9 The Australian Science and Mathematics School, Flinders University, South Australia
11 The Lycée Maximilien Perret in France
13 School Works in the United Kingdom: a new approach to local school design
15 Venezuela’s Bolivarian Schools Project
17 Disaster management and educational facilities – FEATURE
22 New directions for tomorrow’s schools: a personal view from New Zealand
The OECD Programme on Educational Building (PEB)

The Programme on Educational Building (PEB) operates within the Organisation for Economic Co-operation and Development (OECD). PEB promotes the international exchange of ideas, information, research and experience in all aspects of educational building. The overriding concerns of the programme are to ensure that the maximum educational benefit is obtained from past and future investment in educational buildings and equipment, and that the building stock is planned and managed in the most efficient way.

Seventeen OECD Member countries and 11 Associate members currently participate in the Programme on Educational Building. PEB’s mandate from the OECD Council to advise and report on educational facilities for students of all ages runs until the end of 2006. A steering committee of representatives from each participating country establishes the annual programme of work and budget.

PEB Members
- Australia
- Austria
- France
- Greece
- Hungary
- Iceland
- Ireland
- Korea
- Mexico

PEB Associate Members
- Albania Education Development Project
- Chile
- CISEM (Research Institute of the Province of Milan and Italian Provinces Union)
- Het Gemeenschapsonderwijs (Belgium)
- Ministerium der Deutschsprachigen Gemeinschaft (Belgium)
- Province of Quebec (Canada)
- Provincia di Rovigo (Italy)
- Regione Emilia-Romagna (Italy)
- Regione Toscana (Italy)
- Service général de garantie des infrastructures scolaires subventionnées (Belgium)
- Tokyo Institute of Technology (Japan)

PEB WELCOMES CHILE

The OECD Programme on Educational Building is pleased to welcome Chile as its latest Associate member. Chile is the second Latin American country after Mexico to join the Programme. With a population of over 15 million, the country measures a total of 757,000 square kilometres and almost 6,500 kilometres of coastline. An article on the development of school architecture in Chile can be found in the February 2002 issue of “PEB Exchange”. Jadille Baza, architect and chief of the Department of Infrastructure Investment at Chile’s Ministry of Education, attended the recent Steering Committee meeting in Guadalajara, Mexico.

SCHOOL OF TOMORROW SEMINAR IN SEPTEMBER

PEB and Ireland’s Department of Education and Science will hold an international seminar to look at some recent attempts to conceive the “school of tomorrow”, on 1–4 September 2002 in Galway, Ireland. The event will concentrate on existing examples of innovative institutions and will attempt to define some of the basic concepts that will affect the future of school buildings. It will take account of the views of teachers and pupils, as well as those of designers and planners.

An exhibition presenting educational institutions featured in the PEB compendium Designs for Learning will take place in conjunction with the seminar. For more information, contact the PEB Secretariat (see page 28).
SCHOOL SECURITY AND TERRORISM MEETING

Following the 11 September 2001 terrorist attacks, public authorities worldwide are learning to adjust to new realities. Government officials from ten countries met in Washington, D.C., on 13-14 February 2002, to discuss strategies for helping schools prepare for and respond to terrorist attacks. Many schools across the United States and around the world have emergency response plans in place that address school violence and natural disasters. Jointly sponsored by the U.S. Department of Education, the U.S. Department of State and PEB, this meeting was designed to discuss how government can help schools extend those plans to effectively deal with incidents of terrorism.

The meeting was an opportunity to:

- understand the potential for terrorism as a school security issue and to evaluate the risks associated with that issue;
- learn how other countries are dealing with the issue of possible terrorist attacks on schools and students;
- identify policies and practices that have worked in the past, as well as those that have not been effective in protecting schools and students from terrorism;
- identify immediate needs for information exchange, research, technology and training among the participating nations;
- establish a network and process for continuing discussion and collaboration.

Judge Eric Andell, senior advisor and counsel to the U.S. Department of Education, chaired the meeting and called it “an exciting and productive opportunity to learn what other countries are doing to address a threat to people of all ages that knows no national boundaries.”

The international group of school safety experts also addressed preventive measures, developing regional response plans, training administrators, teachers, students and parents, and helping students to cope with traumatic events. In addition, representatives from New York City and the New York City Board of Education presented an overview of their actions and experiences responding to the terrorist attacks on the World Trade Centre. A report is in preparation.

SEMINAR ON EDUCATIONAL INFRASTRUCTURE

Mexico hosted a successful seminar around the three key themes of the PEB programme of work: education and training in the knowledge society; monitoring and evaluation of public policies for educational infrastructure; and promoting and disseminating good practice in planning and management. In the context of decentralisation of responsibility for educational buildings from federal to state level, the seminar brought together participants from almost all of the 32 Mexican states, a number of universities, 14 Latin American and Caribbean countries and 13 OECD countries participating in PEB. It took place 25-27 February 2002 in Guadalajara, Jalisco. PEB will publish the findings, and a summary of a study on decentralisation that UNESCO will undertake jointly with Mexican authorities will appear in a future issue of PEB Exchange. PEB is grateful to the Mexican Ministry of Education (SEP), the Federal Committee on Educational Facilities (CAPFCE) and the State Government of Jalisco who helped plan and organise the meeting.

PEB STEERING COMMITTEE

The Programme extends a heartfelt “merci” to François Louis of France who led its Steering Committee as president from 1997 through 2001, and welcomes Mukund Patel of the United Kingdom as its new president. France’s new representative on the Steering Committee will be Gérard Pourchet, IGEN. Mukund Patel is head of the Schools Building and Design Unit at the U.K. Department for Education and Skills.

INITIAL RESULTS OF PISA SURVEY

The OECD Programme for International Student Assessment (PISA) has published the results of its initial survey aiming to monitor the outcomes of education systems in terms of student achievement. The Programme conducted a survey in 32 countries as part of its mission to analyse 15-year-old students’ performance in reading, mathematical and scientific literacy. Below are excerpts from Knowledge and Skills for Life: First Results from PISA 2000 that relate to physical infrastructure and educational resources, and public and private stakeholders.

