified text materials about all questions of organization and practical realization of the DE system is The Global Distance EducationNet, created by the Education and Technology Team of the World Bank's Human Development Network, the biggest role in which Michael Moore played and members of the publishing team represented the biggest centres and organisations of open and distance education and one of them was Dr Nicholas Farnes whom we could see at our meeting. That site is still existing only in English version, but the creators are planning to open it in other languages first of all, in Spanish and French. English language is used in most part of other sites which contain huge amount of very important and useful information, which could be used for preparing specialists in the DE area – I would mention ICDL and IET (Institute of Educational Technologies) of OUUK, where you could find the largest bibliography of publications about DE and open education and full version of some works of IET workers. Such as works of Drs Derek Rowntree, Judith Calder and Robin Maison (who is director of Postgraduate Courses program in DE offered by IET), site COL with special materials for preparing personal in the DE system and also site of the University of Idaho, containing thorough practical guide in DE system *Distance Education at a Glance*, created by Barry Willis\*. In German language, useful information for providing it for DE courses but not of teaching kind but of scientist-researching character is possible to find only on ZIFF site, where the theoretical reports of institute, single articles, chapters from books written by ZIFF teachers are published. The biggest amount of information about DE on French could be find on a site opened in November 1999 – Observatoire des ressources francophones pour la formation a distance (ORFFAD), created and run by the Institute of New Informational and Educational Technologies. (INTIF) and International French languages consortium of DE (CIFFAD), – but it contains only help materials and bibliographical information about French language organizations and institutes in DE and about the educational and educational-didactical production which they offer. It also contains information about educational courses in French, French language sites and scientist's publications about DE and also personal data about famous lectures, researchers, directors, whose work is in direct contact with DE in French. All these data, certainly, useful both for the theorists, and for experts in DE, can serve only as auxiliary material for training DE and, in this sense, have a secondary importance. For completeness of

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\* Of course, the list of the English sites containing the information on the theory, practice, methodology of DE is far from being exhausted by the specified sites. The perfect site, for example, is developed at the Athabasca University (RIDE – Resources in Distance Education), specially for course MDDE615 (Educational Technologies in DE). There is a lot of sources and useful items of information on the theory and the practice of DE, which could be found on a site of the University of Colorado at Denver (School of Education), on a site *Distance Education Clearinghouse* (University of Wisconsin-Extension), on a site of Department of Distance Education of Pennsylvania State University and, as a minimum, on ten other American, Canadian, Australian sites (ACSDE, AJDE, CEDL (F.Saba), PBS/ALS, Distance Education: A Primer, Distance Ed. Report (A.Shut), Distance Learning Week, personal site of Dr. A.W. (Tony) Bates, etc.)



the description of useful informational-educational resources on French language about DE it is possible to specify also, perhaps, only site TECFA (Technologies de Formation et d'Apprentissage) – Institute of technologies of education and training of the Geneva University, French part of which contains separate materials about DE (information about the projects in this area, in which the institute participates, and also it is possible to find the data of bibliographic character), and site CIEP (Centre International d'Etudes Pédagogiques), where it is also possible to find useful bibliographical and reference information.

Sites in the other languages specially about DE which could be used as a source of information for preparation of the experts for DE system – either do not exist, or they practically cannot be found in the Internet, or, at least, have mainly internal applicability and serve requirement of the students and personnel of concrete DE educational or research establishment\*.

As the result of such non-uniform distribution of the educational centres and informational-educational resources, universal, and in this sense, global system of preparation of the experts in the field of the theory and practice of DE, abundantly clearly, does not exist. Similarly to construction of the Babylon tower, the construction of such system, in my view, is prevented, first of all, by the language barriers, creating what Moore named “transactional distance”, that is “distance of understandings and perceptions, caused in part by the geographic distance, that has to be overcome by teachers, learners and educational organizations if effective, deliberate, planned learning is to occur”\*\*.

As a whole, it is possible to tell, that typical problematical situation, on solving has developed which is usually directed creation of the DE systems: There is, on the one hand, more or less conceptualized and structured for scientific research, study and training of a subject domain and advanced educational and research centres capable to provide educational services and to carry out scientific and scientific/methodological developments in this area, and, on the other hand, – distant from these centres (in physical or transactional sense) interested consumers of knowledge and educational services (in addition to this, – adults engaged, who have a basis qualification and who are interested in its increase).

Third factor. Without pretending on completeness, I would name the following regions and countries which are feeling necessity of preparation of the experts on the international level in area of DE, capable to solve problems of development of national systems of distance education, and, for the specified reasons, completely or partially deprived of such opportunity: French language Africa, Latin America (except for, probably, Venezuela, Costa Rica, where large national centres of DE exist (Venezuela's Universidad Nacional Abierta, Universidad Estatal a Distancia, Costa Rica), and Brazil, already running a number of the significant federal and regional projects in the field of creation of DE), Russia and other countries – members of UIC, plus, from the countries of the Central Europe and the Baltic countries, – Romania, Lithuania and Latvia.

All these countries refer to a category of developing or experiencing the transition. In all cases, we are talking about the access of these countries and peoples to the global international culture and education, under condition of preservation of national originality, – first of all, opportunity to be trained in the native language. Thus, the task to be solved within the framework of realization of the program “A”, coincides not only with the tasks, typical for the DE systems, but also with the basic purposes and tasks of UNESCO, as, in essence, we are talking about overcoming geographical, political, social-economical, language, cultural and civilization barriers for the distribution of education, development both integration of national cultures and formation of humanitarian universal cultures.

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\* For example, the Dutch part of a site of the Open University of the Netherlands, sites in Spanish of the Universidad Nacional Abierta in Venezuela and the Universidad Estatal a Distancia in Costa Rica and the version in Hebrew of a site of the Open University of Israel, etc.

\*\* Distance Education Theory, The American Journal of Distance Education, Volume 5 Number 3 (1991), Editorial

Until now the task of preparation of the national experts for development of national systems of the DE was solved by using two methods: first, through missions – that is through the invitation of the experts of a world level as the advisers and organizers of the forming national centres and systems of DE (here it is possible to mention, for example, numerous missions of Charles Wedemeyer assisting to creation of the national centres and systems of DE worldwide – from Indonesia up to Mexico, missions carried by Michael Moore – in Brazil, Egypt, Kenya, and also Greville Rumble – in the Czech Republic, Hungary, Poland, Venezuela and Costa Rica; secondly, through training: for example, presented here rector of the International Institute of Management “LINK”, Prof. S. Shchennikov, as well as a number of his employees, were trained in OOUK. Recognizing advantage both of missions, and training – forms of direct contact between students and teachers – in preparation of the national experts in area of DE, I, nevertheless, certainly would give back a priority – as to more effective and adequate – other way of the decision of this task and realization by this program “A”: to creation under aegis of UNESCO of the international system of distance education.

Summarizing, it is possible to formulate the following acceptable, from my point of view, priorities and basic landmarks of the educational policy of IITE UNESCO.

1. Orientation to creation of the international system of distance education for training under the basic educational programs of the Institute. The organizational form of such system could become a **consortium** with participation of IITE, Open Universities and other large centres of DE (CNED, UNISA, TLUQ, ATUN, etc.), in which the courses in DE are running, with using as the regional centres of training and preparation the faculties of UNESCO, or the **association**, with the same participants and regional centres (the second variant is easier, meaning mutual relation of the participants, but loses to the first in the sense of the sizes of involved financial, personnel and information resources).
2. Orientation of the educational program “A” first of all not on preparation of narrow specialists, various and numerous experts directly engaged in the DE institutes, but on preparation of comparably small teams of highly skilled experts of broad competence, – capable to develop the projects and to prepare the decisions for policy-makers and, further, to make a professional nucleus of national system of distance education and to organize preparation of the national group of experts. Further, it would mean an opportunity of creation on the basis of faculties of UNESCO the national research institutes of DE (like DIFF or Centre for Research in Distance and Adult Learning (CRIDAL) of OOUK), carrying out, along with a role of actual research institutes, function of the consulting-centres, centres of preparation of the experts and design institutes.
3. Orientation on the listed above countries and regions as priority for accommodation of faculties of UNESCO as the regional centres of the DE system, with the central role of IITE UNESCO in this system.
4. Account as a priority, in creation of informational systems of IITE UNESCO, not only actually informational and search, but also the educational tasks of such system, considering existing non-uniformity in accumulation and distribution of informational and educational resources.
5. The account and constant analysis of the contents of the modular courses of DE, offered by the large international centres of preparing experts in this area, during the development of its own, integrated or adapted course, and also available experience (in particular, Open University of Israel and the Canadian centres of DE) in bilingual preparation of the experts for system of DE.
6. Realization of own educational policy on the basis of coordination and support of efforts of other educational centres and international organizations in the same direction (for example, programs of World Bank, INTIF, CREAD).

Certainly, all it requires a concrete definition and specification, and, in this sense, it is possible only to welcome the first practical step in this direction the decision accepted yesterday about the creation of a constant international commission of experts on the basis of the participants at the meeting and workshop in Moscow, for realization of the further consultations and developments in this area.

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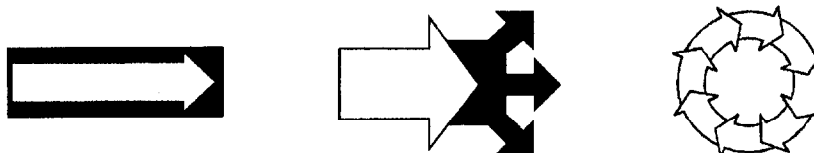
**INFORMATION TECHNOLOGIES IN THE SERVICE OF HIGHER  
EDUCATION: FUNCTIONAL ROLES AND ORGANIZATIONAL  
INFRASTRUCTURES**

### MAIN CONCLUSIONS

- Information technologies (IT) are used currently more extensively by higher education institutions than any other distance teaching method throughout history.
- IT challenge the academic life at both campus and distance universities (re: students-faculty relations; knowledge generation and acquisition; academic curricula; physical environments).
- The actual and potential impact of IT on different higher education sectors varies greatly (re: elite sector, mass-oriented universities and full-fledged distance teaching institutions).
- Different technologies lend themselves to accomplish different academic/pedagogical goals.
- The effective and efficient use of IT costs frequently more than other distance teaching methods and even more than traditional face-to-face interaction.
- The leading model of distance education is likely to be the “mixed mode” – combining both traditional and distance teaching forms of courses.
- The growing utilization of IT in higher education will also lead to a growing collaboration between the academic world and the business sector.

### DISTANCE EDUCATION THREE GENERATIONS

- Correspondence institutions
- Full-fledged distance teaching universities
- Interactive communication and information technologies



### DISTANCE TEACHING: ORGANIZATIONAL FRAMEWORKS

- Full-fledged DTUs
- Dual-mode/mixed-mode universities
- Extensions (mainly for non-degree students)
- Consortia-type ventures
- Electronic universities (web sites, mediators, fully-accredited)

### PARAMETERS FOR COMPARISON

	<i>Elite</i>	<i>Mass-</i>	<i>Distance</i>
No. of students	small	large	large
Faculty-students ratio	low	high	high
Financial resources	rich	poor	poor
Research strong	varies	varies	
Degrees' range	first to advanced	varies	varies
Links with industry	strong	weak	varies
Geographical dispersion	limited	varies	large

## FUNCTIONS OF INFORMATION TECHNOLOGIES

- Broaden access to higher education
- Increase interactivity
- Facilitate the creation of communities of researchers
- Access remote resources
- Enable on-going professional training
- Enrich learning/teaching processes
- Reduce costs
- Enhance life long learning



## TECHNOLOGIES IN THE SERVICE OF DIFFERENT ACADEMIC/PEDAGOGICAL GOALS

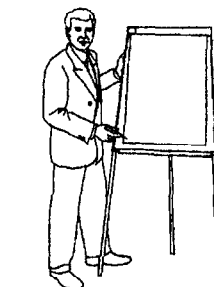
- Expert lectures in a large auditorium (audio/video teleconferencing)
- Seminar/workshop setting (small on-line discussion groups)
- Student-student interaction (chat groups, e-mail)
- Student-faculty interaction (e-mail)
- Data and resources retrieval (informatics, on-line libraries and relevant sites)
- Drill and practice (programmed study materials)
- Experiments, simulations, demonstrations, modelling (multi-media programs)
- Examinations, assignments, papers (word processing, on-line quality assured facilities)
- Course design (word processing, site construction and update)
- Research (knowledge retrieval through Internet sites, chat groups, e-mail)
- Inter-institutional collaboration (audio/video teleconferencing, computer networks)

## VIRTUAL STUDY ENVIRONMENTS

- Virtual classes on campus – on-line
- Virtual classes on campus – videoconferencing (one or two-way)
- Virtual classes at a distance (at home, at work, at another institution)
- Physical extensions/Study centers (virtual settings)
- Virtual extensions (groups and individuals)



Most of the new forms of distance learning thus far are found characteristically in elementary language instruction or introductory mathematics courses, or in various business related subjects, and have been used to facilitate the transfer of specific skills and bodies of knowledge rather than to help students 'appreciating a poem, understanding an idea, finding significance in an historical event, following the logic of an argument, inquiring into ethical dilemmas, making rational and moral judgments – all of which require an exercise of mind that calls upon all the human faculties and which no technology, however sophisticated, can satisfy'. (Trow, 1999, 202)



### **BUSINESS SECTOR: INTERESTS IN THE ACADEMIC WORLD**

- Basic Research
- Professional Education (degrees and diplomas)
- Professional Update
- Academic Reputation

### **UNIVERSITIES: INTERESTS IN THE BUSINESS SECTOR**

- Hardware and Software Design
- Partners for Applied Research
- Potential Student Cienteles
- Funding

"Inter-institutional agreement is more likely the higher one goes in the organization. Hence, presidents will agree almost anything with each other, vice-presidents will usually find a way through, while deans are more skeptical. Faculty are strongly resistant, and academic secretaries don't want to know..." (*Paul Ross, 1990, 148*)

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*Modern University*  
*for the Humanities*  
*Russian Federation*

**NETWORKING AT THE MODERN UNIVERSITY  
FOR THE HUMANITIES**

*24 March 2000*

We have listened to the reports on resources and technologies employed by the Open University of Israel, and one should increase their figures approximately three-fold to have an idea of the Modern University for the Humanities. We have 93,000 students, and our telecommunications capacities are three times as large.

