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REPORT BY THE GOVERNING BOARD ON THE ACTIVITIES OF THE UNESCO INSTITUTE FOR INFORMATION TECHNOLOGIES IN EDUCATION (2000-2001)

OUTLINE

Source: Article VI (3) of the Statutes of the UNESCO Institute for Information Technologies in Education (IITE).

Background: On behalf of the Governing Board of the UNESCO Institute for Information Technologies in Education, the Chairman of the Board submits to the General Conference the second report on the activities and programmes of the Institute and on the resources at its disposal for carrying out its projects. This report covers the period from the end of the 30th session of the General Conference to 31 July 2001.

Purpose: The Institute carries out research and training in the application of information and communication technologies (ICTs) in education and serves as an international clearing house. It contributes to the formulation of national policies and guidelines concerning the application of ICTs in education. The report describes IITE's institutional and financial resources for carrying out its activities to reinforce national capacities in the field within the framework of UNESCO's general policy.

Decision required: No decision is required on this document.

INTRODUCTION

1. On behalf of the Governing Board of the UNESCO Institute for Information Technologies in Education (IITE), I have the honour to submit to the General Conference at its 31st session the report on the IITE's activities during the period from the end of the 30th session of the General Conference to 31 July 2001, and on the priorities which IITE proposes to pursue in the coming years.
2. During the biennium, the Governing Board has paid particular attention to the priorities for IITE's programme activities adopted by the General Conference at its 30th session: to act as an international clearing house for the application of ICTs in education through the establishment of a network of national focal points for the exchange of information and experience; to contribute to the formulation of national policies and guidelines concerning the application of ICTs in education; and to organize subregional workshops and other training activities including the preparation and testing of training modules.
3. This document outlines how IITE has implemented the activities programmed for the biennium, as included in document 30 C/5 approved by the General Conference: carrying out training sessions for different categories of educational personnel using a set of prepared and tested modules; implementation of an international project "ICTs in Education: State of the Art, Needs and Perspectives" focused on national action plans and policy documents launched by setting up an international network of national focal points fostering the exchange of information and experience; elaboration of the national pilot projects launched in several countries; and publication of an IITE bulletin.
4. For these purposes IITE has concentrated efforts on three correlated areas of its programme activities: applied research and project development, training of educational personnel and dissemination of scientific and methodological materials on the ICT application in education tailored towards the main goal of its activities, namely, to assist UNESCO Member States to reinforce their national capacities for the application of ICTs in their education systems and contribute to policy formulation and national action plans concerning ICT usage in education.
5. Research and studies include the following issues: indicators of ICT application for education; ethical, psychological, societal, pedagogical and legal aspects of ICT application in education; ICTs in distance learning; digital libraries for education; ICTs in primary education; ICTs in education for people with special needs; education via the Internet; multimedia in education; and ICTs in the humanities.
6. In order to strengthen national capacities of UNESCO Member States in the area and provide a linkage between research and practice of ICT usage in education, IITE at the request of several ministries of education and National Commissions for UNESCO has developed eight national and subregional pilot projects on different domains of ICT application in education.
7. The Institute has started training activities on the basis of an educational programme developed at IITE, which includes a basic course and specialized training modules. This programme for decision-makers, leaders of teacher-training institutions and teachers is designed for its implementation in the form of regular training sessions at IITE or outside, workshops and virtual seminars.

8. Recognizing the important role of information and communication technologies in education for all throughout life, in accordance with the decisions of the General Conference (30 C/5) and for the benefit of Member States, IITE is building up an information system for ICTs in education and has begun to act as an international clearing house. An international network of national focal points for cooperation with IITE nominated in 33 UNESCO Member States is being developed.

9. IITE would like to express its gratitude to UNESCO Member States, partnership organizations and experts for their considerable support for the implementation of its programme.

10. During this biennium, Mr Koïchiro Matsuura, Director-General of UNESCO, Mr H. Iouchkiavitchious, Assistant Director-General for Communication and Information and Mr A. Modoux, Assistant Director-General for Communication and Information visited the Institute and acquainted themselves with the IITE programme activities, its communication-, information- and training facilities, the publications and the staff of IITE. The Governing Board highly appreciated the interest shown and the support given to the Institute by the high-ranking UNESCO officials, hoping that IITE's remaining urgent needs will be met now or in the near future.



