In this issue

UNESCO'S EDUCATIONAL BUILDINGS AND FURNITURE PROGRAMME
TABLE OF CONTENTS

Unesco's educational buildings and furniture programme:
Background .................................................. 3
Introduction to the Newsletter ............................. 3
In this issue .................................................. 3
Structural organization ....................................... 4
Unesco's approach to the educational buildings planning process 5
Programme actions ........................................... 6
I. Exchange of information and
   the publication of research studies ..................... 6
   Documentation centre .................................... 7
II. Technical cooperation with Member States ........... 8
III. Training of national specialist ........................ 10
IV. Pilot projects ........................................... 12

Inside back cover: Publications, event...
Back cover: Names and addresses of Unesco's school building units.
UNESCO'S EDUCATIONAL BUILDINGS AND FURNITURE PROGRAMME

BACKGROUND

For many years now, Unesco has accumulated a vast experience in the field of research, planning, design, construction, management, maintenance and evaluation of educational buildings and furniture.

In 1962 the first programme for educational buildings and facilities was launched and an educational facilities unit was created at Unesco headquarters as well as three regional centres for school building activities in Asia and the Pacific, Africa, and Latin America and the Caribbean during the period 1962 to 1972. At the beginning, the programme concentrated on research and development work as the cornerstone for achieving a better learning environment and cost effectiveness.

In 1972 a decision was taken to integrate the regional school building programme into the Unesco Regional Offices for Education. Thus, the conditions were created in the regions and at headquarters for interdisciplinary work.

Since 1962 Unesco has carried out a significant number of studies on the design of buildings and furniture which remain an important source of fundamental data.

The four programme actions of Unesco's educational building programme are:
I. Exchange of Information and the publication of Research Studies
II. Technical cooperation with Member States
III. Training of national specialists
IV. Pilot projects

Some of the significant results of these activities are featured on pages 6-14.

INTRODUCTION TO THE NEWSLETTER

To make the current and accumulated experience of this programme available to a wider public, Unesco will publish a biannual newsletter devoted to this topic as from the Unesco 1988-89 programme.

This newsletter shall also strengthen and support the establishment and further development of an International Information Network on Educational Buildings and Furniture. The objective of this network is to link-up national services, specialised institutions and research centres working in this field to allow direct contact and exchange of information and experiences. Following the workshop held in Budapest (Hungary) in March 1988 by the International Union of Architects (U.I.A.) with Unesco’s support, a first provisional Worldwide Directory of these services was published and distributed by Unesco.

IN THIS ISSUE

We have decided to devote this first issue to the presentation of the programme and our main activities, so that the reader may know who we are, what we do and where. We have grouped the information by main activity, with a recent example from each region. Future issues will most likely be structured differently, for example by regions and might according to demand be on focused on a specific theme, such as maintenance, primary schools, low-cost roofing solutions, etc.

TO THE READER

We would very much appreciate your suggestions on what you would like to see in the next issues. Your views, ideas, news... are most welcome, particularly contributions/articles on your own working experiences and problems. We will devote one page of future issues just for this purpose. Please help us fill it in!
The programme's form of organisation is flexible and operates in a decentralised, though still coordinated, manner. Unesco's educational facilities units are:

1. Educational Facilities and Infrastructures Section (EIF) at Unesco Headquarters, Paris.
2. Educational Facilities Development Service (EFDS) at Unesco Principal Office for Asia and the Pacific (PROAP), Bangkok.
3. Educational Industries and Facilities Section (EIF) at Unesco Regional Office for Education in Africa (BREDA), Dakar.
4. Educational Facilities Unit (EFU) at Unesco Regional Office for Education in the Arab States (UNEDBAS), Amman.
5. Educational Facilities Unit (EFU) at Unesco Regional Office for Education in Latin America and the Caribbean (OREALC), Santiago.

These units cooperate with Member States in all geographical regions of the World and also maintain close collaboration with non-governmental organisations, such as the U.I.A., and various research institutions.
The educational facilities planning process can be divided into four phases: diagnosis and analysis, research and development, planning, and implementation. These four activities are linked and depend on each other, but their sequence should not be viewed as fixed since they are flexible and due consideration should always be given to the situation prevailing in a country and the optimum timing of actions to be taken. Seen like this, they can help to deal with priority problem areas and thus respond in a pragmatic manner to the level of advancement of the planning process in each country.
I. EXCHANGE OF INFORMATION AND THE PUBLICATION OF RESEARCH STUDIES

The objective of this activity is the dissemination of experience acquired in the field of educational buildings, including publications, audio-visual materials and research findings; as well as the organisation of national, regional and international seminars, study tours etc. The development of the International Information Network will mainly be carried out through this Newsletter, the World Directory of services working in the field of educational buildings, and through horizontal exchanges among national services. Each of Unesco's Educational Facilities Units has developed a regional directory which serves to increase communication within the same region. The World Directory, which will be updated periodically, will include these regional directories in order to promote interregional exchange of experience and information.