“Ensuring the availability of a suitable physical infrastructure and an adequate supply of educational resources may not guarantee high performance, but the absence
of such an environment will possibly affect learning. Buildings in good condition and adequate amounts of teaching space all contribute to a physical environment that is conducive to learning. Much the same can be said for schools with adequate educational resources, such as computers, library and teaching materials, including textbooks, and multimedia resources for learning. … Educational resources appear to be more closely related to performance than physical infrastructure.”

“School education is mainly a public enterprise. In two-thirds of OECD countries, the private share of the funds invested in primary and secondary education is below 10%... On average across the 24 OECD countries with available data, 6% of 15-year-old students are enrolled in schools that are privately managed and predominantly privately financed... On average across the 17 countries included in this comparison, students in independent private schools statistically significantly outperform students in reading literacy in public schools in ten countries.”

A mine of information on PISA is available at www.pisa.oecd.org.

**FINANCING EDUCATIONAL FACILITIES**

The PEB publication *Decentralisation and the Financing of Educational Facilities* is now available. PEB and the Spanish Ministry of Education organised an international seminar in Toledo, Spain, in 2000, devoted to the procedures for financing educational facilities. The participants came from a number of OECD countries and for the most part play an active role in the provision and management of educational facilities.

The report examines how investment in educational facilities raises questions of financing which can lead to privatisation and to increased decentralisation in management and planning. The participating countries expressed the need to develop strategies for research and evaluation in order to determine new ways of financing educational equipment.

The publication is based on various case studies and a presentation by an expert from the European Investment Bank. In Mexico, financing school infrastructure is defined in an environment of federalism. In Quebec, pre-school as well as primary and secondary education regroup the public and private sectors. In France, financing educational building was transferred to the regional and local authorities giving them increased responsibility. Finally, the European Investment Bank presents its experience in the areas of financing and evaluation of educational infrastructure.

Systems for the financing of expenditure on educational facilities vary according to the situation, but the essential issues are the same in all countries. Policy-makers need to be able to identify accurately where expenditure is required, to put in place efficient systems of resource allocation and to evaluate the use made of the money invested.

The main questions which the report addresses are the following:

- How are funds in the field of educational facilities provided? Which institutions, organisations, etc., public or private, are responsible for providing funds necessary for the building, renovation and maintenance of educational buildings? What are the implications for the planning and design of the buildings?

- How are the funds allocated? What are the various criteria used in the different OECD countries?

- At what levels – local, regional, national – are the various steps of the allocation process situated?

- How can investments in educational buildings be evaluated? How can indicators be provided for an efficient evaluation?

- What are the practical implications of the funding system for planning and management of educational facilities?

The publication can be ordered from OECD distributors (see page 27).
A symposium on “Architecture and Education”, organised on the initiative of the French Minister for National Education, was held at the Paris-Sorbonne University last 31 January.

In opening this symposium, Education Minister Jack Lang expressed the wish that participants address the relationships between school design, elected officials and those responsible for education. This event, which was accompanied by an exhibition and the launching of an Internet site, sought to answer the question of how the curriculum, which is developed by the central government and implemented by staff under its supervision, can be effectively taught in buildings that belong to regional and local governments.

Participants discussed new educational approaches and how to adapt building design to incorporate them into the day-to-day functioning of schools: the widespread use of new technologies, the policy of incorporating cultural activities into basic education and promoting interdisciplinarity, autonomy and free access, etc. How can school premises and timetables be brought into line with these new trends?

The Internet site www.architecture-pedagogie.cndp.fr will make it possible to continue the dialogue on architecture and education initiated at the Sorbonne and possibly open it up to an international audience.

For further information, contact Nadine Prost, Chargée de mission to the OECD, Ministère de l’Education Nationale, Paris, tel. 33 (0)1 55 55 75 31, nadine.prost@education.gouv.fr.

South Australia is recognised for its high quality food and wine, and for its hospitality. The Regency Institute of TAFE is the major provider of specialist hotel management education to Degree level, and in March 2002 new facilities for the Regency International Centre for Hospitality, Leisure and Food Studies were opened. The Centre which cost AUD 40 million is the largest in the southern hemisphere, with a total area of 14 500 square metres under one roof. It houses the most up-to-date training facilities and equipment and highly trained staff. The 240 staff provide accredited courses from certificate to degree level to 6 000 students who come from 50 countries to undertake
training. Upon graduating, these students are much sought after for employment in the hospitality industry. The new Centre offers an extensive range of facilities including a 120-seat restaurant, three function centres, four bars equipped with state-of-the-art technology, a private dining room, a retail and coffee shop, eight fully equipped kitchens, four demonstration kitchens, two large bakeries, a butchery and smallgoods production facility, a wine cellar and two purpose-built wine appreciation rooms, a large food processing hall and a leading-edge applied food industry training centre including laboratories, a sensory evaluation area and a product development kitchen.

In addition to the formal courses, an extensive programme of short courses are offered to the hospitality industry and the community. These courses include The Kids Kitchen, a series of cooking programmes for young people aged four to 18 years; the Philosopher's Stove, a series of cooking classes, demonstrations, seminars and master classes for the general public; and a programme of short courses for hotels, restaurants and clubs. This range of activities will ensure that the facilities are operational for seven days a week for most of the year.

For further information, contact Jenny McCormick, fax: 61 8 348 4302, e-mail: JennyMcCormick@regency.tafe.sa.edu.au

ENERGY EFFICIENT SCHOOLS IN IRELAND

In recent months the Department of Education and Science has signed contracts for two schools which can be considered landmark developments in the Irish educational infrastructure area, due to their emphasis on environmental design principles. The schools in question are the new eight-classroom Gaelscoil Eiscir Riada (Gaelscoil means Irish speaking) in Tullamore, County Offaly, at a cost of some EUR 3.3 million, and the second at Raheen, County Laois, a three-classroom primary school costing EUR 2.1 million. Both schools are already well underway on site, and completion is expected by the end of this year.

The aims of these buildings are:

• to demonstrate low-energy design in the Irish climate;

• to provide a research project that allows the performance of a low-energy school to be analysed whilst providing design information for further low-energy projects;

• to produce a building that uses considerably less energy than a traditional school and to take into account the environmental impact of its building materials.