We are going to demonstrate our educational telecommunication system, which consists of three components. The first is the network of ISDN channels, a kind of the multimedia Internet, which integrates our instructors' centers. We set up these centers in large cities which have university infrastructures. We currently have four instructors centers – in Moscow, St. Petersburg, Samara and Cambridge (England). The ISDN network makes it possible to integrate all the classes conducted at these centers. Now – I mean during the demonstration – these images are transmitted to Italy and are accumulated on the video server. The signal goes from the video server to the head office on Nizhegorodskaya Street, Moscow. This is the first component of our educational telecommunication system.

Then the signal is transmitted from Nizhegorodskaya Street to the teleport and rises to the satellite. This signal is received from the satellite by all educational centers. The educational centers have satellite antennas, converters, digital receivers and projectors (we project image to screens, not to television). These capacities are available in 157 Russian and CIS cities and towns. Educational programs are transmitted daily, 12–16 academic hours a day. These are scheduled lectures and classes conducted in accordance with curricula in conformity with the Russian educational standards for bachelors, specialists and masters. The University offers programs in the following fields: law, economics, linguistics, psychology, computer science and management. The satellite component of our educational program is the second one.

The third component is feedback (questions asked by students), which is realized via the Internet.

Now we'll start our demonstration. You see that Samara and St. Petersburg are both on the screen (unfortunately we couldn't contact Cambridge).

Then follows a conversation with Samara and a conversation with St. Petersburg. An interactive connection is demonstrated.

What are the advantages of our educational telecommunications system?

To begin with, it really works. There are 157 cities and towns which receive our educational programs and whose students study according to our curricula. This system is included in the Government Program for the Restoration of Education in Chechnya, which envisages our participation in the program. This is a "hot place" and instructors can conduct their work properly at our Moscow studios and implement a number of educational programs.

The second advantage is that our system is unique and offers know-how. Nowhere in the world one can find a similar program. We have developed it especially for Russia and we believe it can also be the best system for the developing countries.

Its third advantage is low cost. The cost of this system per student is much lower than that of the Internet (to be more exact, it is 30–50 times less expensive) and 250–600 times cheaper than the cost of ISDN channel operation. I am speaking about the operation of the communication systems. I have not included the costs related to the instruction as such: instructors, staff, preparation of materials, etc.

Our technology has another advantage. It is based on the study of educational psychology. For this purpose, we have created a special entity, the Research Institute for Educational Psychology. We have conducted research and found out that students assimilate knowledge through three stages. The first stage is the imprinting one when students get the first impression of a subject. The second is the memorizing stage when a student learns new concepts and acquires new skills. We widely apply glossary and algorithmic methods of teaching at this stage. Glossary methods are used for assimilation of concepts, while algorithmic methods are



used for the acquisition of skills. The third stage is the stage of actualization, that is the demonstration of newly acquired knowledge and skills in social life.

We develop special educational methods, materials and products for each stage. We prepare special educational video films for the imprinting stage. They are focused on the image-involving aspect of the knowledge presented, and they create a general idea of the subject. We employ special workbooks at the memorizing stage. We also widely employ our own unique educational computer programs. At the stage of actualization, we use special active workshops, which are also developed by our University with detailed scenarios.

I think oral course work may be interesting. Students get a topic and they have to record their presentation with the help of a camera. This allows them to train their rhetorical skills, which are very important for intellectual workers.

### *25 March 2000. Remark*

I would like to say the following in relation to the problem of distance learning staff training. There are only two ways of distance learning development.

One way is distance learning conducted through tutors. Tutors are representatives of the basic educational institution, which works with students directly. Tutors are highly qualified specialists, as they have to represent the university in many or all subjects. Tutors usually teach students according to a package (case) technology. Students get a package of workbooks, audio and video materials, and computer educational programs. It is the tutor who supervises students' work.

The second way envisions the employment of telecommunications for creation of a virtual educational environment. Students also work with methodologists, who are called instructors/technologists. Instructors appear in virtual form, either in a TV class, computer programs, workbooks, etc. Our Modern University for the Humanities has taken the second path.

We have realized the necessity of introducing a new concept, called *exterritorial departments*. These departments unite teachers from different towns and integrate them with the help of the Internet. The head of the department supervises the methods and content of instruction and its organization via the Internet. He/she arranges discussions and debates on the Internet which are as a rule asynchronous. Instructor takes part in such discussions coming to the terminal, the computer connected to the Internet when it is convenient for him/her. We have a total of 21 departments. Our exterritorial departments have 1900 instructors, including 489 doctors and 1247 doctors of philosophy.

Along with these departments, the basic educational institution has exterritorial expert groups who prepare educational materials and products, develop educational computer programs, workbooks, educational video films, educational audio materials, etc. These expert groups number 1300 people. The instructors/technologists who work with students directly number 3500 people.

### *25 March 2000. Remark*

I would like to clarify the problem concerning the relation of distance learning to postal tuition. Discussions have been held to define what postal tuition and distance learning are, and how they are related to each other.

As a result, the participants in these discussions have developed a common point of view, and regard distance learning as a technology and postal tuition as a form. The main forms of instruction, that is full-time studies and postal tuition, can employ either a distance technology or a traditional one. The difference between full-time studies and postal tuition manifests itself only in the employment of educational centers. When students study at home, this difference disappears. When students study at educational distance learning centers, full-time studies envision that students come to the center every day and have classes according to distance learning technology. Postal tuition envisions that students study at home and attend educational centers only during educational or examination sessions. This is one or two weeks per semester.

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**DEVELOPMENTS IN DISTANCE EDUCATION IN AUSTRALIA**

## INTRODUCTION

Australia has a distinctive dual-mode approach to distance education that has served the country well for a large part of the 20<sup>th</sup> Century. My interest has been in the delivery of university programs to distance students, but there is also a strong tradition of off-campus delivery in both school education and vocational education and training.

Distance education internationally is facing pressure to change. I would like to talk about this in the context of Australian universities, but what I am going to say has, I think, wider implications.

## PRESSURES TO CHANGE

Distance education at university level is under considerable pressure to change, three sources of which are technological developments, globalization, and the massification of higher education. I want to address each of these in turn.

### *1. Technological developments*

The convergence of communications and computing technologies is opening up possibilities for higher education that will prove impossible to resist. To a degree not previously experienced, they are changing the nature of distance education. For much of its history, this form of educational delivery was characterized by the provision of fairly static learning resources to students who were also supported by various mechanisms to foster interaction between the student and the teaching institution. The latter took various forms, ranging from the replication of aspects of on-campus experience (e.g. the provision of face-to-face tutors) to technologically mediated approaches (e.g. teleconferencing). At the most minimal level, many students simply submitted written assignments to remotely located tutors who returned the work with annotated comments.

The resources of the Internet and World Wide Web make possible both the provision of dynamic content and interaction between teachers and students, and amongst students, to an extent that has previously been impossible. For example, content can be enhanced by teachers at any point in the duration of a course of study, while immediate contact, both synchronous and asynchronous, between all participants in a learning transaction is now possible twenty-four hours a day, seven days per week. The constraints now are those of decision, rather than technology.

Disappearing too, is the notion of distance delivery as a distinctive form of educational provision. The opportunities of the Web are as available to on-campus lecturers as they are to the distance teaching counterparts. Indeed, distance delivery is to a large part constrained by the technological infrastructure of the community at large. In Australia, bandwidth at present is frequently only that available over copper telephone wires, so the online possibilities of on-campus delivery (made available through broad-banded intranets) are qualitatively greater than is possible off-campus. For a time, at least, those with easiest access to the greatest range of educational resources may be further advantaged.

Nonetheless, Australian universities have embraced the new technologies with enthusiasm. Researchers from the University of New South Wales found 'almost universal agreement that information technology (IT) initiatives had both improved quality and reduced the costs in teaching and administration. But there was very little evidence ... to support those claims' (Yetton & Associates 1997:xi). Most Australian institutions are moving quickly to establish both an on-line presence and to employ technologically-mediated delivery to learning programs, although at different rates and not consistently across all courses. These initiatives are typically presented as serious responses to inescapable global trends.

My unit, the Flexible Learning Centre, has developed an online teaching and learning environment for the University of South Australia that is cheap, universal, requires minimal information technology skills of either staff or students, is accessible from an standard web browser, and is scaleable to any number of courses or students without further technical work. UniSANet, as we call it, is transforming our distance education program. A simple example will demonstrate this. A problem we have faced for years is the late offer of places to students to enable the University to meet Government-imposed quotas. This has it is difficult to determine the volume of teaching resources to have on hand meant for particular programs. Inevitably, there has been a delay for some students in receiving study packages. Now, as soon as a student enrolls they are given a password and can immediately access all resources online from anywhere in the World. This has its downside. If students print those online materials, rather than wait until they are forwarded from the University, they assume a reasonable cost that the institution has previously borne. This can have consequences for equity commitments, for many of our distance students are already disadvantaged relative to those on campus.

For distance educators, there are thus two challenges: first, to maintain a level of service to students who are genuinely remotely located from universities that is comparable to the opportunities afforded those who study on campus, and, almost conversely, to use their expertise and resource-based learning infrastructure to provide on-campus students with greater freedom of choice as to the place and timing of their study. (I return to this point later.) It is not surprising that some of the most comprehensive attempts to achieve an online dimension for all study programs (i.e. including on-campus) have occurred in universities with experience in distance education.

## *2. Globalization*

The collapse of protectionism, national trading boundaries, and economic spheres of influence has had real significance for higher education. Two dimensions in particular are worth noting: first, the competition for students from international providers in what were previously seen as domestic markets and, secondly, a growing acceptance of the marketability of graduates from programs that have an international dimension, both in terms of student recruitment and in the presentation of content.

In Australia, there has been aggressive marketing of educational opportunities to international students with a view to their recruitment to on-campus programs. In a context of declining government funding for domestic students, such activity is often a critical component of institutional budgets. More recently, distance education providers have used a combination of more traditional delivery and online components to provide a hybrid provision to international students offshore. This can sometimes be very attractive, as it avoids student relocation to Australia and costs can in part be reduced by devolving some aspects of administration and support to the country in question.

This has two implications for distance educators. First, student support mechanisms quite different to those that apply locally have to be developed. Second, content and learning approaches may have to be modified to allow for language and cultural differences. The pervasiveness of the Internet is such that staff will probably have to deal with students who wish to make contact across time zones. Where asynchronicity is maintained, this is not so difficult, but local arrangements may have to be made for help-desks and other support infrastructure. This is expensive and there are also likely to be workload issues involved.

Another dimension to global competition is the emergence of non-traditional providers and the market pressure to disaggregate aspects of educational delivery for commercial advantage. My University is currently considering proposals from two private companies, one wishing to provide online delivery services and the other wishing to subcontract content development for our programs. I suspect neither

would have been taken seriously five years ago, but the context of higher education has so changed that these proposals are now seen as matters to which serious attention should be paid. Given the quasi-industrial nature of distance provision, with its typical division of functions according to areas of production specialization, the question cannot be one of whether we *should* enter into such arrangements. Much distance education has been very like this in the past, albeit that typically most contributing entities have been part of the overall provider institution. What is at issue is the appropriateness of the organizations seeking to become involved with us.

Many institutions, my own included, have accepted the educational value of including international perspectives on content into the curriculum. This can be achieved both by the presence of students from different cultures in a classroom, but also through curriculum planning. Indeed, we have mandated a set of graduate attributes for which provision must be made in every course. One of these is expressed: *A graduate of the University of South Australia demonstrates international perspectives as a professional and a citizen.* We have made significant headway on incorporating such perspectives on-campus, but distance education programs present very real difficulties. There is the further question of very real ambiguity about the relative importance of educational and commercial considerations in decisions about international student recruitment.

### *Massification of higher education*

It is only in the last five years that Australia has crossed the divide from an elite to a mass higher education system, i.e. wherein 30% of the age range pursue university studies. This was realized through a series of interventions in higher education by the Commonwealth Government begun in 1988 under the leadership of the then Minister of Education, John Dawkins (DEETYA/OECD 1997). The Dawkins reforms achieved, amongst other things, one of the fastest rates of growth of student enrolments in OECD countries with an increase in participation of 17 to 19 year olds up from 90 to 172 per thousand from 1985 to 1995 (Gallagher, 1997:3). But, because of the dual-mode of educational delivery in Australia, this had particular consequences for distance education, the effects of which are still very much part of the contemporary scene.

First, the expansion of the system occurred at a time when there was considerable pressure on academics to meet other expectations, relating to research output, quality of teaching performance, and generation of non-government funding. This conflicted with the need to produce more distance teaching resources as off-campus provision struggled with its share of the general increase in student numbers.