(Peter P. Canisius)
Chairman of the IITE Governing Board

The Governing Board

11. The Governing Board scheduled two sessions during the course of the 2000-2001 biennium: 3-4 November 2000 in Moscow and shortly after the closing of the 31st session of the General Conference. The second meeting of the Executive Committee of the Governing Board was held on 2 November 2000 at IITE headquarters. The Director of the Institute made a progress report on the development of IITE's programme activities since the second session of the Governing Board. The third meeting of the Executive Committee was held on 28 June 2001 at IITE headquarters. The Committee members approved the minutes of the third session of the IITE Governing Board and this report.

Programme activities

Applied research and project development

12. IITE programme activities were based on the decisions of the General Conference of UNESCO at its 30th session, as well as the needs expressed by Member States there and their requests directly addressed to the Institute. The World Education Forum (Dakar, 2000) gave a new impetus to the major directions of the Institute's programme activities, which are under development in three main correlated areas: applied research and project development, training, and dissemination of results.

13. The Institute is carrying out several international long-term projects, including:
- ICTs in Education: State-of-the-Art, Needs and Perspectives;
 - Establishment of an International Network of Focal Points for Cooperation with IITE; Informatics in Primary Education;
 - Education via the Internet;
 - ICTs in Education for People with Special Needs;
 - Distance Education: Structure, Methodology, Staff Development and Legal Aspects;
 - Ethical, Psychological and Legal Problems of the Application of ICTs in Education;
 - ICTs in Education – Indicators of ICT Usage in Education;
 - ICTs in the Humanities;
 - Multimedia in Education; and
 - Digital Libraries for Education.

For all these projects IITE convenes international working teams. Based on the results of preliminary feasibility studies, IITE organized a series of international short-term training courses in the form of workshops, prepared specialized training modules to be distributed following the requirements of users in different countries, conducted several national pilot projects in Member States at their request, and enriched the data and knowledge bases of the IITE information system and its thematic subsystems acting as the clearing house at the service of UNESCO Member States.

14. IITE organized eight international expert meetings and plans to hold four more before the end of 2001 devoted to the different aspects of the ICT usage in education. The participants of the meetings, experts invited by consultation with the National Commissions for UNESCO, UNESCO Headquarters and professional communities, discussed major subjects in the field and elaborated recommendations on possible approaches to the solution of the problems and further development in the area concerned.

15. An international expert meeting on ICTs in Education for People with Special Needs with experts from six countries (Italy, Japan, Netherlands, Russian Federation, Slovenia and United Kingdom) adopted recommendations concerning the creation of a subsystem of the IITE information system for the exchange of information on special needs education, elaboration of a specialized training module and the preparation of an analytical survey *ICTs in Special Education*. Following these recommendations, IITE prepared and issued an analytical survey and continues its activities in all proposed directions.

16. The participants from nine countries (Belarus, Czech Republic, Egypt, Germany, Kazakhstan, Russian Federation, Ukraine, United Kingdom and United States) discussed at an expert meeting on Education via the Internet in Minsk (Belarus) the main achievements and problems in the use of the Internet in education; the current situation in accumulation,

analysis, international exchange and global distribution of information about education through the Internet, and conceptual design of the IITE information system. IITE started the development of the corresponding subsystem of its information system at the service of UNESCO Member States and the preparation of a specialized training module.

17. Distance education, one of the priority areas of IITE activities, broadens access to education for all throughout life, enlarges ways to improve the quality of teaching and learning and, at the same time, causes a number of problems unknown to teachers, learners and decision-makers. An international meeting of experts from nine Member States (Australia, Belarus, Canada, Israel, Italy, Russian Federation, United Republic of Tanzania, Ukraine and United Kingdom) “Distance Education: Structure, Methodology, Staff Development and Legal Aspects” thoroughly discussed the present situation in distance education in the world and adopted recommendations for further development of the project on distance education. IITE’s follow-up included an analytical survey *Distance Education for the Information Society: Policy, Professional Development and Pedagogy* and several national pilot projects in the field following the requests of UNESCO Member States. An expert meeting “Distance Higher Education in Africa: Professional and Course Development” will be held in September 2001 in Dar es Salaam, United Republic of Tanzania.