The building structure has been designed with the following low-energy features:

• passive solar architecture;

• improved insulation levels;

• improved detailing which assists in reducing heat loss at critical junctions;

• attention to reducing the unwanted ventilation that causes heat to be carried out of the building (of particular concern at night when outside temperatures are low);

• lightweight structure to reduce heat-up periods (timber framed structures);

• quality natural lighting and ventilation;

• the use of materials whose production involves minimum impact on the environment.

In addition to the fabric design, a building management monitoring system will be installed to gather information on the building performance and to assist the occupants in adjusting controls to ensure minimum energy wasting. Other service items directly relate to the low energy performance of the building are:

• a heat pump with ground heat collector;

• underfloor heating;

• individual room controls;

• rain-water recovery system;

• high frequency lighting;

• advanced lighting controls.

The schemes are but part of the government’s commitment to provision of infrastructure at primary level, estimated at EUR 153.6 million in 2002.

For further information, contact:
Quebec invests in the renovation of its schools

School boards in Quebec will be receiving CAD 62 million to carry out repair work on their school buildings, or to bring them up to government standards. This sum, which is additional to their budgetary appropriations, should allow the 72 school boards to improve their buildings by undertaking renovation which is considered urgent.

Every school board will receive an allocation based on the number and average age of its buildings. Each board is asked to submit a list of the projects that it wishes to carry out using this funding. The projects must focus on buildings that are more than 15 years old and must only involve repair work designed to bring buildings into line with government standards, or which targets the structure of and the different systems in place in the building.

The school boards will themselves have to contribute 30% towards the total cost of their projects.

“This investment will allow young people all over Quebec to enjoy the daily benefits of a better quality of life at school, starting from next autumn. In this sense, it can only further their success in school”, emphasised the Minister of State for Education and Employment, Sylvain Simard. He expects the school boards to begin their repair work at the end of the current academic year.

Analysis of the interviews conducted and observations made in four schools gives the following results:

• The new school premises do in fact allow education to progress in cycles, as long as the premises can be used in a manner sufficiently flexible to accommodate changes in individuals’ circumstances. If not, individuals are forced to use these areas in an abnormal manner, accentuating attitudes which are the opposite of those sought after and undermining the original goal of the project. One of the school head’s tasks is to manage the friction between the initial vision of the project and the reality.

• The input of the education team in designing the school premises influences how the latter are occupied. Occupying them in a manner which deviates from that planned stems from changes in individuals’ circumstances, but also from a lack of communication about the real objectives of the project between users, managers and architects.

• The way the premises are occupied influences the way teachers negotiate the organisation of their work amongst themselves, but not necessarily in the manner expected.

For more detailed information, contact Françoise Reubrecht, tel: 32 84 36 60 83, e-mail: reubrecht.fr@swing.be

Research into the occupation of school premises by individuals in Belgium

How does the occupation of school premises, organised for the purpose of teaching in cycles at primary level, depend on the input of the education team? This is the subject of a study carried out in 2001 by a Belgian primary school teacher. She focused her research on the cycle corresponding to 5- to 8-year-olds, in order to maintain continuity over the crucial transition period from nursery to primary school.

A March 1995 decree resulted in the 2000-2005 plan for a “Successful School” at primary education level in Belgium, which largely assumes the continuity of learning. This continuity is to be achieved by organising the different learning cycles to form a learning continuum for pupils from 2½ to 14 years old, which will mean making changes in terms of time and space management.

The Department for Education and Skills in the United Kingdom has recently published a building bulletin on “Schools for the Future”. The document, written by the Department’s Schools Building and Design Unit (SBDU), is aimed at designers, teachers and those responsible for preparing design briefs for school buildings. The steering group that was set up to advise on the document included local authority and private sector architects, teachers and educational experts.

The aim of the document is not to propose a standard blueprint for “schools for the future” but to highlight
some of the design issues that should be considered to ensure that a school meets the needs of teachers, pupils and the community for now and the future and that the building is of excellent design quality. It is an inspirational rather than a technical guide, well illustrated by case studies.

The guide is timely as there have been a number of educational developments in recent years running in parallel with government initiatives and a large increase in capital funding. Key issues include:

• increased use of information and communications technology and a more flexible way of learning;
• “opening up” school buildings to a range of users;
• including as many children as possible with special educational needs in “mainstream” schools;
• improving the design quality of all public buildings.

The document is divided into three parts. Part 1 looks at the key issues likely to influence the design of school buildings today. Part 2 discusses the key aspects of school design in relation to types of spaces and environment. Part 3 looks at how different stages of the building process affect the final building design. Some of the key design characteristics recommended in the bulletin are:

• flexibility to allow for a varying range of activities and differing group sizes of users;
• blurring of the boundary between learning and social spaces;
• building designed to allow easy access to the wider community;
• daylight and natural ventilation used imaginatively to create an excellent learning environment;
• exciting use of spaces, form, materials and colour to create beautiful buildings;
• energy conservation as the keystone for school building design.

“Building Bulletin 95: Schools for the Future”, priced GBP 25, is available from the following address and Web site (where it can be viewed):

The Stationery Office
PO Box 29, Norwich NR3 1GN, United Kingdom
Web site: www.clicktso.com

The SBDU Web site at www.teachernet.gov.uk/sbschoolsforthefuture includes examples of new schools and exemplary projects.

For further information on the project, e-mail Lucy Watson at: Lucy.Watson@dtes.gsi.gov.uk

Whitely Primary School, Fareham, Hampshire
In the design of this 630-place primary school, consideration was given to function, sustainability and visual enjoyment.
PROJECTS

THE AUSTRALIAN SCIENCE AND MATHEMATICS SCHOOL, FLINDERS UNIVERSITY, SOUTH AUSTRALIA

Introduction

The South Australian Department of Education, Training and Employment, in association with Flinders University, are collaborating in the design, construction and development of a senior secondary high school which will specialise in the teaching of mathematics and science and focus on innovative pedagogies.

The Australian Science and Mathematics School (ASMS) will accommodate 450 students, with up to 150 from overseas, in years 10, 11 and 12 and will be open from 8.00 a.m. to 8.00 p.m. on most days of the year including school holidays. In conjunction with the Science Faculty of Flinders University, the school will offer adult learning approaches for these final three years of schooling at the pre-tertiary level and will collaborate in the development of curriculums based on the “new sciences” such as nano-technology.