Second, as student numbers increased, the teacher-student ratios worsened and, in distance education programs where assessment was substantially based on written assignments, marking workloads sometimes became intolerable. Staff, the costliest component of Australian higher education, could not be employed at a level commensurate with the growth in students.

Third, the increase in students also carried a greater diversity in the enrolment profile and there was pressure to provide programs for students from increasingly diverse backgrounds such as Aboriginal Australians and people for whom English was not their first language. Many of these students were remotely located or for other reasons unable, and sometimes unwilling, to attend on campus. Such expectations produced new sets of demands, both for teaching materials and assessment activities which were inclusive of the experience of such students and for additional forms of learner support to ensure parity of educational outcomes with others taking the same courses.

While I have concentrated on the implications of the expansion of the system for distance educators, of course similar pressures were experienced by those who only taught on-campus, and across all universities.

The cumulative affect of these pressures has been a recognition that it is increasingly difficult to sustain traditional models of teaching and learning; that resource reasons do not allow them to do what they used to do in the same ways *and* that there are increasing demands that they do different and additional things.

### *The move to flexible delivery*

A very common response in Australian universities has been a move to what is being called flexible delivery. As one Vice-Chancellor puts it:

Finally, the long-standing distinction between open learning or distance education and on-campus programs is being blurred by the realization that flexible modalities are both appropriate for and expected by a range of students, and that resource based learning and creative timetabling are likely to become the norm, rather than special attempts to meet the access needs of certain groups. (Reid 1997:1)

In short, aspects of distance delivery are recognized as valuable for any form of teaching.

I want first to indicate what I understand by the term 'flexible delivery' and then underline what most distance educators would recognize as its obvious antecedents.

I have found it convenient to define flexible delivery as:

The provision of learning resources and the application of technologies to create, store and distribute course content, enrich communication, and provide support and services to enable more effective management of learning by the learner. In particular, the concept involves a view of learning in which a teacher does not predominantly mediate the student's experience. (King, 1998:271)

I see the origins in Australia of flexible delivery as being (1) the acceptance of distance education as a legitimate form of educational delivery, (2) increasing acceptance of notions of openness in education, and (3) technological developments and will comment briefly on each<sup>1</sup>.

The dual mode of delivery meant that many academics in Australia had some understanding of distance education, whether they were personally involved in distance delivery or not. In particular, they saw that neither Government nor their own institutions made any distinction of status between awards studied on or off-campus and that completion and graduation rates between the two modes were comparable.

By "openness" I mean those theories and practices in education that are based on an acceptance of the legitimacy of transferring significant control over the learning experience from teacher to student; in short, acting to maximize the choices students have in their learning programs – about content, learning approaches, and the timing and place of study. This, I think, pushes distance educators further than is presently the case, although all distance education embodies some elements of openness.

I have already talked about the impact of the converging communications and computing technologies. The point here is that it is the technologies that afford the means to the end of flexible delivery. The example of distance education and the values of open education provide the rationale.

What is evident in Australia is the success of universities with distance education expertise in making some headway towards more flexible delivery both on an off-campus. In short, the infrastructure of distance education – expertise in planning and scheduling, facilities for production of learning resources, experience in non-traditional delivery, appreciation of the administrative and support needs of students and provision for systemic response to these, and professional development programs for academic staff – is being redeployed in part to bring about changes in university teaching *generally*.

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<sup>1</sup> This is developed in King (1998).

### *Where does this leave distance education?*

Does this mean the end of distance education as we know it? My response would have to be both yes and no. Let me explain.

First, the distinctions between distance education and on-campus teaching arrangements will continue to blur, particularly as more on-campus teaching employs computer-aided instruction and invokes the resources of the Internet and World Wide Web. So, there will be less that is distinctive about distance education. I think this is likely to be true both in dual mode universities and when the different kinds of single-mode institutions are compared.

Second, while the differences in teaching methodology blur, I think for a long time there will be a difference in the administrative and support needs of students who are genuinely at a distance from their teaching institution. Technology is making it easier to deal with some of their concerns, but I see a continuing need for support infrastructure that acknowledges the specific learning milieu of the distance student.

Third, online delivery allows anyone to become a quasi-distance educator and we have seen individual instances of this in Australia, as enthusiasts on campus put more of their teaching onto the Web. Unfortunately, individual innovation bears many of the characteristics of cottage industries, particularly replication of development work, adoption of strategies that do not lead to mass application, and unrealistic labour costings.

Fourth, distance education is largely successful because of the systems developed to manage its disparate elements. The take-up of incompatible technical platforms and software by individuals – a characteristic of the experience of many universities as they move to flexible delivery – quickly outstrips institutional capacity to service those diverse environments. I believe it imperative that distance educators advocate the same systemic approach to servicing flexible delivery as has prevailed in solely distance courses.

Fifth, it seems perversely the case that the consequences of the previous two points can be seen as an argument for dismantling distance infrastructure. In dual mode institutions, I think the argument, in simplistic form, is rather like this: if the new technologies allow anyone to be a distance educator, why would you want to stop this development. Secondly, if the support infrastructure of distance education cannot service the various approaches individuals are taking, then why not dismantle it and use the resources thus saved in other ways? The answer in part lies in experience: individual innovators tire rapidly of the effort required to be both educator and technologist and soon look to systemic processes for handling what moves from being interesting on first experience to repetitious subsequently. The consequence for an institution that allows a thousand flowers to bloom is that with time, so many wither and fade.

Sixth, in developed countries where labour costs are high, the new technologies are turning the conventional costing assumptions of distance education upside down. If we assume that conventional distance education can be cost effective because, although it tends to have high initial fixed costs, its variable costs are relatively low (depending on choices about methodology) and fixed costs can be amortized over large intakes and time, then we need to think what the introduction of an online dimension to teaching and learning do. In my experience, both fixed and variable costs increase. On the one hand, despite the lowering of computer costs, it is still the case that providing the hardware, software, support systems, and the training to develop quality online teaching resources adds significantly to their cost. Variable costs, i.e. those associated with delivery to students, also increase because the technology allows students much greater access to teaching staff, who in developed nations are the largest cost component of educational expenditure. In my own university, we have accepted that moving online is not a cost-cutting measure, but an attempt to add value for students by improving the range of services we offer them. It is about improving quality rather than reducing cost.

### *Staff Development*

I should finish by briefly considering the question of staff development, for this is perhaps the most critical dimension to bringing about the changes that are potentially available to distance education through new technologies. (There are also likely to be differences here between dual-mode and single purpose distance teaching institutions.)

There is no question that the new technologies push many content specialists to the margins of their competence. The issue should be one of why they need to deal with the technology.

First, of course, many will do so because it catches their interest and it draws upon skills they need simply to sustain their academic role, e.g. in communicating with colleagues internationally by e-mail. But should they be involved in technical considerations relating to the delivery of courses?

Second, if they are to be involved, it is more important that they understand the educational implications of employing new technologies to teaching and learning than be able to handle the technical dimensions personally.

Third, institutions should move against individualization of the application of technology to teaching and learning and put systemic approaches in place, for reasons indicated earlier.

What then should be the role of staff development? At the lowest level, there will be need for some training in computer literacy, for even the most basic academic content authoring tasks will be computer mediated for all before long. The same training may be necessary for students, too. We run one-hour workshops that are taken by almost half of all beginning students on-campus. It is more difficult to do this for distance students, of course, although not impossible.

Secondly, there are very real professional development needs around issues of how new technologies can be used to enhance teaching and learning. This is costly and requires specialist staff. Our response has been to place as much of this material online in interactive form as is possible.

Third, professional development staff need to assume a new role when institutions decide on the introduction of system-wide innovation, as in the commitment to go online. The professional development specialist must become a committed agent of change, understanding the policy imperatives of the institution and prepared to model and advocate new approaches. I take the very strong view that professional development is not something that can be left in the form of provision that content specialists opt into as a matter of choice. It needs to be purposeful and in direct support of the institutional mission.

Fourth, the best staff development comes from the teacher's colleagues. We are working to develop pools of expertise in the various discipline groupings of the University such that individuals confronting difficulties can turn to someone up the corridor in their own department rather than feeling the need to seek out professional development experts. This comes with time, of course, and we foster it by both supporting and disseminating information about instances of good practice so academics learn about what their colleagues are doing.

Fifth, the decisions taken about particular forms of technology, the platforms adopted and the software used, can all facilitate the staff development of those who work within the institution. We have tried to develop tools for moving online that require absolutely minimal skills on the part of both academics and students, do not involve specialist software having to be loaded onto terminals, and can be implemented by people with rudimentary skills by following the instructions of wizards and working in specially-designed templates. In this, we have adopted the



dictum that change is not produced by making demands on people, but through providing them with tools that make their professional lives easier<sup>2</sup>.

### *Conclusion*

Distance education is changing in ways that are inescapable and may lead to an end to its particular distinctiveness, i.e. the provision of resource based learning to those who cannot, or choose not to, attend on campus. But the sensible practices and commitments to student service that have characterized distance education provision are now impacting on higher education generally. Distance educators, more than at any time in our history, have an opportunity to exercise leadership that transcends the boundaries of our field and points the way to quality provision for all students who seek to access higher education, in whatever form they choose.

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<sup>2</sup> Information about the approach of the University of South Australia to online teaching and learning is available on the University's home page at [www.unisa.edu.au](http://www.unisa.edu.au) and clicking on UniSAnet.

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**EXPERIENCES OF THE OPEN UNIVERSITY OF TANZANIA  
IN DISTANCE TEACHING AND LEARNING: STRUCTURE,  
METHODOLOGY OF DELIVERY AND CHALLENGES**

# EXPERIENCES OF OPEN UNIVERSITY OF TANZANIA IN DISTANCE TEACHING AND LEARNING: STRUCTURE, METHODOLOGY OF DELIVERY AND CHALLENGES

## 1.1. BACKGROUND

The United Republic of Tanzania (URTZ) covers a vast area of 945,090, sq. km. in East Africa with a population of 31,270,820 (CIA July 1999 estimate). Administratively the country is divided into 25 regions comprising 126 districts (URTZ 1997). It is one of the least urbanized countries in Africa. About 24% of the population live in urban areas and the rest of 76% live in rural parts (UNFPA 1995). Tanzanians have demonstrated a keen desire for education yet opportunities for higher education are restricted. By providing a flexible and economically manageable alternative to traditional higher education, the Open University of Tanzania (OUT) was established to expand education opportunities, especially for working adults through distance education. The purpose of this paper is to briefly highlight some experiences of the Open University of Tanzania in Distance education structures, methodology of delivery system and its challenges since 1994.

The Open University of Tanzania (OUT) is a new university with an experience of 6 years in offering academic degree and certificate programmes. Its legal existence dates back to December 1992. Apart from very tedious work of legal processing and other preparations from 1992, the University started offering academic programmes on 19<sup>th</sup> January, 1994. It is a single mode institution offering degree courses through distance learning systems such as correspondence courses, seminars, face to face tutorials, broadcasting and telecasting. Within 6 years the University has made many achievements which include expansion of programmes, increase in student enrollment, increase of facilities and manpower. For example student enrollment has increased from 766 in 1994 to 3,680 by 1997 and 6,738 students of whom 31 are blind students by March 2000 (See Appendix 1). Staff development has also grown from 12 academic staff and 25 non-academic staff in 1994 to 43 permanent academic and 54 permanent non-academic staff by 1999 to 64 permanent academic staff by March 2000 (Mmari, 1998, 1999).

In 1994 the University started with two faculties namely the Faculty of Arts and Social Sciences and the Faculty of Education offering undergraduate programmes, today (March 2000) it has two more faculties namely the Faculty of Law and the Faculty of Science, Technology and Environmental Studies. In addition two institutes have been established, namely the Institute of Continuing Education (ICE) and the Institute of Educational Technology (IET). Plans are underway to start graduate studies later this year. The number of OUT Regional Centres grew from 9 in 1994 to 21 by 1997 while the number of Study Centres rose from 7 in 1996 to 56 by 1999 (OUT, 1999).

## 1.2 THE STRUCTURE AND METHODOLOGY OF DISTANCE TEACHING AND LEARNING

### 1.1.1 The structure:

The United Republic of Tanzania has 25 political regions comprising 126 districts. At this stage the OUT has managed to establish its administrative centres at regional level in 21 regions out of the 25 regions. Its Head Office is located at the city of Dar-es-Salaam, which formerly was the capital city of the country. Hence, it conducts its operation from the Head Office to all the 25 regions and their respective districts through Regional Centres and Students' Study Centres. Currently the University has also managed to employ regional directors in 19 regions. It has

established 56 students' Study Centres where students meet for self-study discussions. Occasionally students meet with academic staff members from the Head Office and the respective directors of the regions for face to face seminars and tutorials. In the context of this structure, the following section describes briefly the flow of distance teaching and learning.

### *1.1.2. Methodology of Distance Teaching and learning*

The Open University of Tanzania (OUT) uses various forms of learner support systems. It combines systematically organized correspondence materials, selected texts, practical sessions, audio and videocassettes, radio and sometimes television.

The first and major delivery system has and is still the print through postal and courier services, public carriers and personal delivery by the University staff during their visits to the Regional Centres. The second support system has and is still in physical face to face contact with physical movement in both ways. Students visit the Head Office or Regional Centres regularly while the Academic Staff, both full-time and part-time, who are on call, visit the students for problem oriented academic discussions and consultations.