18. In the context of the intersectoral project “The Status of Teachers and Teacher Education in the Information Society”, a research seminar “Teacher Training for the Information Society” examined a new situation with the teacher training caused by the enhanced usage of ICTs in the world as well as the main trends of the development of the IITE training activities. The participants from 12 countries (Armenia, Austria, Denmark, Estonia, Finland, France, India, Japan, Netherlands, Norway, Russian Federation and Switzerland) paid special attention to New Literacy for All as a prerequisite for the Information Society, recommendations on Informatics in Primary Education and the preparation of an Elementary ICT Curriculum for Teacher Training (Curriculum for Schools).

19. At an international expert meeting “ICTs in Education – Indicators and Information System”, experts from 11 countries (Belarus, Czech Republic, Finland, Germany, Former Yugoslav Republic of Macedonia, Mauritius, Namibia, Pakistan, Russian Federation, Thailand and United Kingdom) discussed various types of indicators of ICT usage in education and recommended research on existing experience leading to a policy paper as well as to recommendations for UNESCO Member States; and that a system of the ICT indicators should be determined. In this context, the seminar “Networking and Information Resources for Education” will be held in October 2001.

20. In partnership with the Council of Europe, an international expert meeting “History Education and New Information Technologies” with representation of nine countries (Belarus, Estonia, Germany, Latvia, Lithuania, Republic of Moldova, Norway, Russian Federation and United Kingdom) discussed the role of ICTs in teaching history in secondary schools and analysed the way in which ICTs can encourage new methods for teaching and learning history. An expert meeting “Internet Usage in Teaching/Learning of Foreign Languages” is planned for October 2001.

21. The participants of an international expert meeting “Digital Libraries for Education”, who came from seven countries (China, Germany, Greece, India, Italy, Russian Federation and United Kingdom) discussed the experience of the most effective usage of digital libraries for education and the merits and demerits of digital libraries in education. The Institute started a feasibility study on an international project on digital libraries for education. The

international research seminar “Ethical, Psychological and Legal Aspects of the Application of ICTs in Education” with the participants from Germany, Poland, Russian Federation, United Kingdom and United States analysed the state-of-the-art and evolution of enumerated problems of ICT usage in education and discussed the framework of an international project to be developed.

22. Striving to promote international cooperation and to distribute modern knowledge about ICT application in education, IITE has acted as a co-organizer of several international conferences. Since 1997, IITE has been acting every year as a co-organizer of the International Technology Institute “New Computer Technology in Education” and of the International Conference and Fair “Information Technologies in Education”. Each of these events gathers about 500 participants from the CIS countries and Eastern Europe. In January 2000, IITE in partnership with the Ministry of Education of the Russian Federation, Goethe Institute and Peoples’ Friendship University of Russia organized the International Congress “Internet in Education, Economics and Art (Congress on New Information Technologies)” in Moscow. IITE is a co-sponsor of the Seventh UNESCO-ACEID International Conference on Education (Bangkok, Thailand, December 2001).

23. IITE presented the results of its activities at international forums such as the Sixth UNESCO-ACEID International Conference on Education (Bangkok, Thailand, December 2000), the Twentieth World Conference on Open Learning and Distance Education (Dusseldorf, Germany, April 2001), the Third Meeting of the Pedagogical Club of European Capitals and Conference “European Schools in the 21st century” (Moscow, Russian Federation, April 2001) and the International Conference of Rectors of Technical Universities of Central and Eastern Europe and CIS Countries “Higher Technical Education at the Turn of the Centuries” (Kiev, Ukraine, May 2001).