Earthquake resistant educational buildings

Many school buildings in Asia and the Pacific are designed and constructed without the assistance of engineers. To provide technical information to those who build, PROAP developed an illustrated handbook on how small school buildings should be designed and built. A regional training course was held in Roorkee, U.P. India, in 1988, where 21 architects and engineers from 10 countries were trained on how to pass this information on to architects and other members of the building community.

Agricultural training centre, Niaming, Senegal. Ten years after.

After ten years in operation, the prototype developed by BREDI for this agricultural training school has been evaluated to see how the building has stood up to the harsh Sahelian conditions. The report discusses the history of the centre, its development and modifications and also comments on the training that has taken place over the years in the building. The centre, which was awarded an Aga Khan architectural prize in 1980, was built using improved local construction materials and techniques and successfully resolves the problem of providing large educational spaces in the Sahelian region.
U.I.A. Working Group on Educational and Cultural Spaces. 8th international seminar on "International Information Network on Educational Buildings and Furniture"

The Working Group on Educational and Cultural Spaces of the International Union of Architects (U.I.A.) organizes every two years, with the support of Unesco, an international seminar to discuss basic concepts in the planning, design and use of educational buildings. In 1985, the 7th seminar was held in Sèvres, Paris, to discuss "the wider use of educational spaces". In February 1988 (postponed from 1987), the 8th International seminar was held in Budapest on the topic "International Information Network on Educational Buildings and Furniture". The proceedings of these seminars are published with the assistance of Unesco and are distributed worldwide to U.I.A. W.G. members, N.G.O's, and interested individuals or government services working in this field.

Documentation Centres

The Educational Facilities Units have their own Documentation Centres containing an extensive collection of technical books, publications, reports and research documents covering all aspects of the planning, design and implementation of educational buildings and furniture. A Thesaurus was developed by all the Units, containing more than 2000 key words related to education, educational facilities, construction and physical planning. The documents are catalogued in a computerized database entitled EDFAC facilitating cross reference, retrieval of information and preparation of bibliographies.

Requests for information and documentation should be directed to the Educational Facilities Unit in your region. Their addresses are shown on the back cover.
II. TECHNICAL COOPERATION
WITH MEMBER STATES

Assistance is provided to Member States, at their request, with a view to establishing or strengthening national departments responsible for the design, planning and management of educational buildings and furniture, including buildings able to withstand earthquakes and other natural disasters. Unesco also executes or assists in the identification, preparation and implementation of a great number of extra-budgetary projects (projects financed by banks, other UN agencies, donor countries, etc.) in the field of school construction. During 1986/87 Unesco was providing assistance to 30 on-going projects, representing a capital value of some 22 million US Dollars.

Mozambique

Unesco architects participated in a mission to assist the Government in preparing the Education input for the Emergency Programme which was submitted to the April 1988 U.N. Donors' Conference. The project proposals prepared included the creation of "Primary and Basic Education Centres for displaced populations" to cater for the educational and social needs of both adults and children displaced by the war, living in temporary or permanent accommodation centres. The project includes a primary school component (classrooms) and an adult basic education centre (workshops for agriculture, construction health and nutrition plus a community room). The main objective of these facilities is to provide direct access to education for war-stricken adults and children and, through education, to enable these communities to become self-reliant and to improve their living conditions. One pilot centre is shortly to be implemented in the Cheringoma accommodation centre.

Somalia

"A feasibility study for low-cost educational buildings in the six least developed Arab countries" financed by the Arab Fund for Education and Social Development (AFESD) and the Arab Gulf Fund (AFGUND). This project aims to develop low-cost educational buildings and furniture through training of national specialists, construction and evaluation of prototypes and exchange of experience and information. These prototypes are intended to serve as a model for large-scale construction programmes financed by capital investment donors/agencies.
Nepal

A project preparation mission was undertaken to Nepal in May 1988 to prepare, in close collaboration with the Nepalese Government, the third phase of a project entitled "Expanding the Access of Girls and Women to Education" financed by the Norwegian Government and AGFUND. The objective of this project is to provide access for girls and women to education through the creation of boarding facilities (hostels) for girls in rural areas, who will become primary school teachers, thus attracting more girls to schools in rural areas. The third phase includes the construction and equipping of six new feeder hostels and a substantial maintenance component (training, manuals and equipment) for the hostels built under the project.