The third approach is through telephone technology that has proved to be an invaluable medium of communication between the University and both the registered and potential students applying for university studies. The part-time staff, authors and reviewers of study materials, banks tracing fee-payments and others, quite often uses the telephone system for communication with the Open University of Tanzania. It being the case the flow of information is much quicker for the University to keep its activities moving both ways.

The radio is also being used not so much for teaching purposes but rather for making important announcements to students and for publicity of programmes at irregular intervals. Similarly the Open University of Tanzania uses television very rarely because, before the start of year 2000, broadcasts were restricted in some parts of the country. Recently a national television owned by the Government has been launched. However, where it was possible to be viewed, the programmes were and are still very expensive. The alternative educational video cassettes is also rarely used because of not being produced locally, and those professionally produced from else where are very expensive and thus neither the University nor the students can afford them (Mmari, 1997).

The David Anderson Africa Trust (DAAT) is a non-government organization (NGO) which supports education and training in Africa. It has provided facilities to the Open University of Tanzania for recording educational programmes in audiocassettes for the print disabled students, especially the visually impaired students (DAAT, 1999). The recorded audiocassettes have been found so invaluable that they are also used in recording overviews and lectures for the normal students as well.

The African Virtual University (AVU) facilities have been funded by the World Bank and installed at the Open University of Tanzania Head Office. The AVU transmits the programmes originating from USA, Canada and Ireland to Tanzania via satellite. The OUT is just a receiving centre of the programmes developed elsewhere. There is a great need that in future the AVU at OUT should have a facility for sending out its own study materials as well including to its own students in the regions and districts. In this regard UNESCO has agreed to help OUT in providing up-linking equipment that will transmit to other six stations in the country to start with.

The Open University of Tanzania has no laboratories for practicals in physical and life sciences. To handle this problem the University is using laboratories of other two on-campus Universities in Dar-es-Salaam City and Morogoro town. Due to advantages of sharing facilities, students from all over the country make use of the laboratories during the long vacations of those universities.

## *1.2. Challenges Facing the Open University of Tanzania*

Earlier on in this paper in the background section, it was pointed out that the Open University of Tanzania is a newly born institution six years old. Just like a newly born baby who faces severe challenges of standing up and attempting movements, the University too has been facing various challenges. Apart from several achievements, there are various problems that are perceived by the University as challenges to be tackled as time and resources avail especially in overcoming the four barriers of distance, time, age and circumstances. The challenges and efforts being made include:

- (a) The geographical diversity of the country and its population stands out as a serious challenge for a young university with low-level of communication technology. The fact that 76% of the population live in rural areas where communication is largely poor creates a big problem for the University in offering efficient services to the students. For example delays of study materials delivery due to long distances to rural areas frustrate students.
- (b) On the other hand Public Regional Libraries are trying their best in supporting distance education for the students. Although they are facing serious shortage of reading materials due to Government inability to provide enough funds, they do the best they can to help the students.
- (c) The target population of the Open University of Tanzania is home-based and work-based clients served through regional centres established within their localities. It is a University with its campus covering the entire United Republic of Tanzania and beyond its borders. The academic backgrounds of the students who qualify for admission to OUT are from traditional schooling in walled classroom under the daily physical presence of the teacher. They have been brought up through continuous face to face teaching and learning systems from grade one through fourteen. This is a form of conditioning of students for thirteen years in classroom teaching and learning. When they are admitted for distance teaching and learning that are dominated by self-study reading that demands serious concentration, it takes a long time to adjust to the content which may slow down learning. The competing interests may also adversely affect the study process for the students' time and attention especially at work and at home. Essentially physical as well as intellectual isolation from the teaching institutions and from the daily presence of teachers, and from fellow students may easily lead to drop out for some less ambitious students.
- (d) The budgetary constraint is a major challenge for the OUT that is just taking off. This factor alone is very powerful in limiting expansion in staffing, hence necessitating use of more part-time workers than permanent workers. Similarly, the expansion of programmes and the introduction of modern information and communication technologies are not at a speed that a University aspiring to improve the quality of its programmes would want. Inadequate basic and supplementary study materials necessitate the student's over dependence on correspondence notes.

## *1.2. Conclusion*

Mmari (1997) points out the importance of a vision as a driving force for the University. As far as he conceives, experience has shown that no matter how hard the Open University of Tanzania is trying to face the challenges, the long, medium and short term bench-marks have been extremely useful and helpful in steering the affairs of the University.

In its Corporate Strategic and Rolling Plan for the period between 2000-2004 the Open University of Tanzania has among other things included an establishment of an Institute of Educational Technology as an academic organ in charge of:

- (i) Improving delivering system by also including information and communication technologies (management and information systems). This includes experimenting with new media.
- (ii) Supporting teaching and training programmes by media and instructional technologies.
- (iii) Carrying out research on the impact of new technologies on students progress. This includes artificial intelligence, computer based learning, efficiency of interactive media, students need and on the information flow within OUT Head Office and between it and Regional/District Centres.
- (iv) Carrying out contract work and consultancies services for other institutions and the public in general.
- (v) Making contributions to course development in various faculties and institutes of the University.
- (vi) Acting as a collaborator internationally in matters of educational technology research and innovations especially in information and communication technologies.
- (vii) Carrying out policy analysis in view of creating a policy involvement that is conducive to the work and development and use of educational technologies.
- (viii) Designing and executing evaluation instruments at undergraduate, postgraduate and continuing education programmes.

The first Director of the Institute of Educational Technology (IET) has just been appointed and assumed his duties with effect from 1<sup>st</sup> March 2000. Faced with challenging duties of establishing a new IET, there are short term, medium and long term plans to be carried out as new projects on Management Information System. To achieve this objective, funding assistance is needed to enable the Institute to procure various facilities as here to attached, (See Table 1). It also requires support for capacity building for its staff both at Head Office and the outreach centres. The same is necessary for the students if they are to benefit from this information age.

MANAGEMENT INFORMATION SYSTEM OBJECTIVE

Table 1

Programme	Activity / Project	Short term					Medium term	Long term
		2001/2 in US\$	2002/3 in US\$	2003/4 in US\$	2004/5 in US\$	2005/6 in US\$	2010/1 in US\$	2015/6 in US\$
Enhance information flow with in OUT head office and regional centres	Procure computer for all regional centres academic and administration departments at Head Office	122,000 (50 units)	61,000 (25 units)	36,600 (15 units)	24,400 (10 units)	24,400 (10 units)	512,400	512,400
	Procure photocopiers for all regional centres	305,000 (5 copies)	366,000 (5 copies)	439,200 (5 copies)	527,040 (6 copies)	-	1,844,700	1,844,700
	Procure fax machine for faculties and regional centres	16,500	-	-	-	-	19,800	23,760
<i>Sub-total</i>		<i>443,500</i>	<i>427,500</i>	<i>475,800</i>	<i>551,440</i>	<i>24,400</i>	<i>2,376,900</i>	<i>2,357,100</i>

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## Appendix 1

The Open University of Tanzania student distribution by region and gender  
1994–2000

REGION	Male	Female	Total				
ARUSHA	328	33	361	SINGIDA	59	6	65
DAR ES SALAAM	2086	457	2543	TABORA	207	20	227
DODOMA	158	29	187	TANGA	151	20	171
IRINGA	292	25	317	ZANZIBAR	185	31	216
KAGERA	161	19	180	<b>FROM FOREIGN COUNTRIES</b>			
KIGOMA	126	9	135	BURUNDI	5	0	5
KILIMANJARO	264	38	302	HONG KONG	1	2	1
LINDI	60	1	61	KENYA	25	0	27
MARA	157	9	166	LESOTHO	3	0	3
MBEYA	386	30	416	MALAWI	1	0	1
MAOROGORO	220	37	257	NAMBIA	1	0	1
MTWARA	117	24	141	UGANDA	4	0	4
MWANZA	333	36	369	U.S.A	1	0	1
PWANI	115	18	133	ZAMBIA	1	2	3
RUKWA	65	4	69	UNITED KINGDOM	1	0	1
RUVUMA	132	16	148	ETHIOPIA	1	0	1
SHINYANGA	203	23	226	<b>TOTAL</b>	<b>5,849</b>	<b>889</b>	<b>6,738</b>
				PERCENTAGE	86.79%	13.21%	100%

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**ABOUT INFORMATION MATERIALS FOR AN IITE ANALYTICAL  
SURVEY ON DISTANCE EDUCATION**



UNESCO medium-term strategy for 1996-2001 envisages a special focus on application of communication and information technologies for development, democracy and peace.

The dramatic acceleration in the development and use of information and communication technologies during the last few years has set in motion a world-wide process of transition from the "Industrial" to an "Information Society". Depth and non-linearity of this process seem to have much greater social, economic and cultural implications for humanity than the industrial revolution of the past.

As we move towards to the "Information Society", it is of the utmost importance to understand and to influence the fundamental changes brought about by the "communication and information revolution".

A closer look reveals that new information and communication technologies offer immense opportunities to all societies and individuals for alternative truly universal and often cheaper ways of access to information and its dissemination.

Information technologies in education are viewed as a means of complementing traditional educational techniques, so that education systems could adjust to the different learning and training needs of societies. These tools provide an unparalleled opportunity to "reach the unreached", particularly 900 million of the illiterate in the world and 130 million children unable to attend primary school, and to make lifelong education for all feasible, particularly for learners who are limited by time and distance, age, social or cultural environment, working hours, physical or mental abilities. Modern systems of distance education provide learners with access to knowledge available in different parts of the world; what is more, it ensures dialogue – the main factor in effective learning – among learners and between learners and sources of learning.

The report of the UNESCO International Commission on Education for the 21<sup>st</sup> century "Education: Hidden Treasure" (1997) specifies that the most promising and perspective area of use of communication technologies is associated with development of distance education.

Use of distance education may promote wider access to education of different groups of people. In this relation the Joint Initiative in Distance Education of Nine Countries with Largest Population acquires special meaning. It is UNESCO that coordinates this initiative as half of the population of the earth and nearly three-quarters of the illiterate live there.

UNESCO World Conference on Higher Education (Paris, 1998) underlined that "forms of open learning, distance learning and new information and communication technologies secure a wider access to higher education, to new social group in particular. It is important to exploit their potential in education. Both the State and higher educational establishments are vested with the duty to develop and implement appropriate philosophy".

The General Conference at its 30th session used the report of the International Commission on Education for the 21<sup>st</sup> century as the main source of inspiration. It was stated that UNESCO would continue to promote elaboration of advanced strategies to achieve the goal of lifelong learning. Emphasis will be placed on the challenges of the modern information and knowledge society, on the concept of «Learning without Frontiers» and on open learning systems.

Following the decision of the 30<sup>th</sup> Session of the General Conference of UNESCO (Paris, November 1999) IITE UNESCO launched an international project «ICTs in Education: State-of-the-Art, Needs and Perspectives» which will comprise several specialized data and knowledge bases. Taking into account that UNESCO Member States showed their increasing interest to the problems concerning distance education in its various forms IITE plans to include relevant sub-system in the above-mentioned project.

In order to determine the UNESCO role and policy in the field of application of ICTs in distance education for the Information Society the UNESCO Institute for Information Technologies in Education organized the international Expert Meeting "Distance Education in the World: Structure, Methodology, Staff Development, Legal Aspects" The meeting was held by the IITE UNESCO in Moscow on 23–24 March, 2000.

Before the Expert meeting IITE prepared Information Materials in which took part the staff of the Open University of Israel: Prof. S. Guri Rosenblit, Dr. Margalit Ganor and Rinat Gil'ad, from Moscow State Open Pedagogical University – Prof. V. Ovsyannikov, from Institute of Scientific Information on Social Science of the Russian Academy of Science – Dr. A. Panchenko and Dr. L. Mordvintseva and from the Russian Peoples Friendship University – Dr. Y. Zaporovanny.

Those who prepared the document did not work out comprehensive survey so that the Expert meeting should not result in discussing such a document. The task was to suggest the original material, to give the opportunity to discuss the problems of DE in a free way and to come to the common conclusions, which could become the programme activity of IITE in this field.

What is the structure of the presented materials? They consist of the reference to history and four parts.

## **1. HISTORY OF THE QUESTION SHOULD ACQUAINT THE READER WITH THE EVOLUTION OF DE**

The evolution of theoretical concepts of distance education (DE) is connected with emergence and rapid growth of educational institutions that carry out training of future specialists by means of non-traditional technologies and such organisation of learning that allows for in-service training. The world practice has given different names given to this type of education. Besides the term "correspondence education" such terms as "at-home courses", "open education", "education by-radio and television", "independent education" and "distance learning" are widely used. The term "distance education" has got wide spread all over the world, though sometimes it is interpreted as application of communication means to the educational process, or merely as usage of telecommunications without any link to learning objectives, just for "transfusion of information from one vessel into another".

DE and its conceptual implementation have undergone several stages their evolution. It is taken for granted that the foundations of DE were laid by Ch. Tusen, a French professor of the Berlin University, and by G. Langensheidt, a member of the Berlin Society of Modern Languages. In 1856 they set up an institution in Berlin on the basis of a distance form of education in foreign languages. However, in 1850 or six years earlier, an Institute of correspondence education was established in Russia. Yet other countries followed that Russian and German example the late 19<sup>th</sup> – early 20<sup>th</sup> century:

- In 1858 the University of London allowed post-graduates to defend their theses without preliminary studies at the University. Eventually it transformed into a correspondence form of education of such "externs";
- In 1874 the example was taken by the University of Illinois in the United States;
- In 1877 by the University of St. Andrews (Scotland);
- In 1889 by Queen's University of Canada;
- In 1891 by Chicago State University (USA);
- In 1906 by Wisconsin University (USA);
- In 1911 by University of Queensland (Australia).