National and subregional pilot projects

24. Based on the results of its applied research and studies and using the resources of its information system, IITE has launched at the request of UNESCO Member States seven national pilot projects:

- “Application of ICTs in Education for People with Special Needs” in Armenia;
- “Distance Learning for Rural Schools” in Kazakhstan;
- “Distance Learning in the Educational System” in Kyrgyzstan;
- “Training and Re-training of Educational Personnel on ICT Application in Education” in the Republic of Moldova;
- “Re-training of School Educators in the Application of ICTs in Education” in the Russian Federation;
- “National Programme of ICT Application in Education” in Tajikistan; and
- “Application of Distance Teaching/Learning Methods in Education” in Ukraine.

25. IITE held working meetings on national pilot projects, e.g. in Moscow (Russian Federation), in Kiev (Ukraine), Almaty (Kazakhstan) and in Bishkek (Kyrgyzstan) and plans

to organize such meetings devoted to the other national pilot projects in corresponding countries in the second half of 2001.

26. A feasibility study is under way on a subregional pilot project “ICT Application in the Systems of Education of Member States of the Commonwealth of Independent States” aimed at fostering the exchange of information and experience as well as comparative analysis, identification and testing of indicators of ICT usage in the region.

Training activities

27. During this biennium, the Institute held a series of training seminars, short-term training courses and workshops for different categories of educators; launched the adaptation of the basic course and specialized modules for further use in regular training activities; and started elaborating and testing sets of training materials to be distributed in Member States. The facilities for the training activities at the Institute have been further improved. The conference/lecture hall for 60 persons has been equipped with multimedia devices and systems of audio amplification and for simultaneous interpretation. Eight classrooms have been equipped at the Institute, including four classrooms for seminars and workshops with multimedia equipment; one videoconference room; two computerized classrooms (IBM and Apple) and a multimedia library.

28. IITE has developed its educational programme as a set of guidelines, which consists of a basic course and special training modules. The basic course is an introduction for policy- and decision-makers in the education field aimed at assisting them in the application of ICTs within their education systems. Five training modules – ICTs in Primary Education; Internet in Education; ICTs in Distance Education; Multimedia in Education; ICTs in Special Education – have been designed for heads of institutions for training and on-the-job re-training as well as trainers of trainers. Six international working teams are preparing sets of teaching materials (introductory note, curriculum, timetable, methodological materials and textbooks) for the training seminar for decision- and policy-makers within the framework of the basic course and all training modules. By the end of 2001, the seminar and the first four modules will be tested and updated for their future implementation at IITE and in Member States.

29. The main goal of the high-level seminar for ministers of education, decision-makers and policy-makers “Towards Policies for Integrating ICTs into Education” was to assist UNESCO Member States in designing policies for integrating ICTs into education, as well as in the elaboration and improvement of national action plans on ICT application in education in conformity with the decisions of the World Education Forum. The international research seminar “Teacher Training for the Information Society” had recommended that IITE concentrate its training activities on top-level educators for the most effective fostering of ICT implementation in education in Member States. The first seminar involved participants nominated by Ministers of Education of 13 Member States, among them deputy ministers, heads of the departments of the ministries of education and other educational personnel responsible for national policies on ICT application. This theme will be discussed at a Special Interest Group for policy-makers within the framework of the 7th UNESCO-ACEID International Conference on Education (Bangkok, Thailand, December 2001). IITE plans to make this seminar a regular event. The training seminar “Programme of ICT Applications in Education: Projecting National and Regional Strategies” was thematically linked with the previously cited seminar and intended for decision-makers in education from the regions of

the Russian Federation. It laid down a basis for elaboration and updating relevant regional action plans.

30. The training modules were tested at various working meetings and workshops, e.g. "Multimedia in Education" (Saint Petersburg, Russian Federation, July 2001), "ICTs in Distance Education" (Dar es Salaam, United Republic of Tanzania, September 2001) and "ICTs in Special Needs Education" (Yerevan, Armenia, October 2001). IITE also held seven and will hold two more workshops aiming at acquainting educators with modern knowledge and skills of ICT application in teaching and learning in particular areas. Some of them were twinned with international expert meetings and thus were able to add international expertise. A workshop "Internet Usage in Education", Minsk, attracted about 100 Belarussian educators, researchers and students. The main objectives of the workshop were to share experience in the Internet usage in education, to describe the best practices from different countries and to discuss the main problems and perspectives in the area. The international workshop "Distance Education: Networking and Staff Development" was attended by experts from nine countries. There were about 100 participants at the conference hall itself and a vast audience in 157 places in seven countries linked with the Moscow auditorium through ISDN channels.

