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ICT Developing Education in Armenian Schools (IDEAS) 2004-2008

National Program



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Necessity of ICT Integration in Education

- Quick progress and integration of IT into life
- New demands of labor market
- Continuous development of knowledge and skills – lifelong education
- Increasing role of education in a knowledge economy
- New ICT-based teaching methods in education
- Stress on skills of information use instead of its accumulation
- Enrichment of traditional educational materials and means with new technologies



ICT Introduction in General Education

The Main Objective

- To improve pupils' learning outcomes through the use of ICT and increase the quality, effectiveness and efficiency of teachers and schools to enhance the delivery of the curriculum without time and distance limits and reduce time spent on administration



ICT Introduction in General Education

Target Areas

- Curriculum design and pedagogical reform
- Content and teaching/learning resources
- Technology infrastructure
- Human resource and capacity building
- Management of ICT introduction into the educational system



ICT Introduction in General Education

Goals and Objectives

- Establishment of School Learning Centers and provision of computer hardware to Armenian schools.
- Creation of School Network.
- Establishment of National ICT Center for coordinating and managing the National Program implementation activities.
- Integration of ICT learning in new National Curriculum and subject syllabuses.



ICT Introduction in General Education

Goals and Objectives (continuation)

- Development of educational software for applying new ICT-based teaching and learning methods and tools in the classroom.
- Creation of School Educational Portal for sharing educational resources.
- Teacher's training on basic ICT skills and use of ICT in core subject teaching.



ICT Introduction in General Education

Pupils' Expected Abilities and Skills

- To use ICT hardware and software
- To use the Internet
- To use new media technologies
- To develop competency in dealing with information
- To succeed in the open global society with different cultures



ICT Integration into New National Curriculum

- Integrate ICT learning into new National Curriculum Framework (2003-2005)
- Integrate ICT learning into subject disciplines-Math, Science and Languages (2005-2008)
- Define number of hours per school year for those subjects to be spent in school computer learning centers
- Introduce ITC as a separate subject from grade 5 and ICT-based learning in other subjects in the 7-12 grades



ICT Infrastructure

- Establish learning centers in all Armenian schools and equip them with necessary computer hardware
- Organize centralized procurement and delivery of computer equipment for school learning centers
- Establish school network in the country, connect all Armenian schools to the network and provide them with Internet access



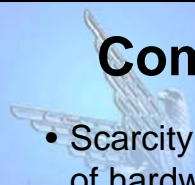
School Learning Centers

- Computerized classroom containing wide range of media and relevant, stimulating, well-designed information materials
- Should serve to develop and extend knowledge, give access to the widest possible range of ideas and options
- Should provide the environment for the development of the basic research and analysis skills
- Should have wider functions than computer lab – be information, technology, and resource center for the school



School Learning Centers (continuation)

- Establishment of about 1200 SLCs in all schools throughout Armenia during 2005-2008 or about 300 SLCs per year
- Provision of sufficient number of equipment to each SLC to ensure provision of ICT-based class-hours for defined subjects in grades 5-12
- Creation of a computer revolving system to resolve the problems of scarcity of funds and continuity of hardware provision



Computer Revolving System

- Scarcity of funds for provision of necessary amount of hardware to all schools
- Necessity of having a continuous mechanism of hardware provision
- For overcoming the financial problems establishment of a Computer Revolving Scheme through providing hardware to schools on non-interest credit terms
- Provision of equipment to schools on 5-year zero-interest credit scheme and 100% recovery of funds during 5 years by each school -the initial plan of the Project. Currently only 30 % recovery of the hardware cost during 2 years period.



Computer Revolving System (continuation)

- Organization of centralized procurement and delivery of standardized equipment to school
- Reinvesting funds collected from schools for provision of equipment to additional schools first and then for replacement of the worn-out equipment
- Equal opportunities for schools to acquire necessary equipment
- Ensuring possible lowest prices and modern specifications for hardware
- Openness and transparency of financial flows



School Network and Internet Access

- Establishment of inter-school network, connecting all SLCs to the network and provision of Internet access to schools as a long-run objective
- Provision of connectivity to 300 schools at the first phase of the project-2007-2008
- Provision of state financing for network maintenance and Internet access costs
- Establishment of network management and operation units in Yerevan and other regions



Teacher Training in ICT

- Organization of trainings for relevant subject teachers of all schools in ICT literacy and use of subject software
- Provision of training to about 13500 teachers during 2004-2008
- Provision of specialized trainings to SLC operators in computer systems and LAN management
- Synchronization of trainings with provision of hardware to schools



New ICT-based learning materials and resources

- Creation of new educational computer software for 3 main subject areas during 2006-2008
- Synchronization of development of educational software and new curriculum based relevant subject textbooks
- Preparation of software manuals and teacher training modules
- Provision of all schools with new software and ensuring their use in subject learning



School Portal

- Development and operation of School Portal as a main tool for delivery, exchange and joint use of electronic learning resources for schools
- Creation, testing of the Portal and its placement in Internet to be finished by 2006
- Establishment of specialists' team for maintenance, editing and designing of the Portal
- Continuous improvement, updating and enlarging of the Portal



National Center for Educational Technologies (NACET)

- Establishment of NACET manage and coordinate ICT integration process
- Allocation of office space to NACET, provision of necessary equipment and furniture
- Creation of School Network Management Center within NACET
- Inclusion of School Portal management team into NACET staff
- Provision of state financing for NACET's operating costs



Current Progress

Infrastructure

- Revolving scheme modified to be on 2-year interest-free condition with 30% repayment of equipment's purchase price
- By 1 October 2007 about 590 schools received equipment and covered almost 90% of their credit payment obligations with new credit terms and by 31 December 2007 about 350 schools will also be provided with computer equipment
- By 1 October 2007 about 1150 schools entered into revolving scheme by signing hardware supply contracts on new credit terms
- Tender for Establishment of School Network has started



Current Progress (continuation)

Curriculum Reforms

- ICT based learning integrated in new National Curriculum Framework
- Development of all subjects' syllabi with integrated ICT learning finished in 2007

Teacher Training

- By October 2007 4600 teachers from 500 schools already trained during pilot phase of teacher trainings on ICT literacy



Current Progress (continuation)

New Educational Resources

- Development of Math and Informatics software is completed and is in pilot phase
- Development of School Internet Portal software is in process and the start of operation from January 2008

NACET

- NACET legally established, office provided and refurbished, staff hired and started its operation from 2004