In subsequent years the Soviet Union became the leader in formation of independent institutions of distance education. This type of higher education began to develop

there during the late 1920s when a number of DE polytechnic institutes and DE divisions of pedagogical colleges came into existence. Eleven DE higher education institutions and hundreds of DE divisions in other universities and colleges had been established by the mid-1960s. After the World War II countries of trial and Eastern Europe, as well as the People's Republic of China followed the Soviet example.

According to the data presented in the "World Directory on Non-traditional Post-secondary Education" (UNESCO, 1984), 82 non-traditional education institutions and programmes came into being during 1900–1960 all over the world.

Conceptually their activities were substantiated by the consideration that students could be taught not only during their classes with instructors. They might work on their own when and where they wish, and fulfil assignments given to them by their educators at an individual pace. That is how education by correspondence, often referred to as correspondence-course education, came into being. It can be considered to be an earlier form of DE.

DE in its "correspondence" form appeared when the first secure regular and available to everybody system of communication was established. Usually it was mail service. Simultaneously regular railway communication appeared and began its rapid growth, which gave a further impulse to the spread of distance education.

Second stage of DE development falls on the early sixties till 1969, when the British Open University was founded. That period was characterised by rapid growth of non-traditional universities. According to the above-mentioned source, 79 education institutions were founded within the ten-year period in comparison to 82 institutions established during the first sixty years of the 20<sup>th</sup> century.

Traditional institutions of higher education now review their structures, curricula and programmes, as well as forms and methods of education, to fit in the framework of this universally recognised philosophy. As a result from the 1960s onwards Great Britain began to develop a network of polytechnic colleges with 2 to 3 years of education designed to train specialists for immediate employment by businesses. Technological schools in French universities, as well as higher professional schools in Germany were created to pursue the same goal, while networks of 2-year colleges were substantially extended in the United States and Japan. Education, which combined classroom studies with work at enterprises, became widely spread (so called "sandwich courses" in Great Britain and co-operative forms of education in the United States).

Both developed and developing countries connect their future with education. Thus the former try to maintain and strengthen their positions in the world market, the latter hope to bridge the gap in economic and social development and to reach the world level. In process of the post war development the rivalry of nations in economic field turned into competition in the sphere of science and technology and later on in the sphere of education. For this reason education was put on the list of priorities in investment policy both by states and by monopolies, thus providing for a rapid inflow of financial resources into this particular sphere. For example, during 1966–1983 the overall expenditures of the United States on education grew from 24 milliard to 260 milliard dollars, and those on higher education – from 7 milliard to 11 milliard dollars. Nowadays the USA spends 10% of their GDP on education, distance education constitutes the fastest growing segment of this market. Nearly half of higher education institutions of the country are involved in on-line DE and together they spent more than 1,5 milliard dollars in 1998 (300% growth). The spread of campus networks has reached 83 % in higher education. National Institute of Standard and Technology expects the on-line bearing market in the United States reach 16 milliard dollars by the year 2005.

Theoretical aspects of DE which were laid down mainly during several past decades, were a sort of response to conservatism of traditional universities, which hindered the growing demand on well trained specialists for vigorous industrial development of the world. Nowadays DE is recognised by the world community as the educational model of the 21<sup>st</sup> century.

## 2. STRUCTURE OF DE

There are many types and forms of organisations of distance education. They depend on the level and character of education, number and variety of students, technical and financial possibilities, government policy, historical and cultural peculiarities of the educational system of a country. Roughly speaking distance education universities can be defined as open universities like the Open University of the United Kingdom, traditional correspondence courses, radio and TV universities. Systems of distance education vary in size: from huge, up to 100,000 students (Allama Iqbal Open University, Pakistan; the Open University, Great Britain), to those that deal with a small group of students (Wye College, PETROBRAS Project Acesso).

The way of DE organisation depends on its goals and policy. In context of education practice and theory developments in the modern world DE remains its integral as well as specialised part.

In materials the structure of DE are presented by the main types of institutions of distance education:

- Single-mode institutions
- Dual-mode institutions
- Mixed-mode systems
- Consortia
- Projects

The single goal of Single-mode institutions is to provide distance education. All their administrative and educational activities, as well as funds are designed to serve this purpose. Researchers of distance education organisations point out the complex interdependent nature of distance teaching systems and necessity for supporting interaction and interdependence of different services inside a single-mode organisation. It is a requirement for constant improvement of teaching process and for clear evaluation of its effectiveness.

Dual-mode institutions of distance education provide both conventional and distance education, and distance education services are usually managed by a special unit (e.g. Department of external studies). This unit usually has administrative staff whose sole responsibility is distance education.

Some researchers believe that there is no real difference in quality of distance education of these two models. Single- or dual-mode organisation of distance education at a university is rather based on historical reasons (particular economic, social, political, geographic exigencies) than on a grounded choice (Stewart D. 1986. Single Mode versus Dual Mode: A Fair question? // Deakin University Open Campus.– 1986, N12, P. 10–15).

The mixed-mode system of distance education is represented by conventional colleges, universities and others institutions that have decided to offer their courses off campus through audio- or video-conferencing or, recently, by the Internet. They simply add distance learners to their regular students, taught in traditional way. Distance learning programmes in mixed-mode institutions do not have their own faculty or administrative services. Experts predict that mixed-mode teaching will be the faster growing kind of distance teaching within next years.

A consortium usually consists of two or more distance learning institutions (or units within an organisation) that agree to share responsibilities in designing or delivering programmes. Each member of the consortium has its own management structure and contributes personnel to participate in setting general policies. Each consortium member also usually manages the delivery of the courses to its own constituency. Problems can emerge, however, where common interests in the consortium are not strong enough to keep the partners together, and where disagreements about academic and pedagogic policies, or technical and financial pressure, make collaboration difficult.

These are the projects realising particular goals of distance education. Targeted at groups of learners or even whole communities (e.g. villages) educational projects are designed to meet the needs of these groups or communities. The role of a specially designed scientific or educational centre is to generate materials as a resource for group discussion, and to provide trained facilitators who can get the group or community to initiate an action. Such projects are often financed by the governments or international organisations and funds and can pursue the goals related to ecology, employment, family planning, etc. The Tanzanian rural health campaigns, and the Action Cultural Popular in Colombia are good examples of the approach. Such projects are based on the theory of social action and interaction, where the main goal of education is an achievement of progressive changes in the society, social structure or institutions.

The tele-courses of the Baltic University can give another example of a project. Launched in Sweden, it combines resources of more than 50 universities of the Baltic area. Using the systems of the satellite TV, students and scholars of 10 countries communicate on the topics of mutual interests. In 1991–92, such a topic was the Baltic Sea Environment, in 1993–94 – problems of the development of the Baltic Peoples.

### 3. THEORY AND METHODOLOGY

It has been for several decades already that international organisations, especially UNESCO, develop programmes of continuous education, professional development and re-training of specialists. The goal of this work is to transform theoretical and philosophical aspects of these programmes into practice, to change fixed, rigid and elitist forms of the educational systems into democratic and widely available ones.

In distance education the act of teaching is separated in time and place from the act of learning. Learning materials may be offered to students several years after they were developed and to students spread throughout the nation or overseas. A teacher may prepare learning materials from which he/she will never teach. The theoretical justification of distance education can be found in the attempt to reintegrate the act of teaching which is divided by the nature of distance education.

The intersubjectivity of the teacher and the student, in which learning proceeds from teaching, has to be artificially re-created over space and time. In conventional education this linking is automatically set up, in DE the link between materials and potential learners has to be artificially maintained.

The DE application in various countries shows that:

- Today DE is not a chance element of the education system, DE has become an important and many-sided integral part of the education space and has a great influence on its development
- The original DE characteristic was distance teaching, but in the ICTs century this characteristic changes towards the creation of such structure that allow the students to get the information without assistance using electronic equipment and modern data base wherever they are.
- DE is a dynamic structure, free of any conservatism and routine.

However, there are several problems left:

- What are the optimum parameters of the student's autonomy and independence?
- How to organise an effective bilateral communication between the students and the teacher?
- What are social and psychological peculiarities of studying in the DE system and how should they be considered when organising the studies?

Besides, there is another important question: can we admit that the presence of many DE conceptions shows that the process of its theoretical basing is finished? Is the common DE theory necessary or is it enough to have its several independent definitions on various state and national levels?

If the answer is "yes", then how should we reconcile the existing different views?  
If the answer is "no", then in what direction should the theory develop?

The answers to these as well as to other questions are important as the future development of the distance universities and in the long run the quality of education depend on it.

Current evolution of the classical models of education necessitates critical examining of its philosophical and pedagogical fundamentals and a search for new ways, which will respond to the requirements of the society and people in the period when a post-industrial informational civilisation arises. Only those societies will remain successful that will equip their members with a yearn for lifelong learning and provide resources to achieve it.

#### **4. DE STAFF RECRUITMENT**

The key problem of teaching and training at DE institutes is the qualitative support of students. The solution of this problem depends on the staff development of DE.

Academic, administrative and technical staff works in the system of the DE institutes. The usual teaching staff belongs to the first category of the staff. Instructors and advisers are in the same category but they can work part-time in regional and local centres of the DE network. Co-ordinators of a course and their senior colleagues (dean or EO, manager of training programme), as well as secretarial staff belong to the administrative group.

Technical staff materialise projects and products generated by representatives of the first two staff categories, i.e. they type-setting and printing documents, store them and dispatch, prepare audio- and video recording, CD-ROMs, provide conferences and do many other things.

As it was mentioned above the structure of DE comprises single- and dual-mode universities, and institutions of the mixed mode. Institutes of different modes have their specific ways of tackling problems of personnel support.

Staff development is understood as training of the personnel for accomplishment of their new tasks and application of modern technologies, as well as establishment of professional credibility and enhancement of existing proficiencies. The need for development is explained by the impact of obsolete disciplines and lack of competence in the technological environment.

Dual-mode universities have to acknowledge that their distance education activities must be managed in ways that are foreign to most face-to-face teaching responsibilities. The autonomy of faculties, departments and professors in their disciplines is a cherished university value. It is fortified by the ever-increasing specialisation of knowledge as well as by the concept of academic freedom. But distance education responsibilities cannot be thought of realistically other than in operational terms. Different forms of knowledge and expertise have to be combined through co-operative effort. This calls for long-term planning, concerted action across faculties and departments, and clockwork efficiency in development of programmes of study, regular despatch to students of study materials, and equally regular marking of assignments, tests and examinations. The challenge is to find ways of combining managerial and academic principles.

In Materials there are some examples of the DE staff recruitment. It can be seen that this problem is connected with the system of higher educational institutions management

and the organisation of the education process. It shows that various aspects of the DE functioning are interrelated and that we should consider it as a complex phenomenon in education.

Various DE educational centres understand the importance of staff training and pay special attention to training tutors and co-ordination specialists working directly with the students. In Materials the experience of the Open University of Great Britain and the National Open University of India is taken into consideration. Great attention is paid to the experience of the staff training of the Open University of Israel.

## 5. LEGAL ASPECTS

The legal aspects of distance education institutions as reflected in their statutes, charters and other legal acts, are by and large similar to the legal status of their classical, campus counterparts in each national setting. However, the legal status of universities in different national contexts portrays an array of political and academic cultures and legal conventions. In Great Britain, for instance, the authority to award academic degrees is jealously guarded and is associated with the granting of a royal charter, but only to institutions which were able to demonstrate that they can teach and examine to high and common academic standards. The Open University of the United Kingdom (OUUK or the British Open University) was an exception in the sense that it got its royal charter in 1969 without a probation period, as has been the rule for any other university.

While examining the legal status and statutes of different distance teaching universities, it is important to pay attention to some of their characteristics relating to: their admission policy, scope of operation, the range of their academic curricula, and the type of degrees and diplomas they are entitled to award. Distance teaching universities clearly provide more than one grand model of an innovative university. Only few of the distance teaching universities exercise an open admission policy, while most of the others adhere to conventional admission procedures. Some are defined as national universities (such as the OUUK and UNED in Spain), while others are regional and provincial institutions (such as FernUniversität in North-Rhine Westphalia in Germany, and Athabasca University in Alberta in Canada). This alone is an important variation. National universities are geared to accommodate national priorities on a large scale. Some of the national universities are also budgeted by different mechanisms as compared to other universities.

It is equally important to pay attention to the degree of autonomy granted to various distance teaching universities to award academic degrees, which defines to a great extent their academic status in the overall higher education system in which they operate. Some distance teaching universities were initially given full authority to operate as fully fledged universities and to confer academic degrees from bachelor to Ph. D.

DE in its development encounters a number of legal problems. These problems get special meaning in conditions of globalisation of educational processes when DE leaves the framework of separate universities and national-state borders to enter the international level. These problems are as follows:

- Balance of rates and recognition of the DE levels by traditional universities.
- Mutual recognition of diplomas, certificates, training programmes. This problem is especially pressing with 'export/import' of education. However it arises at national levels (because of difference in rates of various educational institutions), and even at the institutional level (similar specialities within the framework of one university).
- The language problem in 'export/import' of education.
- Development of priorities in situations of a collision of national interests and cultural traditions.
- Strategic planning, for example, whom, where and what to teach.

- Communication and standards.
- Copyright and intellectual property.
- Quality of courses, software and educational standards.
- Parity of state education and DE diplomas for the industry and private sector.