31. A number of workshops were held aiming at the presentation of the latest hard- and software for education to teachers, school managers and other educators: "New Information Technologies for Education" (in cooperation with Apple Computer, Inc.); "New Software for Education" (in cooperation with Microsoft, Inc.); and "New Hard- and Software for Education" (in cooperation with IBM). Up to 80 teachers and other educational personnel from different regions of the Russian Federation and some CIS countries took part in each of these workshops.

32. An international workshop "ICTs in Education" took place in October 2000 in Prague (Czech Republic) and the next one is planned for October 2001. The 70-odd participants of the workshop "ICT Usage in Teaching/Learning of History" focused on the results of ICT application at secondary school with regard to the teaching/learning strategies and their outcome. The representatives of nine countries involved in the expert meeting "History Education and New Information Technologies" twinned with this workshop presented their experience, too.

33. Regular virtual seminars (including online sessions) were conducted by IITE in 2001 on themes related to the IITE applied research and project development: "Education via the Internet"; "ICTs in Education for People with Special Needs"; "Distance Education: Structure, Methodology, Staff Development and Legal Aspects" and "Ethical, Psychological and Legal Aspects of the Application of ICTs in Education".

Dissemination

34. Striving to serve as a clearing house and foster international exchange of information in the areas of its competence, IITE is developing its information system with a website available through the Internet. Preparation, editing and dissemination of the information materials on ICT usage in education in electronic and printed forms are the permanent tasks and activities of the Institute.

IITE information system

35. In order to provide Member States with the mechanism for experience sharing in ICTs in education and a high technology support tool for UNESCO research and training activities

in this field, IITE has been developing the IITE information system – WWW portal, consisting of a website, a database and interactive tools. The website (<http://www.iite.ru>) contains information on the IITE structure, partners, programme activities and publications. The database provides numerous hyperlinks to Internet resources in five languages with structured descriptions, associated indexation and query tools. On the basis of the database, the Information System on Information Technologies in Education (ISITE) is being developed. The interactive tools, enriched with instruments for group working and training activities allow professional networking by creating the worldwide virtual environments for policy-makers and planners, research and development personnel and educators. The distributed part of the IITE information system is currently being developed on the basis of the network of nominated national focal points for cooperation with IITE.

Publications

36. IITE regularly publishes the results of its international projects in such forms as analytical surveys, monographs and recommendations. In January 2000 IITE launched the publication of the quarterly *IITE Newsletter*.

(a) Analytical surveys

- *Information and Communication Technology in Special Education*, prepared in close cooperation with an international group of authors, outlines the role which could be achieved by ICTs in special education, with the objective of getting it more widely adopted and used in Member States. It establishes definitions and then outlines the role ICTs can play in education in three identifiable roles, namely: prosthetic, educational and communication at a distance.
- *Distance Education for the Information Society: Policies, Pedagogy and Professional Development*, prepared with an international working group set up by the Institute consisting of experts from the open universities and other institutions provides an analytical survey to assist decision-makers and educators who need to know more about the background and current state of distance education and its relationship with the technologies of the Information Society.
- *The Experience of Internet Usage in Education* describes adopted terminological agreements and abbreviations as well as data acquisition methods. It specifies the world experience of Internet usage in education, providing the reader with information and analysis of the existing typologies of Internet applications, applied technologies, usage of Internet technologies in teaching and learning, organizational aspects of education linked with the Internet.
- *The Current Information Systems on Information Technologies in Education* looks at 400, and thoroughly analyses more than 180, information systems with interfaces in four languages all over the world, and describes their technical and functional features.