The school is expected to provide leadership to the State of South Australia as well as to the nation in re-energising the teaching of maths and science. The school’s director, Ron Lake, describes the ASMS as being “designed to prepare students to shape our world, our future, our global community and our environment through the great changes of science and technology now moving to centre stage in the new century.” The development of staff in the existing schools throughout the state and across Australia will occur through teachers visiting the complex to experience new approaches to pedagogy or through the outreach and online programmes developed by the school.

Over the three years as the students advance through the school, they will increasingly encounter its adult, self-directed, constructivist, problem-based and independent learning approaches, and it is hoped that upon graduation they will be eager to continue with maths and science and be sufficiently proficient to perform at high levels in tertiary study or in the workforce.

The project

The joint venture partners believe that no school such as this one exists. Their vision is to completely rethink the schooling, educational, teaching and learning processes such that the facility will not even look like a school.

The proposed new building, adjacent and connected to the faculties of education and science at Flinders University, will facilitate teaching and learning of mathematics and science in a research environment where teachers will engage in staff development, where research will be carried out into new technology-enhanced pedagogies and where science faculty staff will foster in students a willingness to pursue learning and careers in science and mathematics.

The facility briefing process included extensive international research into best practices with study visits to eight of the leading science and mathematics schools in Europe and the United States. Four working parties to aid the briefing process were established, including staff development, facilities development, curriculum development and information technology strategy.

The environmental response

The project manager for the ASMS, Peter Sachs, a specialist in technology-enhanced teaching and learning, notes that “the ASMS building and environs are designed to specifically use space and place as a learning tool. The building has a range of environmental features
such as scientifically advanced building materials and structures, a mixed mode of air-conditioning which automatically responds to both internal and external environments in transferring heat loads throughout the building, energy efficient lighting systems, environmentally friendly and efficient materials in the structure of the building, water reuse facilities and passive measures such as building orientation for local climatic conditions. The building management system of the ASMS will be connected to the school computer network so students can measure the performance of the building.

The school grounds and gardens, or “outdoor classrooms”, are designed to illustrate Australian native environmental conditions, and can be accessed through “break out” areas from the learning commons offering opportunities for students to monitor flora and fauna activities.

**Learning commons, learning studios and other facilities**

A key feature of the school is the break away from the traditional concepts of classrooms and laboratories. These have been replaced by such concepts as “learning commons” and “learning studios”.

The spaces are designed to be student centred, rather than teacher centred, and will foster collaborative syndicate and project-based learning. Each student will have his or her own “home-base” work station located in one of the learning commons. Students may flexibly organise their home-bases to meet social or study group needs. Students will move around the school, the university campus and the local community, spending significant amounts of time in each, but will always be able to identify with their home-base in the school. Eight specialist learning studios cater for the eight learning areas in the South Australian Curriculum, Standards and Accountability Framework; the studios will take a group of students working on project-based activities rather than the traditional class-based cohort in laboratories. Special furniture has been designed to meet the flexible nature of these spaces.

Students will be able to work individually, in small groups or in class groups, or will be able to meet as a whole-year or complete school group in a range of purpose-designed facilities ranging from their home-base to lecture theatres and laboratories within the university. The school design deliberately incorporates large central common spaces for circulation, break out areas from learning commons and studios for formal and informal learning, displays, exhibitions, assemblies and conferences.

In addition, there are seminar rooms, meeting rooms, staff preparation rooms, student and staff social areas, and central common spaces. Zones are allocated for visiting teachers to collaborate and observe the school’s innovative approaches to science and maths teaching, learning and research. Academic staff from the university faculties of science and education will also collaborate in these staff development exercises.

**A day in the life of ASMS students**

Louise Mather, curriculum project officer for the ASMS, has described how students might spend the day at the school. A typical day might start with a literature forum with students from local high schools. Then, with students from more distant high schools, the ASMS students might join a video conference class on economics. The students might then send via Internet updated information on the experiment they are running to volcanologists working on a live volcano in Hawaii. They might participate in a working lunch with a visiting archaeologist from the South Australian Museum. They might work with a local business to develop and program a microchip for a robotic drama production or join the mobile phone radiation research group at Flinders University Science Labs. Some might
leave the ASMS to attend their part-time role as explainers at the Investigator Science Centre for a year 5 class on forces. On the weekend students might access the online archive lecture series on biotechnology held at Flinders University during the week.

Achieving the vision

The school will open in January 2003. Preparation for initial staff appointments is underway, the curriculum is being developed and staff development programmes are being planned. Teaching in a student-centred environment in a building with no traditional classrooms or laboratories will be a challenge, and staff development is seen as a critical part of the success of the school. The staff will be trained in how to use the building as a “learning tool”, in much the same way as they are already trained in the use of information and communications technology. Staff will be expected to contribute to the ongoing professional development charter of the school.

Further information about the school is available from:
Kenn Fisher, Partner, Educational Planning and Design, Woods Bagot, e-mail: kenn.fisher@woodsbagot.com.au
Ron Lake, ASMS Director, e-mail: lake.ron@saugov.sa.gov.au
Peter Sachs, ASMS Project Director, e-mail: sachs.peter@saugov.sa.gov.au
ASMS Web site: www.asms.sa.edu.au

THE LYCÉE MAXIMILIEN PERRET IN FRANCE

The new premises of the Lycée Maximilien Perret, an upper secondary and continuing education institution, meets many – but, as experience has shown, not all – of its users’ needs. Why was it necessary to relocate the lycée in the first place? Which aspects of the new buildings effectively meet users’ needs, and which facilities have not lived up to expectations? This article will examine these questions in the spirit of post-occupancy evaluation.

The Maximilien Perret school, familiarly known as “Max’P”, combines programmes of initial education within the secondary school system, alternating in-school/enterprise-based training and continuing education for adults (Groupement d’Établissements de Formations à l’Énergie, G.E.F.En, providing training in energy-related fields). The lycée provides technical training in jobs ranging from skilled worker to engineer, with specialisation in air-conditioning and sanitation, environmental protection, building management, etc.

The lycée was originally created as a vocational training school in 1887 to meet the need for skilled workers in plumbing and roofing, and later evolved in response to industrial needs and institutional changes. The lycée had outgrown the old house in Vincennes, a town on the outskirts of Paris, where it had been located since 1953: outbuildings had been transformed into classrooms, courtyards were occupied by prefabricated buildings and basements were filled with workshops and technical facilities.