As rapid change continues to fuel the economy, consumers depend on continuous education to gain knowledge necessary to thrive at work and at home. Until recently, prospective students had to conduct tedious search online and offline to identify courses that meet their needs. The data they seek exists, but is spread across thousands of Web-sites and catalogues, making it difficult - if not impossible - to choose conscientiously. Unless dramatic changes take place, the inefficiency of this process will interfere with consumers, employers and learning providers in their goal for growth and success in the new millennium.

The World's Marketplace for Continuing Education, a venture-funded company, was formed to create a paradigm shift necessary for continuous education to proliferate. Its new web marketplace, introduced in January 2000, is by far the Internet largest centralised source of continuous education, providing access to more than 1 500 000 learning materials (courses, certificates, degrees and training programmes). The Edupoint.com marketplace represents the first and only effort to aggregate the entire professional and continuing education industry into a single, online location. Not merely a distance learning web-site, it connects prospective students with more than 3 000 universities, community colleges, distance learning providers and training firms. Now, consumers have an easy, complete and intuitive way to access, research and register for classes that span the entire continuing education spectrum, from individual enrichment courses, to comprehensive programs for executive training, professional certifications, advanced degrees and more (<http://www.edupoint.com>).

Under these conditions there is quite an urgent problem of accreditation and certification of DE institutions.

Accreditation and granting of credentials have traditionally been an institutional issue. But the situation is changing with the increasing internationalisation of DE, due to several reasons:

1. Increasing availability of courses from several sources;
2. Growing movement toward granting credit for assessed experiential learning;
3. Move away from the traditional assumption that credentials should normally be earned at a single institution.

The need for ready transfer of credit across institutional and even national boundaries has only grown with the development of private and corporate education programmes delivered at a distance. In response to that need, several national and international agencies have been established to facilitate credit transfers. As connected to copyright and ownership issues institutions can take several possible approaches to copyright issues. Among them:

1. Copyright on course materials may be assigned to the faculty members who develop them.
2. Institutions commissioning materials may retain sole rights.
3. Institutions may retain rights but provide for royalties to the developers.
4. In case materials have been developed collaboratively, one institution or all the collaborating institutions may hold copyright.

Whichever approach is chosen, it is vital to ensure that the institutional policies are clearly stated and consistently administered.

Copyright and ownership are primarily an institutional concern. But the trend toward delivering distance teaching programmes of institutions outside the region where they reside makes this a national or even an international issue.



The problems of copyright and its laws change from country to country. Here we shall consider, how they are solved in the USA – the country, which is the world leader not only in DE, but also in development and delivery of modern information and communication technologies. The experience of the USA in the decision of problems of copyright and intellectual property with reference to DE can be useful to distance teachers in many countries of the world. The speech will go about problems of protection of copyright with reference to the Internet.

The biggest problem of business and service providers in the past was hurdles in distribution of information. Today the situation is completely different. One of the most surprising features of the Internet is proliferation of information. The user can download within a few minutes more information, than was contained in entire libraries during the Medieval times. But the Internet, for many practical reasons, renders obsolete most existing copyright and royalty systems. Once information is made available electronically, it is virtually impossible to control it; it can be downloaded, duplicated, given away, or otherwise saved, altered, or sold.

One of the biggest challenges of the further growth of a stable electronic information environment is that of devising a way to manage users' access and address the surrounding copyright and intellectual property issues that confront anyone placing information on the Internet.

The electronic revolution in publishing has forced to confront some very fundamental changes in the established assumptions about the nature of information.

The first change relates to the increasing accessibility of information. S. Bennett (Bennett S. Copyright and innovation in electronic publishing: A commentary// J. of academic librarianship. – 1993. – Vol. 19, N 2. – P.88) pays attention on the more promising egalitarian aspects of the digital environment. The electronic scholarly communication, writes S. Bennett, involves and empowers individuals in unprecedented ways in creation and distribution of information. For that reason, it is an environment that particularly favours the promotion of learning and democratic use of knowledge, which are the constitutional underpinnings of the U.S. copyright law.

The second change concerns the nature of the publishing process. Publishing has become more «democratic» in the digital age: anyone with a computer can become a desktop publisher; and through the proliferation of electronic networks, those created materials can be dispersed to thousands of users.

The third major aspect of information that has changed is its increasing mutability. While a publication was previously recognisable by certain parameters of its own physicality, the electronic environment has removed many of the defining features of «publications».

Fourth, there exists the issue of control of ownership. When information was published primarily in books, it was difficult and time-consuming to alter an author's work. But there is no corresponding physical mechanism to prevent a today's computer user from downloading and altering an article and then claiming authorship of it.

Does the DE institution provide faculty development events where legal and ethical issues such as copyright and regulatory compliance are discussed alongside with technology and pedagogy issues?

One of the most important steps in the copyright compliance process is educating all parties concerned, from designers to graphic artists, programmers, the faculty, editors, administrators, etc., about the ideological, legal, ethical, and practical issues related to the copyright law. One of the best ways to reach this purpose is one by means of panel discussions, during which their participants (head of the faculty, technologists, librarians, representatives of administration and publishing houses) achieve clear understanding of the discussed problems.

The Internet has the potential to become a force of great change in our society, but all of the hype and hope must be tempered with a healthy dose of realism. An information network is only valuable as long as we can ensure the integrity of the information that it contains. In the electronic publishing environment, information integrity is tied in many ways to issues of information production, ownership, and control. All can help to shape what the Internet becomes. This is a tremendous opportunity, which involves great responsibility.

The original intention of the copyright law was not to thwart information usage but to protect the free flow of information in the public interest. To realise this intention, we must reaffirm our commitment to safeguarding the rights of both the producers and the consumers of that information. And, indeed, in the online course delivery environment, we may often find ourselves playing both roles simultaneously. Although the electronic environment offers new challenges to the existing copyright law, many of those challenges could be met by providing public education on the appropriate use of information. Many people who violate the copyright law in the electronic environment do so simply out of ignorance. As responsible users of the Internet, we need to educate both ourselves and others about the spirit and the practice of the copyright law, which, in the end, is based on mutual respect, respect to both producers and consumers of information, and respect for the value of information itself.

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*Deputy Director*  
*Institute for Applied System Analysis*  
*Ukraine*

## **THE DISTANCE LEARNING IN UKRAINE**

### Content

1. The system analysis of distance learning
2. On-line multimedia curriculum for teachers training on telematics application in education
3. Ukrainian Research and Academic Network (URAN)

#### Part 1

## THE SYSTEM ANALYSIS OF DISTANCE LEARNING IN UKRAINE

Now we have new demands of the education system.

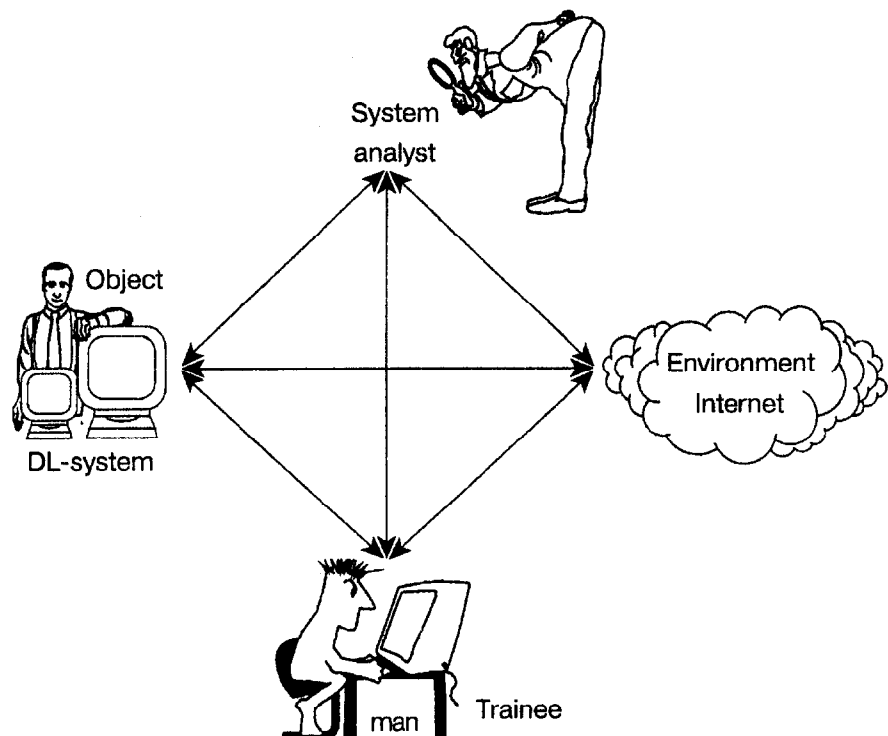
Main from them:

- fundamentality;
- integrity;
- individualization.

Taking into account the economic situation in Ukraine the introduction IT must corresponds with next conditions:

- Accessibility of the technical education. Its components are:
  - low payment;
  - domiciliary education;
  - use technical support;
  - different kinds of the property in the educational institution.
- Complexity is "Learning by Living" by single methodology of the technical education.
- Decentralized (distributed) structure with third interrelated networks:
  - Informational;
  - Teaching and Methodical;
  - Educational

### THE ROLE OF A SYSTEM ANALYST IN DL-STUDYING

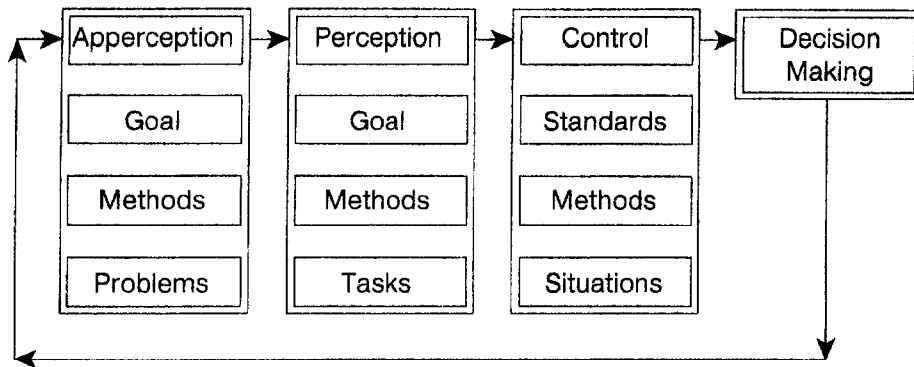


### THE DISTANCE LEARNING EARLIER

*The initial definition of DL:*

Education where the instructor and students are (at least partially) geographically-dispersed and, for the purposes of this tutorial, technology is used to facilitate education.

*This definition corresponds with next structure:*



*We have only procedural aspect !*

### THE DISTANCE LEARNING NOW

*We say about:*

PSP – Problem Solving Potential – is a qualitative index of an information benefit of URL for solving a given problem.

PSP can be approximately define as a speed of getting a useful information or building an adequate set of data for solving a given problem.

The Media Competence – is a qualitative index of an ability and a skill of a person to obtain an adequate information with high level of PSPs from URL's for solving a given problem.

*Now we have information and procedural aspects !*

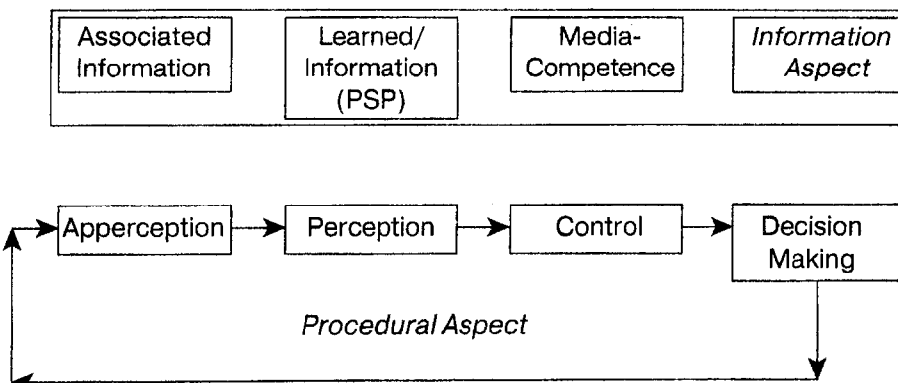
### THE DISTANCE LEARNING NOW

*Now we have next definition of DL:*

The DL teach the student also:

- how to find information and knowledge for solving a given problem with adequate PSP from all spectrum of the World of URL's
- how to develop his own media competence during all life.

*The structure had change too:*



## Part 2

# ON-LINE MULTIMEDIA CURRICULUM FOR TEACHERS TRAINING ON TELEMATICS APPLICATION IN EDUCATION

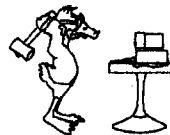
## DO YOU WANT TO LEARN

- how to use the Internet in your own work?
- how to use
  - electronic mail,
  - computer conferences,
  - the World Wide Web and
  - many other services existing in global networks?

## IF YOU WANT TO MASTER

- multimedia distance course design and development technology and
- graphics,
- animation,
- audio and
- video use in distance education too,

this on-line curriculum will help you to develop necessary skills



## WHO CAN BENEFIT FROM THE CURRICULUM:

- Pedagogical colleges and
- universities student,
- teachers,
- educators,
- educational technologists,

and everybody who wants to explore the educational potential of Internet and multimedia means through gaining practical experience and discussing relevant issues with distant colleagues and experts during the on-line learning.