(b) Methodological and training materials

- *Informatics for Primary Education. Recommendations.* In French (earlier published in English and Russian). (In cooperation with IFIP.)
- *Elementary ICT Curriculum for Teacher Training.* Curriculum for Schools. (In cooperation with IFIP.)
- *Use of the Internet in Education.* Introduction note and curriculum (as a part of a specialized training module on the subject). CD version. (In cooperation with the UNESCO Training Centre of San-Sebastian, Spain.)

(c) Other publications 2000-2001

- *Proceedings of the Second International UNESCO Congress on Education and Informatics.* Books 1 and 2, CD versions in Russian, English and French.
- *Distance Education: Networking and Staff Development.* Collected materials.
- *Distance Education: Structure, Methodology, Staff Development and Legal Aspects.* Final report.
- *Education via the Internet.* Meeting of experts and the workshop. Proceedings.
- *The Internet Usage in Education.* Materials of the workshop.
- *Teacher Training for the Information Society.* Materials of the research seminar.
- *Meeting of Experts of the CIS Countries and Countries of Central and Eastern Europe on Problems of ICTs' Usage in Education.* Materials.
- *New Information Technologies for Education.* Booklet (in cooperation with Apple Computer, Inc.)
- *Expert Meeting "ICTs in Education – Indicators and Information System".* Final report and materials.
- *Programme of ICT Application in Education: Projecting National and Regional Strategies.* International training seminar. Keynote lecture by Professor S. Papert (United States).
- *Expert meeting "History Education and New Information Technologies".* Final report.
- *Expert meeting "Digital Libraries for Education".* Final report and collected materials.

- *Research seminar “Ethical, Psychological, Societal and Legal Aspects of the Application of ICTs in Education”*. Final Report.

International cooperation

37. The Institute maintains regular relations with the professional communities and with training and research institutions of Member States, cooperates with National Commissions for UNESCO and with various national and international organizations acting within the framework of IITE’s field of competence, e.g. the Council for Cooperation in Education of the Countries of the Commonwealth of Independent States, the World Bank, the European Union, the Council of Europe, the European Training Foundation and the International Federation for Information Processing.

38. IITE is building an international network of national focal points, at present in 33 Member States. The Institute provides national focal points with information about the Institute’s activities and access to the IITE databases. Two working meetings on the activities of national focal points were held by IITE in 2000, namely of five European focal points in March (Minsk, Belarus) and of 11 European focal points in October (Prague, Czech Republic). Four working meetings on the activities of national focal points from the CIS countries were held in 2001: in February (IITE, Moscow), in May (Kiev, Ukraine and Almaty, Kazakhstan) and in June (Bishkek, Kyrgyzstan). Two more meetings will be held in October 2001 on activities of African and European national focal points.

Other activities

39. The Institute participated in the preparation of the Protocol to the Agreement between UNESCO and the Government of the Russian Federation concerning IITE, of 21 July 1998, signed in Paris on 28 December 2000. This Protocol specifies the financial and other commitments of the Government of the Russian Federation and UNESCO with respect to the Institute. In addition to the existing agreements on cooperation with educational institutions from different countries and international organizations, the Institute signed agreements with the Ministry of Education of the Russian Federation, the Committee for Education of the Moscow Government and the Institute for Informatics Problems of the Russian Academy of Sciences concerning joint activities in research and training in ICT usage in education.

Financial resources

40. IITE’s budget was financed in 2000-2001 by direct contributions and indirect contributions (in kind) amounting to \$4,175,980 for the biennium. The direct contributions to the budget came from: (i) the UNESCO financial allocation of \$1,200,000; and (ii) the financial contribution by the Russian Federation of \$340,000. The in-kind contributions were estimated at \$2,635,980 and comprised the contribution of the Government of the Russian Federation (\$2,154,480) in the form of rent-free premises, maintenance services, heating, electricity, security and staff detached to the Institute; and the contribution to programme activities by public and private institutions (\$481,500) in the form of printing of the IITE publications, software design and development, and covering the cost of workshops.

Conclusion

41. IITE is making effective efforts to contribute to the implementation of UNESCO's Education for All programme and the follow-up to the World Education Forum; it is serving as a laboratory for ICT application, including the adaptation and development of related educational issues, and as a training centre and clearing house in this field.