El Salvador

Following the earthquake that devastated the country in October 1986 a mission was carried out to San Salvador in June 198 by a consultant architect to assist the authorities in the development of a plan for the relocation of schools damaged by the earthquake.
III. TRAINING OF NATIONAL SPECIALISTS

This is done through the organisation of national, subregional and regional training workshops, including training at experimental building sites. Training is also provided on an individual basis in the regional offices and through study tours. Unesco also produces training materials in the form of manuals and audiovisual aids for self-instruction or group teaching.

Maintenance of educational facilities in Togo

Progressively, greater imbalances occur between the needs for educational facilities and the means to satisfy them. Too often, the exception has become rule, and the rule exception. The lack of adequate facilities has important repercussions on the internal efficiency of education systems and all possibilities have to be considered to improve the balance (reduce needs and improve means).

One first step in this direction consists of the consolidation of investments already made, that is to say: "improve maintenance standards".

This was the subject of a seminar organized in June 1988 by BREDA and the school construction service of the government of Togo.

In short, the 6 recommendations of the Lomé seminar were:

- transfer the built property to the ownership of its users;
- reduce school sizes to the economical minimum and improve acquisition and control of school sites;
- provide sanitation facilities and drinking water;
- programme and execute maintenance by order of priority;
- provide school maintenance manuals and guides.

The seminar also concluded: "why not firmly introduce the notions and activities of construction maintenance and site development (with technology, physical and natural science and practical work ...) in the teaching programmes at schools and in this way transform at least part of the maintenance constraint into a resource".
Typhoon resistant school buildings for Viet Nam

Australia, Fiji, Samoa, Tonga, Sri Lanka, Philippines, Viet Nam, India, Bangladesh and China are Member States of Unesco in the region which have the unfortunate common trait of being struck periodically by typhoons. PROAP has held two regional training courses and one national course (Fiji, March 1985; Philippines, April 1986 and Viet Nam, June 1987) to provide practical advice to architects and engineers on how to design and calculate educational buildings that can survive strong winds and remain intact. If these guidelines are followed, every building should survive a typhoon.

Training Materials

The following 4 volumes, published in English, French and Spanish, are part of a cluster of training materials of 17 volumes on educational planning, administration and facilities designed to be used in training seminars and for self-instruction:

- Norms and standards of Educational Facilities.
- Management and maintenance in the use of educational buildings and equipment.
- Designing secondary schools for comfort.
- Accommodation and space for secondary general schools.
These provide technical support to Member States for the development and construction of prototype multifunctional educational facilities meeting the requirements of both formal and non-formal education, using local materials and unproved construction techniques, including resistance to natural disasters. These pilot projects are designed with a view to being replicated within the same country or adapted to others with similar conditions, and to serve as a basis for large-scale externally financed national construction programmes.

**IV. PILOT PROJECTS**

Realization of an Experimental Training Centre in Bakel, Senegal

In 1980, after years of drought, a project entitled "Living in the Sahel" was created; in the framework of this project an experimental practical training centre (CEFP) was developed. The purpose is to offer a non-formal self-financed training facility for comprehensive rural development. The strategy chosen for its realisation is characterised by the development of local material and human resources.

The domes have been constructed through the placing of small sized sand-cement bricks in successive layers of concentric circles starting on a reinforced ringbeam. The ground plan can be circular, hexagonal, rectangular or square.

Costa Rica - A Rural One-Teacher School

To cater for the needs of small rural communities in Costa Rica a prototype has been developed which can accommodate multigrade teaching in one space at primary level as well as serve the community for social, educational and cultural activities. The basic unit consists of one classroom, linked to outside paved spaces, and using modular furniture which allows for greater flexibility in use. This basic unit can be multiplied according to the needs of the community. One such prototype has been built on an experimental basis using a semi-prefabricated (pre-cut) timber construction system which is easily transportable (truck, horse-back, etc.) and can easily be erected by the community, requiring no sophisticated equipment.
Argentina - A Rural School for Arid Zones

Rural, arid areas have their particular problems, one of which is often the complete lack of infrastructures. To help relieve this situation, Unesco has developed a prototype school in Argentina for these areas that uses locally available materials, and an improved local construction system which can thus be implemented by the communities themselves. The building is also designed to be able to cater for pre-school, primary school and community activities. The construction system used is composed of adobe brick walls; timber, mud and cement roof and the whole structure is reinforced with timber poles to protect the building against earthquake damage.