## THE CURRICULUM INCLUDES THREE MODULES:

- Internet Literacy (term is two month),
- Telematics-based Course Design and Development Technology (term is two month),
- Methodology of Multimedia Telematics-based Course Creation (term is two month)

## INTERNET LITERACY

### *Content*

Chapter 1. Introduction to Communication terminology

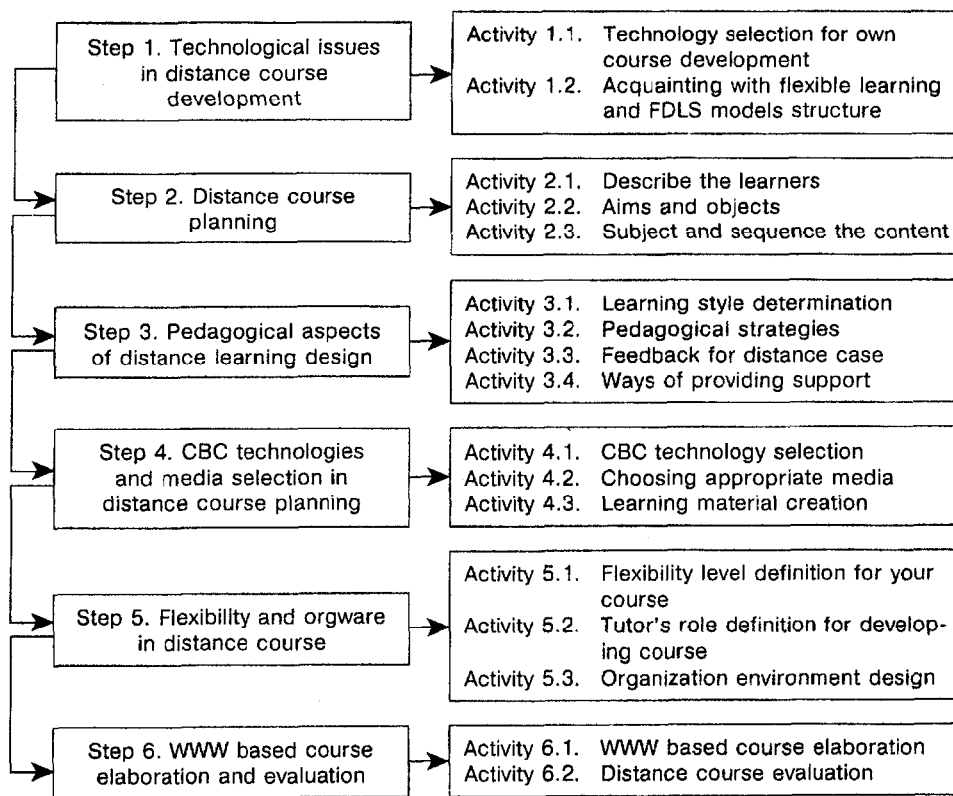
Chapter 2. Electronic mail

Chapter 3. Computer conferencing

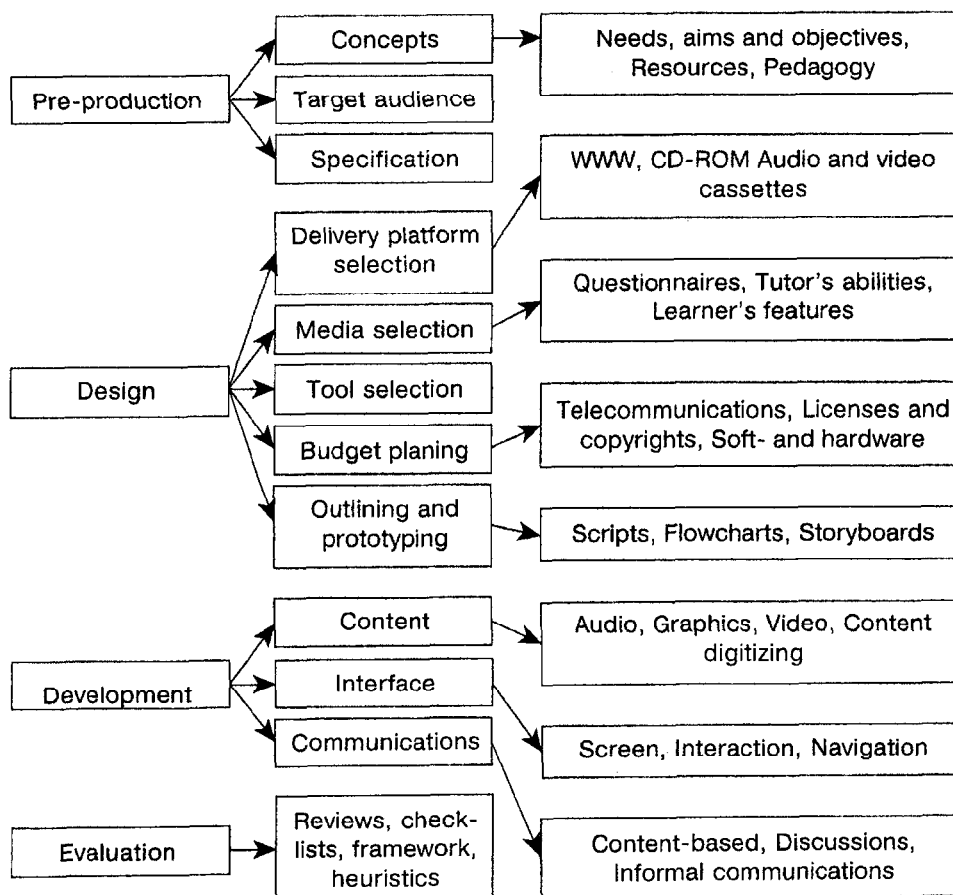
Chapter 4. The Internet as information resource: FTP, TELNET, USENET

Chapter 5. World Wide Web

### DISTANCE COURSE DESIGN AND DEVELOPMENT OUTLINE



### METHODOLOGY FOR MULTIMEDIA DISTANCE COURSE DEVELOPMENT



## Part 3

## UKRAINIAN RESEARCH AND ACADEMIC NETWORK (URAN)

### ABOUT PROJECT URAN

The Base of the project is the computer-informational infrastructure of the science and education in Ukraine.

Realization of this project provides:

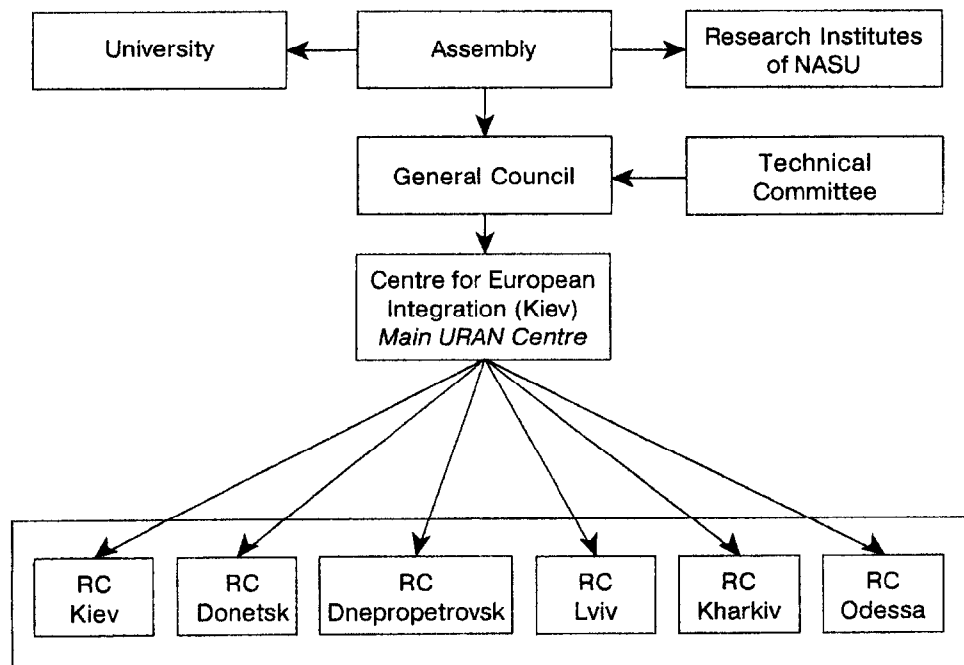
- access to the Internet for universities and institutes of Ukraine;
- introduction of the methods, resources and communication technologies in science and education;
- accumulation and effective use divided informational resources in science and education.

Project are made by Ministry of Education in Ukraine, NASU, National Technical University "KPI".

Main task of this project is creating national base Net (backbone), which will unite all education institutes, will give to access to the Internet and to all educational networks.

We hope the realization of the project will give impulse for the new level of the development of the education and science in Ukraine.

### ORGANIZATIONAL STRUCTURE OF URAN



### CONCLUSION

We would like note it is necessary to consider the Distance Learning on the basis of system analysis methodology with the help of which may be formed the paradigm of Distance Learning and particular to create the new electronic courses.



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*Management (LINK)*  
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**SOME FEATURES OF THE OPEN DISTANCE EDUCATION  
DEVELOPMENT IN RUSSIA**

Social and economic reforms in Russia have led to new requirements to education system and first of all to additional education system. Besides, crisis phenomena that affected a lot of aspects of life has had an effect on education. Thus, seeking ways of education development adequate to all changes is urgent.

In the present day situation, the ideas of open distance education (ODE) defining strategic directions of education development in the new century often do not have any alternative. In Russia the ODE ideas implementation is connected with a great difficulty. It is a misunderstanding that the ODE implementation is an innovative process requiring system changes.

As the result, the lack of the system approach produces absolutization of only several ODE elements having great practical results. There are two main approaches: identification of ODE with the correspondence education system, which was once very effective and well developed, or consideration of ODE only from the point of implementation of new innovative technologies. In the latter case, ODE is actually identified with a virtual university based on the possibilities of the Internet.

The identification of ODE with the correspondence education system explains why in Russia the distance education is considered to be cheap and therefore of lower quality than full time education. The poor reputation of correspondence education is associated automatically with ODE, which affects the consumer's attitude.

Combination of the two above-mentioned approaches produces a highly popular definition: "Distance education is correspondence education plus new innovative technologies". This definition creates the illusion of a quite evident and simple way of transformation of the existing correspondence education system in the ODE system or development of ODE in full-time educational institutions. However, many years of vain expectations of emersion either in traditional full-time or in correspondence educational institutions of educational programmes realizing in full scale the ODE ideas nearly of the same quality as the world best examples show that everything is not so evident and simple.

The stage of fitting out the institutes with modern technical equipment seems to be already finished (at least such is the situation in many institutes of higher education), but the only positive result to point out is that the understanding that real problems are out of this field has appeared.

Moreover, the experience of previous years brings out the question if the successful ODE development is possible in general within the bounds of the existing educational institutions. The main problem is that being another model of education, ODE requires different organization culture and everything connected with the necessity of organization culture changes does not produce much optimism of specialists in the field of management.

For example, in one of the researches of the National Fund for Personnel Retraining there is a conclusion that transformation of the Soviet system of correspondence education of managers in the system of distance education as the education base of the XXI century is impossible.

Taking ODE as a different education model, let's distinguish several characteristic features of this educational system emphasizing the notion "open".

The following principal features of ODE can be distinguished:

1. The open character of education with respect to its availability is provided owing to the maximum regard for the needs of customers: teaching from any level of knowledge, distance training, teaching without discontinuing work, etc.
2. The education is called "open" because it is not limited by the bounds of special organized teaching. ODE is well combined with professional activities as a result of interpenetration of studies and profession that in the long run leads to creation of

the developing intellectual and professional environment. The field of studies is no longer considered to be an isolated sphere of vital activity of an adult. That is why ODE is likely to correspond to the information structure of adult educational institutions – “education through life”.

3. Open education is characterized by communication space where various forms of communication between the tutor and the student are realized as well as within educational and professional groups (tutorials, Sunday schools, groups of support, conferences, etc.). Communication can be direct or non-direct (with the help of modern means of communication).

4. ODE can be presented as the space of self-actualization of the individual by organizing outstripping education (knowledge from future) and the leading role of self-education.

5. The system of teaching used in ODE possesses such qualities as large range, responsiveness to the questions of adults and mobility.

Two quotations from a book by S. I. Guessen can constitute the base of comprehension of educational activity on the whole and ODE in particular:

- “Life is education and the theory of education is actually the theory of life”.
- “The goals of the modern cultured society are the goals of education”.

One of the main objectives to overcome the crisis is to establish a system of retraining of managers of all levels. The activity of International Institute of Management LINK, the pioneer in ODE in Russia, is based on the following ideas:

1. The base of the management education is not scientific logic but professional goals, that is why ODE allows to pass from the subject principle of forming education contents to the creation of integrated educational courses embracing all the field of professional activities. Thus, the character of management knowledge changes: when defining the contents the main criterion is “knowledge adequate to life”. In ODE knowledge does not perform the function of ontology but becomes a means of solving concrete professional problems. This does not mean that fundamental knowledge disappears from ODE; it remains, but it is formed differently: not knowledge for future but knowledge adequate to real needs and problems arising in management activities. Universal (methodological) knowledge allowing projecting the future becomes the most important.

2. The requirements to methods and forms of education organization and therefore to the level of teachers' preparation and their role in the educational process change. Active individual and group methods of work with educational material become the main ones. Accordingly, the type of activities and the roles of teacher and students change: the student becomes a subject of full value when solving professional problems, receiving the necessary aid and support from the teacher. It allows creating various highly flexible forms of adult education without discontinuing work.