New premises were built in the town of Alfortville, a few kilometres outside Paris, and were inaugurated in May 2000. The total cost was EUR 55 million, of which EUR 9 million were for technical training facilities (in the fields of sanitation and heating, refrigeration, air conditioning, etc.). Nearly all of the staff, strongly attached to the Vincennes site, were opposed to building the new school. The educational programme was modified at the time of the move with the introduction of general streams. However, the staff of “Max’P” were able to participate in the design of the school and the monitoring of its construction. The construction of the building was dissociated from the new pedagogical infrastructure – which led to difficulties – since the administration wanted partner enterprises (which were often owned by former pupils) to participate in building the school; according to former principal Claude Gyral, these graduates of the school “really put their heart into building a fine project”.

The lycée moved to its new premises in 1997, the year of its 110th anniversary. The architect, Massimiliano Fuksas, described the new site as follows: “This architecture is
meant to be open to the town and its space, which is prolonged by and connected with the space of the buildings. This is achieved by the breaks in the volumes of the buildings and the transparent, ceiling-high glass walls on portions of the ground floor. Thus, the variety and complexity of these spaces creates a multifaceted interaction between the lycée building and the town, despite the small size of the site on which the school is built. The lack of public and recreation areas on the ground floor is offset by the spacious areas of the first floor, which are also open to the town and its space.”

Some years on, users can now assess the premises, and the current principal, Bernard Plasse, was willing to share his views, both positive and negative, on this subject. Users appreciate the fact that there are separate, dedicated buildings for the different schools: one for the lycée, another for the apprenticeship training centre and a third for the G.E.F.En. The buildings are well sound-proofed, which is particularly appreciated by teachers. The school is brightly lit, thanks to its many large windows, even in workshops.

Other aspects are less positive due for example to spatial or budgetary restraints and not necessarily to the architectural design. There is no recreation courtyard of sufficiently large size and the buildings are constructed on too small a site and surrounded by a parking area that is sometimes too small to accommodate the vehicles of staff and visitors. There are three stories of classrooms located above the technical training facilities, which poses safety problems. It is difficult for pupils to circulate; since they do not have an area where they can relax, they tend to linger in the school’s complex network of corridors. Some fittings are not of high enough quality to withstand pupils’ use, such as the most frequently used doors, which are already damaged.

 Lastly, common areas were not well thought out, and there is no area where pupils can congregate and socialise when they are not in class.

The Lycée Maximilien Perret has a surface area of 27 000 m$, 5 000 m$ of which consist of workshops. There are 30 rooms equipped for specialised training, 20 workshops of 250 m$ each in which pupils work in real-life situations using state-of-the-art equipment,
SCHOOL WORKS IN THE UNITED KINGDOM: A NEW APPROACH TO LOCAL SCHOOL DESIGN

School Works, a not-for-profit company in the United Kingdom, has developed a secondary school design process which enables communities to create unique school buildings that cater for their own particular needs. At the heart of this process is the basic principle that it is the people who work and learn in a school building every day who really understand its ethos, its needs, its strengths and its weaknesses, and that truly involving the school community will generate an innate sense of ownership and respect for the buildings. School Works has put its participatory process into practice at an inner-city school in London.

Traditionally in the United Kingdom, local education authorities have acted as clients on school building projects. Head teachers and heads of department are usually consulted on pre-conceived design ideas, and pupils are only occasionally given a chance to see designs before they are built. This lack of engagement with school communities means that schools are designed according to the priorities of individuals who may never use the buildings once they are constructed.

In addition, many schools currently under construction show little evidence of fresh thinking about the way learning environments are designed and used, and little emphasis on the need for quality design, despite government commitment to improving the fabric of school buildings.¹

What is School Works?

School Works is an independent organisation that is funded by the Department for Education and Skills to explore new approaches to learning developments in education and make recommendations for new ways of designing and building school environments. The company believes that the design of school buildings has both a direct and an indirect impact on learning. School Works argues that as the function of schools is rapidly changing, it is vitally important that design keeps up. It is

¹ The current British Government has pledged to build or refurbish more than 600 schools over the next three years and has set aside the huge sum of GBP 8.5 billion (EUR 13.8 billion) to improve education building stock.
and these linkages were often in the detail. For example, the process highlighted the fact that without personal storage spaces, students were not bringing the required equipment to school, in order to avoid carrying it with them all day. This had an obvious impact on their ability to participate fully in lessons, and the process recommended the provision of lockers.

Secondly, there was a clear link between design, behaviour and education – for example the long, narrow corridors in the school were encouraging unruly behaviour through their design. Students were arriving at lessons late and agitated after their trips down these overcrowded spaces which were impossible to patrol. As a solution, the School Works process recommended removing the walls that define the corridors and opening out the central courtyard to create a spacious circulation area, providing passive surveillance to promote good behaviour and therefore better concentration in lessons.

Other recommendations ranged from introducing swipe-card security access to educational resources, to providing soft toilet paper. Whilst not all of the ideas put forward are revolutionary, they were inspired by the priorities of those that use the building.

The influence of the School Works process also went deeper than the fabric of the building. By generating a dialogue with the young people who attend the school, the project aimed to create designs that would be easy to maintain, not just because they were made of high-durability materials, but because the students knew that the school environment was their own and were therefore more inclined to take care of it. As well as generating respect for the building, the School Works process developed a new sense of belonging in the school and developed the relationship between the school and its local community. The students were inspired by the process and delighted to have been asked to participate in it. As a year 10 student said: “What we are doing is too beautiful.”

Construction at the school commenced this year, and the outcomes of the project will be monitored over a five-year period.

School Works publications

School Works has produced a step-by-step guide to involving school communities in the creation of unique new school designs: the School Works Tool Kit. It is packed with inspiring images and creative workshop ideas that will be as useful for schools that are rethinking
their storage systems as for those that are embarking on extensive refurbishment or new build projects.

School Works has also produced a book, sponsored by Ecophon, outlining policy recommendations arising from the project so far: Learning Buildings.