Bulgaria - Prototype Primary School for Small Towns

This prototype was developed with the aim of designing a school which would cater for formal and non-formal education as well as community and cultural functions in small towns in Bulgaria. Emphasis has been placed on the flexibility of the required spaces and their clusters as well as their links to the community through shared use of spaces. As this school is located in a seismic area, the prototypes has been designed to withstand extensive damage due to earthquakes and the proposed construction system is therefore applicable to areas with similar geological conditions throughout the Balkan Region.
Primary schools in Burma

The Primary School Improvement Programme (PSIP) aims to improve the learning environment of up to a quarter million pupil places in Burma during the period 1987 to 1991. The new school buildings are a co-operative effort. Communities provide labour and funding for construction of building frames, making use of local materials. UNICEF is assisting by providing hard-to-get materials required for clean water supplies, sanitation and water tight roofs. The central government ensures teacher salaries and learning equipment and supplies. PROAP trained 14 Burmese technicians on how to design the schools and how to work with the communities to encourage their participation.

Rural Teachers' Housing in Ethiopia

Accommodation for teachers in rural areas is a great problem in most developing countries, contributing to the shortage and retention of well-qualified teachers in these areas. To help overcome this problem in Ethiopia, Unesco has, during 1988, in cooperation with the Government, developed prototype housing units catering for the needs of teachers of different marital status: single, married, married with children. In order to reduce costs, improved locally available materials have been used, the main components being plastered adobe block walls, eucalyptus joists and stabilized rammed earth floors. Local technicians were given theoretical and practical training in the techniques developed through the construction of one prototype and it is envisaged that the communities will be participating in the further implementation of the teachers' housing programme, through the guidance of the trained technicians. Presently the Government is also considering constructing whole schools using the system developed for this prototype.
EVENTS

Theme: Evaluation of an educational or cultural building in rural or peri-urban areas.

RECENT PUBLICATIONS

Almeida, R.

Arya, A.S.

Vickery, D.S.

We welcome relevant information from readers about recent and forthcoming publications as well as news and events which will go into this news and events section.
For further inquiries please contact:

- Mr. R. ALMEIDA, Chief
  Educational Infrastructures & Facilities Section (EIF)
  UNESCO
  7 Place de Fontenoy
  75700 PARIS
  France
  Tel: 45.68.10.00
  Cable: Unesco Paris
  Telex: 204461 Paris 270602 Paris
  Telefax: 40.65.94.05
  Post Box: B.P. 3.07 Paris
  Sénégal

- Mr. J. DE BOSCH KEMPER, Chief
  Educational Industries & Facilities
  Section (EIF)
  Regional Office for Education in Africa
  (BREDHA)
  12 Avenue Roume
  DAKAR
  Tel: 22.50.82
  Cable: Unesco-Dakar
  Telex: 2175 Unesco SG
  Telefax: 21.89.21
  Post Box: B.P. 3311 Dakar

- Oficina Regional de Educacion para
  América Latina y el Caribe (OREALC)
  Enrique Delpiano 2058
  (Plazo Pedro de Valdivia)
  Casilla 3187
  SANTIAGO DE CHILE
  Chile
  Tel: 223.55.82
  Cable: UNATIONS UNESCO
  Telex: 340258 Unesco CK
  Telefax: 249.18.75
  Post Box: P.O. Box 3187

- Mr. J. BEYNON, Principal Architect
  Educational Facilities Development Services (EFDS)
  Unesco Principal Office for Asia & the Pacific (PROAP)
  920 Sukhumvit Road
  BANGKOK 10500
  Thailand
  Tel: 391.05.77
  Cable: Unesco Bangkok
  Telex: 20591 ROEAP TH
  Telefax: 391.08.66
  Post Box: P.O. Box 1425,
  General Post Office
  Bangkok 10500

- Mr. H. EL. KHAWAD, Chief
  Educational Facilities Unit (EFU)
  Regional Office for Education in the
  Arab States (UNEDBAS)
  Al-Shmaisani,
  Wadi Saqra
  AMMAN
  Jordan
  Tel: 606.659
  Cable: UNEDBAS
  Telex: 24304 Unesco JO
  Telefax: 682.183
  962 (Jordan)
  06 (Amman)
  Post Box: P.O. Box 2270