3. The logic of learning in the ODE system is based on the peculiarities of adult teaching and is built according to the following scheme: a real problem of the student – analysis of theory and conceptions as the means of solving the problem – reflection of the ways of solving and dynamics of self-alteration.

It is important to point out that the model of ODE is meant for the qualitative change rather than for improvement of the existing practice of management as the result of the change of the paradigm and priorities in defining goals. When training managers the main goal is to develop capacities for various types of activities, first of all intellectual (thinking, creative work, professional communication, reflexion), and for self-development and change of professional goals and orientation. Only these qualities may serve as an effective method of interaction with the quick-changing environment.

The usage in ODE of various information technologies and new methods of information transmission provides effective interaction between student and teacher: personal meetings (seminars, mini-lectures, consultations, play sessions); educational and methodic literature in the form of books, audio- and video-materials; analysis of practical situations and conducting exercise-books; computer programmes, etc.

A student stands in the middle of the ODE development and the changes connected with it are characteristic of any enterprise that used to work at the time of the central planning system and resources distribution and that under the new conditions the new market strategy has to be worked out. The market orientation of an educational institution implies great changes starting from the mission and philosophy up to the practical mechanisms of activities' organization including interaction with the environment. The complexity of these changes, first of all organization at ones, is often underestimated.

The ODE development through the realization of a number of advantages is limited by the insufficient development of educational services market as such in Russia. First of all, the customer is not prepared and identifies ODE with low quality education. Second (and that seems to be more important), there is a "pseudo-market" of educational services characterized by the absence of free competition in the structure of "state - non-state education" or "regional – capital educational institutions" as well as in "traditional – innovative education" one. The fact that the very notion of ODE does not appear in the Russian legislation and is not supported by the adequate normative base is connected not only with the sluggishness, inertness or conservatism of high-ranking education officials.

On the one hand, ODE model creates new possibilities and on the other hand, it cannot be realized without new organization forms. Sometimes we can speak about new globalization tendencies. For example, the International Institute of Management LINK has a net of 80 partners, including state and non-state higher educational institutions, educational centers of big enterprises, teaching and consulting firms. In the beginning of 2000, 30 educational institutions established Open Educational Consortium LINK. The missions of this organization are:

1. Development of organization and management culture as the most important element of economy functioning.
2. Forming and diffusion of the system of management competence standards corresponding to international norms.
3. Development of organizations-members of Consortium LINK by unification of the resources for elaboration and promotion of educational programmes on the base of common standards of quality.

Nearly at the same time the heads of educational institutions of the Central and Eastern Europe having great experience of cooperation with the Open University of Great Britain established Coordination Council, including representatives from Russia, Hungary, Czech Republic, Slovakia, Romania and Bulgaria. The idea of establishing the Danube University is being discussed now.

Some normative documents could give an impulse to the process of consolidation of efforts and resources of various educational institutions, first of all with a view to increase the quality of educational services and to satisfy the requirements of individuals as well as of enterprises and the state. However, for the time being in this field there are also more obstacles than stimuli.

As any innovative process, the ODE development meets resistance. The following social categories showing this resistance could be distinguished:

1. State officials. They constitute a great power taking into consideration the traditional role of officials in Russia. The problem of management and the role of officials in the ODE system is a stumbling block.

2. Heads of universities. The average age of the Russian rectors and poorly developed rotation mechanism should be taken into account.
3. The average rank of the teaching staff (the level of senior lecturer). It is connected with poor knowledge of modern methods of active teaching and information technologies.
4. Capital "educational elite". ODE breaks the monopoly of these professors in the field of getting new information from abroad.

The most effective and real way to overcome the resistance to the ODE development is constant teaching of educational workers of all degrees. 1500 teachers working in the system of secondary and higher education have been retrained so far in the system of IIM LINK. Some of them (300 persons) are involved in the system of teachers' training and retraining and work as tutors at various courses.

The main discussions dealing with the usage of new technologies in the Russian education are connected with changes in the student's work with stored knowledge. However, establishment of the effective ODE system is impossible without at least two elements:

1. Establishment of the ODE management system using new technologies.
2. Creation of the professional communicative space for the tutors (teachers).

The latter is the most important for Russia taking into consideration its great size and scantiness of the resources given for the purpose of retraining teachers.

Characterizing ODE as a system made to achieve and maintain high standards of quality, we should point out that the technological character and the "transparence" of ODE allow providing the necessary quality. The ODE quality is provided owing to realization of a number of various technologies united in one system.

Y. A. Komensky wrote: "The art of teaching requires only clever distribution of time, subjects and method. If we are able to distribute all this in the right way, the process of teaching will not be more difficult than having typographical instruments cover thousands of pages with the most elegant letters every day".

To realize this approach, a normative system based on the introduction of methods of functional standartization is highly important. Besides, we should point out that being both social and information structure, the ODE system cannot have any imposed ways of development. The uniformity of the normative base can only be achieved by studying tendencies and ways of the ODE development.

From the point of view of technologies, it is promising to apply the ideas of using functional standartization of open systems and providing compatibility of working procedures, data base and staff through standartization interfaces, services and supporting formats.

For the ODE system having a large structure with a great number of partners, the most effective instrument is **to organize continuous teaching of employees and to establish the system of their motivation support.**

Within the frames of the TQM ideology, it is possible to provide the system approach to guaranteeing the ODE quality. Successful realization of the ODE model allows organizing a process of quality management involving first of all people and ways of support and only then systems and instruments.

"Total quality management is the philosophy of an organization based on striving for quality and practice of management; so the quality is not something you have to keep an eye on and add on some stage of the industrial process, this is the very essence of the organization" (Bovee and Thill, 1992).

So, we can say that total quality management is a special state of the organization culture, motivation of staff at all levels.

The quality movement in the history of the USSR has a lot of traditions of instructive character. That is why there is a danger of understanding the idea of quality as another strong campaign "under the new market conditions". In this situation, the calls for improving quality may lead to stereotype reactions based on the former life experience. The steps taken to improve quality may serve for eliminating the consequences of arising problems and not their causes.

It seems to be quite justified to "form" thinking and behavior in the organization culture market. The base of the market philosophy is the same idea of the maximum satisfaction of the consumer's requirements.

So ODE, as it was mentioned above, differs greatly from traditional professional training (in all its forms: full-time, by correspondence, evening classes) as to its purposes, contents of education, type of teachers' and students' activities and its final results. Besides, another characteristic feature of ODE is its non-antagonistic character in regard to other forms of education; it can not only occupy a certain place in the existing educational system, but provide additional possibilities for the existing educational structures.

The ways of the ODE development are inseparably linked with the future of reforms.

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*Russian Federation*

**DEVELOPMENT OF THE IITE INFORMATION SYSTEM  
“INFORMATION AND COMMUNICATION  
TECHNOLOGIES IN EDUCATION: STATE-OF-THE-ART,  
NEEDS AND PERSPECTIVES OF THE DEVELOPMENT”**

Within the framework of the UNESCO Institute for Information Technologies in Education (IITE) project "Information and Communication Technologies in Education: State-of-the-Art, Needs and Perspectives of Development" initial investigations have been carried out and the preparation for creation of the title information system is under way.

The research is being conducted by the order of UNESCO by the collective of authors of Center for Information and Analytical Provision of Distance Education System (CIAN) of Ministry of Education of Russia and the Corporation "University Knowledge Networks" (UNICOR). The proposed information system (IS) is directed at creation of methodological and information basis for preparation and realisation of all posterior projects of IITE and partner organizations in UNESCO Member States.

The main project's objective is the creation of an information system that will promote the activity of UNESCO Member States and their interested organizations in the area of application of information and communication technologies (ICT's) in education.

Users of the system will be heads of educational systems; heads of educational organizations and their departments responsible for the usage of information technologies; teachers and trainees using educational information technologies in their activity; scientific and informational employers carrying out research in various aspects of information technologies in education.

The main tasks solved with the help of the system are:

- Systematization of the data on the ICT's in education development and usage perspectives:
  - on the technologies classes and components,
  - on the countries and regions;
- Integrated evaluation of the situation with educational information technologies in the countries and regions;
- Comparative analysis of data in the field of ICT's in education;
- Facilitating of the access to Internet resources on ICT's in education.

The IS will consist of the following thematic sub-systems:

- National action plans and policies in the field of ICTs in education;
- Internet-technologies in education;
- Multimedia in education;
- ICT's in distance education;
- ICT's in education for people with special needs;
- ICT's in educational management;
- Other areas.

The IS should contain three types of information resources:

- Data on basic documents concerning the policies of UNESCO Member States in the field of application of ICT's in education;
- Applied and scientific research results on ICT's in education accomplished in Member States, including those developed under the guidance of IITE;
- Data on the main information systems accessible through the Internet and specialized in the area of ICT's in education.

The methodological basics of the project are:

- A system vision of the subject field;
- Coverage of the maximum quantity of various information sources;
- Continuous actualization of the information using:
  - automated search means and
  - distributed network of international co-operation;



- Elaboration of efficient ways of the subject field's current state assessment;
- Reliable determination of immediate and remote perspectives of the system's development;
- Timely and exact understanding of UNESCO Member States needs in this sphere.

Investigation of more than 400 specialized Web-sites containing the information on various aspects of usage and development ICT's in education have been carried out. The largest information systems are detected and the analysis of their contents on subject headings is executed. The Web-site of the project is developed and the predesign model of the future IS, represented on fig. 1–2, is prepared.

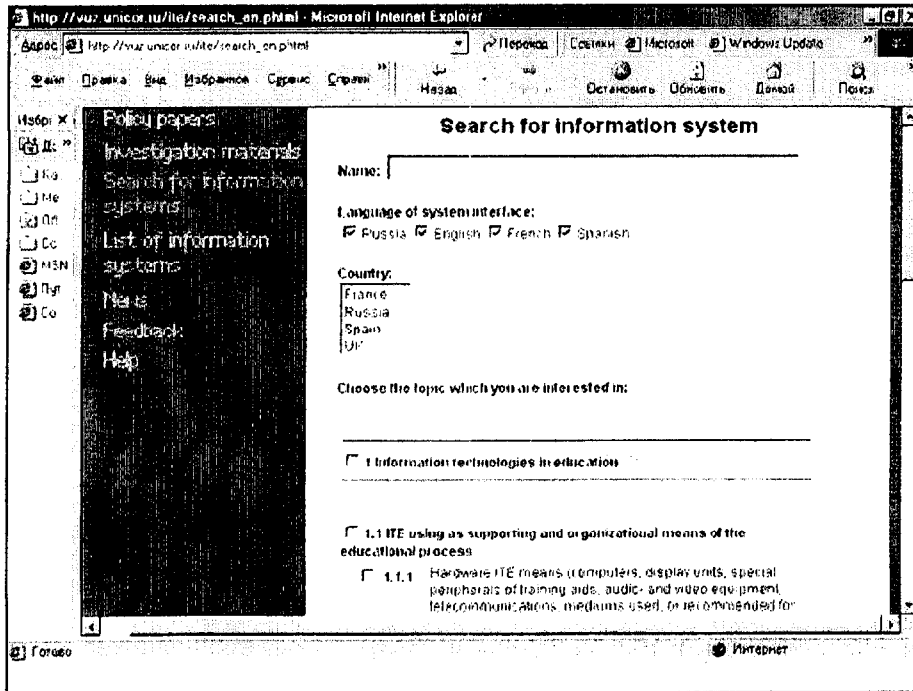


Fig. 1. Search possibilities of specialized information systems on ICT's in education.

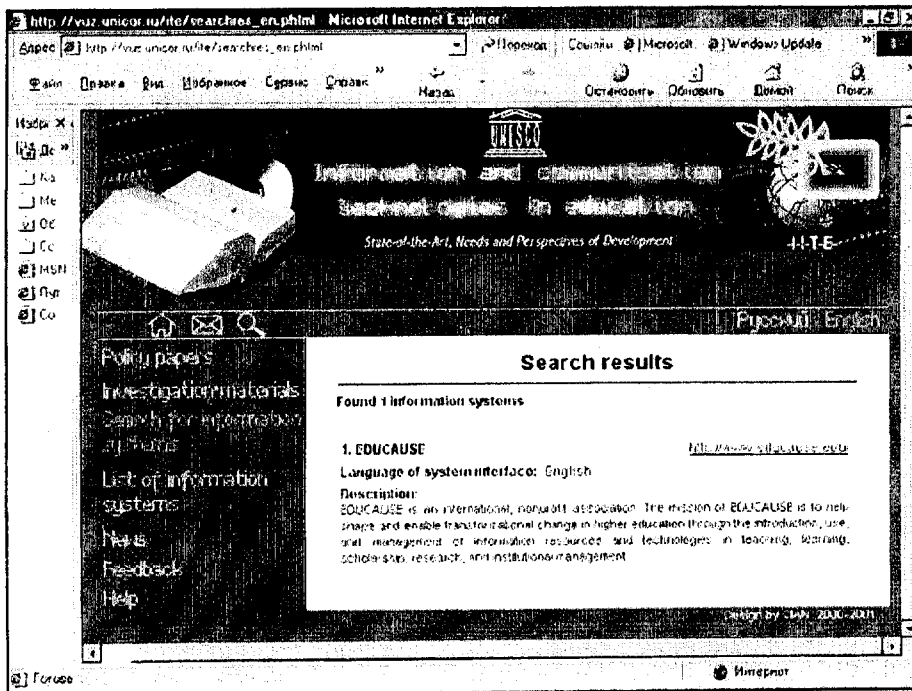


Fig. 2. The IS search result representation.