Further information on the project and copies of both books are available from School Works Ltd, tel.: 44 20 7401 5333, www.school-works.org

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VENEZUELA’S
BOLIVARIAN SCHOOLS PROJECT

According to Article 102 of the new Constitution of the Bolivarian Republic of Venezuela, “Education is a human right and a fundamental social duty; it is democratic, free and compulsory. The state shall assume responsibility for education as a function of maximum importance which it cannot decline to perform, at all levels and in all forms.”

The Bolivarian Schools Project is intended to respond to problems such as dropping out, educational exclusion, repetition, malnutrition, and loss of local, regional and national identity, and to the search for citizens interested in economic and social transformation. The Bolivarian Schools Project sets four guiding principles for Venezuelan schools:

- promote social transformation and strengthen national identity and democratic participation;
- provide integral educational for social justice;
- contribute to the campaign against educational exclusion;
- participate in community activities.

To put these principles into practice, the government has defined the following means:

- a full school day;
- integrated school meal and health services;
- refurbishment of existing school buildings and construction of new ones;
- appropriate and adequate funding;
- curricular reorganisation within a system of life-long education;
- development of school management techniques;
- integration into the community;
- development of research, evaluation and supervision.

The evolution of school building in Venezuela

The four principles above are guiding the current phase in the evolution of school building in Venezuela, which has reflected official education policy over the course of time.
The first phase began in 1870 with the enactment of free and compulsory public education on the unitary school principle, with one teacher per school. During the period from 1899 to 1908, the grade school concept was introduced, with several classrooms and teachers being grouped together in the same building. Rather than being the rule, this arrangement was the exception up to the fall of the dictatorship in 1935.

In the second phase, lasting from 1936 to 1948, years in which the country was opened up to democracy, schools were designed and built to take into account the concepts of space, function, educational level and matriculation. These schools, designed by important architects of the period, reflected the transformation of the educational system and were instrumental in improving students’ mental and physical development.

The democratic period returned in 1958, together with the idea of mass education. Economical building systems that made rational use of easily transportable structural elements were developed to bring education to the remotest parts of the country.

In 1976, during the fourth phase, the Foundation for Educational Buildings and Grants (Fundación de Edificaciones y Dotaciones Educativas) or “FEDE” was established to take care of school building requirements. Initially, in order to eliminate the shortage of classroom space, FEDE established a policy of mass school construction under an experimental pilot programme, using prefabricated buildings in order to speed up school production.

The schools built during these phases constitute the main network of state buildings. However, a policy of accelerated decentralisation led to school buildings being built, extended and refurbished to inferior standards. The decentralisation policy was based on financial considerations and lacked a proper process of delegation of authority and transfer of expertise. This was combined with a lack of suitable maintenance arrangements and resulted in the aesthetic, environmental and functional deterioration of the physical plant installed.

Today’s reform

The Ministry of Education, Culture and Sport, through FEDE, is now reforming the school system using the Bolivarian Schools Project. FEDE is implementing a “Strategy for an Efficient Education Infrastructure”, which establishes a process to cover the various phases of school building provision, namely: planning, programming, design, construction and maintenance.

This strategy revolves around the concept of risk management. Although it is not always possible to avoid disasters, lives can be saved and damage limited by taking preventive and impact-reducing action. This approach is indispensable in formulating and carrying out plans, programmes and projects for investment in the education sector, since reducing the vulnerability of the educational infrastructure is fundamental for achieving sustainable national development.

Accordingly, FEDE is developing a new policy based on sharing responsibility between the government, schools and communities for maintenance, risk prevention, mitigation and preparedness in the face of disaster situations. The objective is to restore optimum operating conditions for school buildings and ensure their capacity to function through a process of co-management by national, regional and local government and an education community authorised to participate in the processes.

FEDE is also planning and implementing such measures as:

• Developing an educational infrastructure information system in association with a geographical information system, in order to keep abreast of the latest situation, identify what needs to be changed and what needs to be done to change it.
• Reviewing and updating space requirements to establish, quantitatively and qualitatively, the amount and type of space required.
• Reviewing and updating classroom standards and specifications, which include planning, maintenance and risk management processes.
• Designing new model functional and organisational units.
• Building new classrooms and upgrading existing ones.
• Sharing responsibility for the maintenance of the educational infrastructure.

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DISASTER MANAGEMENT AND EDUCATIONAL FACILITIES

Some 80 earthquake specialists, architects, engineers and civil servants from a dozen countries met to discuss the different relationships which may occur between educational facilities and natural disasters; the emphasis was on the implications and effects of earthquakes and the appropriate design and use of educational buildings, both in their role as protection for their everyday users and in their role as emergency shelter for potential earthquake survivors. This international seminar, which took place in November 2001 near Thessaloniki, Greece, was organised by PEB, the Greek Ministry of Education and Religious Affairs and the School Building Organisation S.A., Greece. The following article by Grace Kenny summarises the findings on the topics of educational buildings; partnerships; training; standards, regulations and procedures; finance and legislation; and research and support. PEB will publish the case studies presented at the seminar along with a more extensive summary and references.

Educational buildings

Apart from dwellings, the most common type of building in any settlement is that used for the teaching and training of young people, namely nurseries, schools, colleges and universities. These buildings, by their very function, are evenly distributed across their catchment areas, and are used by the vast majority of populations at some time in their lives. In some cultures, schools are seen at the hub of local community life. The implication of this is that they are ideally placed as potential refuges in the case of a disaster; at the same time, however, it also means that if a disaster occurs, educational buildings and facilities are bound to be affected, and must therefore be the subject of particularly stringent regulations concerning design, construction and emergency procedures.

The occupants of educational buildings, being young and vulnerable, hold a special place in the public’s consideration; any harm to them, and above all, any harm which is preventable, is especially dreadful, and public authorities are only too aware of this.

The non-human contents of educational establishments can also be valuable. Many older universities house collections of documents and objects which represent national treasures. Research institutions can also hold runs of historical data of a sort that is not possible to back up electronically. At the same time, particular research institutes may handle materials which are extremely dangerous, and the normal health and safety procedures which apply need to be reinforced in disaster-prone areas.

Partnerships

One concern was shared by all at the seminar – the protection and security of people and buildings – and, apart from obvious geographical variations, cultural and national differences did not make themselves felt. One underlying agreement was on the usefulness of partnerships, at all levels, whether regarding design or locally, nationally and internationally.

At the level of design, a proper integration of the roles of the architect, engineer and client is necessary for the adequate strengthening of buildings. The engineer’s part is particularly vital in the context of earthquake protection, while the architect should, among other things, consider providing simple buildings where potential subsequent damage is easy to detect and rectify. Inspection should be made as easy as possible in the event of a disaster. “Disguised” elements and, in Greece, half columns, were singled out as potential areas for hidden failure. Equally, the design and fitting of non-structural elements need to be considered and co-ordinated. A lot of injury in earthquakes and hurricanes is caused by falling light fittings and furniture and by flying roofs.

The location of buildings and facilities is also important, and meteorologists and environmental engineers can help to site buildings in optimum positions.

It may also be appropriate to bring in social scientists and disaster managers at some stages of the planning and design process in order to make sure that potential lifelines (water, heating, etc.) are adequate if the buildings are to be used as shelters.

While educational buildings are in use, there needs to be co-operation among their staff and pupils, together with parents and the surrounding community, and local fire, police, environmental and health services, particularly if the buildings are to be used as refuges after a disastrous event. Even if these co-operative arrangements necessarily operate at the local level, they may need to be organised and promoted nationally.
In the field of public buildings, there may be a gap between central design and funding, and local maintenance; this gap can be crucial when it comes to keeping buildings safe and secure, and some sort of agreed national intervention may be necessary. In the event of a disaster, there is evidence that the presence of nationally accredited building inspectors, brought in as quickly as possible, is reassuring to the victims.

Because expertise is scarce, and to safeguard and support particularly vulnerable countries, international co-operation is essential, at both the prevention and the recovery stages. Among the networks and organisations working at this level are the United Nations International Strategy for Disaster Reduction, the Disaster Management Planning Programme of the United Nations Centre for Regional Development and RADIUS (Risk Assessment Tools for Diagnosis of Urban Areas against Seismic Disasters) which is being promoted by the United Nations Inter-Agency Secretariat of the International Strategy for Disaster Reduction.

The following are views of the South Iceland College in Selfoss, Iceland, which has around 800 students aged 16 to 20, specialising in information and communications technology. The building was completed in 1994 and was designed by Dr. M. Jonsson who applied earthquake standards exceeding the current code requirements. Located in the South Iceland seismic zone, the college was severely tested by the strong earthquakes of June 2000. The demand on the strength of the building during this event reached 50% g (where g is the acceleration of gravity), more than twice the code requirement. The building was only 14 km from the causative fault, but it sustained no structural damage.
Training

A critical element of all such initiatives and programmes is training, both for building designers and for building users. Earthquake-prone countries must put greater emphasis than others on the appropriate training of architects and engineers, and specialists may be needed in the field of assessing and retrofitting existing buildings.

If good action plans are in place, they can be put into effect very quickly. In Greece on 7 September 1999, the Attica basin was struck by an earthquake measuring 5.9 on the Richter scale; during the night of 7-8 September an operational programme was elaborated, and on 8 September, teams of civil engineers of the national School Building Organisation were visiting, inspecting and checking 634 buildings in the 20 municipalities of the epicentral area. Schools were able to reopen on 20 September.

The training for school users needs to be specific to the type of danger to be expected; this may seem obvious, but there have been cases where children have been trained in evacuation procedures when remaining in the building might have been safer (in the case of external chemical leakage for example).

Training must be accepted as normal, and in a sense routine; this both lessens the feeling of alarm and improves levels of achievement. In Mexico, earthquake drills are carried out every two months. In France, emergency plans now have to be prepared and submitted to governors every year; this has been imposed on schools by the national government, a fact which underlines both the attention which is now being given to disaster management in schools and the role of authoritative bodies in ensuring that the problem is seriously addressed.

The acceptance of this type of preparedness training shifts the emphasis of programmes from reaction to prevention.

Standards, regulations and procedures

All programmes of prevention and strengthening begin with some form of risk assessment; this must start with a visual inspection of buildings, and it will then be accompanied by standardised but appropriate formulae to cover such elements as age, type of construction, location and environmental conditions. Programmes such as RADIUS produce software to help in this process.

There may well be a gap between the establishment of appropriate standards and their proper implementation
“on the ground”. Any set of building codes must be backed up by a rigorous policing system, capable of imposing penalties.

There may also be tension between standards which have been established by national bodies, to cover all types of buildings and eventualities, and the conditions which may be found locally. A particular problem may be that national school safety standards may not be able to take local geographic conditions into account, and they may not adequately consider the snow-ball effect of several weather conditions and multiple hazards coming into play at the same time (e.g. wind and rain).

Standards need constant revision as technologies change, and indeed as conditions change (e.g. increasing urbanisation, climate change). In Greece for instance, the building codes relevant to earthquakes have been revised in 1959, 1985, 1995 and 2000.

Finance and legislation

The range of sources for carrying out strengthening and prevention programmes is extremely wide. In some villages which are involved in UN projects, the local inhabitants have even resorted to fund-raising in order to protect their own schools. In Greece, a substantial programme of assessment and improvement is under way, with considerable help from European Union funds. In Japan, there is now an arrangement in place whereby, according to the state of school buildings, the government will subsidise up to half the cost of seismic reinforcement for public schools, and up to a third of the cost for private schools. This is in recognition of the importance and impact of damage to public buildings, and of the fact that on the whole, such costs cannot be borne locally.

Maintenance, which is usually the responsibility of local authorities, is another area where proper funding is essential if safety and security are to be kept up to acceptable standards.

Similar arrangements are in place when it comes to recovery and repair. In Japan, restoration of disaster is subsidised, when there is “severe destruction” (designated by Cabinet order), on the scale of two thirds of the cost for public schools, and one half of the cost for private schools.

There are also ad hoc or established disaster funds (such as the National Fund for Natural Disasters set up in 1996 in Mexico), and the involvement of private foundations and benevolent individuals. Iceland uses a system of semi-mandatory private insurance.

One of the crucial decisions to make when buildings are damaged is whether to repair or to demolish, and there are many and various formulae upon which this decision can be made. In Greece, if a building which has survived for more than half its lifespan is to be repaired, the cost of repair must be less than half that of new build. And if it is newer, up to 80% may be allowed. However, listed buildings do not come under this criterion, and instead local political and cultural pressures can result in schools being repaired when the formulae would decree otherwise. The Field Act (United States, 1933) recommends up to 70%, and Iceland and Spain prefer only 50%.

When a disaster hits, rapid intervention and repair are of the essence. In Greece, where earthquakes are fairly common, and after the 1999 earthquake, the Ministry of National Economy can allow for exceptional procedures and funding in times of emergency, by-passing normal arrangements. The law also allows special dispensations in order for building licences to be obtained, land to be acquired and contracts to be let. Such legal constraints, which require certain time rules to be followed, were a particular obstacle during the repair work following the storms in France in December 1999, not to mention the potential conflicts between different expert professions, and the disagreements over liability. There needs to be a disinterested, overarching third party to resolve such conflicts.

Even if programmes of assessment and strengthening may appear costly in the first instance, after the first round the costs will quickly reduce. It has been estimated that such costs will be recovered within 15 years. This is another reason why it may be worthwhile for international bodies to fund the first stages of such projects – to kick start them – in order to pass the future funding onto national and local authorities. Again, the importance of proper maintenance must be stressed.

Research and support

Real progress can only be achieved through the proper recording and assessment of catastrophic events. In Japan, particular studies were made of how different building materials react to earthquakes; in the recent Californian events, studies were made of what caused the most injuries: falling furniture rather than structural elements; whereas in the storms in France, flying roofs were more hazardous than walls or windows. As
far back as 1929 experience in Iceland showed that “traditional” timber buildings were more robust than “masonry” and non-reinforced concrete, and this early realisation has been borne out increasingly since; the more recently established School Earthquake Safety Initiative has reinforced these findings.

As awareness and networking have grown, it has been possible to test various combinations of approaches – constructional, planning, proactive and reactive – in the field. This has been the great impetus behind the RADIUS project, where actual at-risk cities have been offered the chance to set up and put into place assessment, prevention and management strategies.

Data and experience, which used to be gathered at the time of a catastrophic event and which were often forgotten, are now gathered, assessed and disseminated by specialist units. There are such organisations within individual countries, and they are generally public bodies, such as the Earthquake Planning and Protection Organisation in Greece and the Disaster Prevention Unit in Japan, both of whom concentrate largely on educational and cultural buildings. Other such organisations are not necessarily made up of people who share a workplace, or even a country; increasingly they are more or less loosely constituted organisations which can call on the appropriate range of experts when these are needed. The various agencies of the United Nations are a prime example of this, and exchanges of information (feed-back, experience) and expertise (professional research and studies) are becoming easier with the Web and the Internet.

Although these units may have a primarily technical bias, the importance of raising awareness of the issues involved can mean that the team will sometimes include psychiatrists and other social scientists, and even celebrities, useful for gaining public attention, or when money needs to be found. The essence of these units is that they are teams, virtual or real, which can be co-ordinated by quite small secretariats, in order to try to foresee and to react to potentially catastrophic public events. Such “global” teams can help motivate and organise local teams.

The growth of specialist teams and organisations underlines the value that the public and politicians attach to these events. It is clear that as urbanisation increases, as the effects of climate change begin to be felt (with particularly disastrous consequences in developing countries) and as the globalisation of information becomes a reality, disasters and their impact can no longer be left to the best efforts of communities and regions. Overarching organisations, either national or international, are the only ones with the necessary funding and influence to support and, if necessary, to impose acceptable criteria for construction, maintenance and recovery.

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Is there a new paradigm emerging in education? There seem to be a number of forces coming together to challenge the current status quo. First, there is the change from industrial economy to the knowledge economy. Secondly, there is renewed questioning of the relevance of current education. Thirdly, there is a change in learning theory and pedagogy. And underpinning all this is the explosive growth in information and communications technology and the Internet.

As a strategic property policy manager an issue for me is the school for the future and the impact this will have on school property. I am concerned that we design schools by looking at the past rather than trying to think through what the future might hold. Although we may be in the midst of something quite dramatic I wouldn’t prescribe top-down change. (I am always reminded of the “open plan classroom” fiasco.) We should either have small pilot projects or ensure that new schools (and major additions) are flexibly constructed.

I look here at the issue of design after first commenting on the three forces listed above.

Change to the knowledge economy

Education (schooling and the school) largely reflects the society in which it takes place, and we are moving towards a knowledge economy and away from a largely industrial one.

In the past book learning was highly valued and it continues to be. Book-based schooling focuses on information transmission and puzzle-solving techniques to be regurgitated in exams. In this sort of schooling, students work as individuals.
The key competencies for the knowledge economy seem to be, in addition to analytic thinking (puzzle solving):

• creativity (synthesis thinking);

• the ability to communicate (orally, in print, video, etc.) in ways which lead to action on the part of the listener;

• the ability to form and manage productive relationships with other people: forming a team and working as part of it, and influencing and being influenced by others;

• enterprise (not just inventing something but being able to “sell” it).

A key feature of modern knowledge work is working in teams – not something we teach much in schools.

Relevance of current education

The traditional curriculum and method of teaching are still desired by most of society, but has the schooling most of us received been of any use? For seven years I was a secondary school math teacher and would be hard pressed to give real practical uses for much of what I taught. Too much of what I taught and what I have learned was simply repackaging old information, not using it to solve real-world problems. Julia Atkin has characterised current education as “just in case”; we do differential calculus just in case we become an engineer.

Much of secondary education that I have experienced is what I would term “practising not using”. It is centred around the teaching and learning of individual disciplines. While most of us have gone through this, does it make any sense? We are assessed on how well we “know” the discipline by sitting an exam in it. While this model may seem to be reasonable, is it?

Apply this model to tennis. We would go to serving classes and then go to return of serve classes. We would practise shots individually and in isolation. To assess our tennis ability we would “sit” individual shot “exams”. Our overall tennis ability would be some aggregation of the individual shot exam results. And to give us a ranking we would compare our tennis exam results with those of others. In other words, students’ tennis ability would be assessed on individual competencies not on how well they could string it all together on the tennis court against real-life opponents. Likewise, current education is too often practising the components rather than playing in the real world.

Daniel Pink (“School’s Out”, *Reason*, October 2001) has pointed to a riddle for the education establishment. Invariably students in the United States come near the bottom among OECD countries on the international educational tests (e.g. TIMSS). But, which country has the most developed knowledge economy (which depends crucially on brainpower) and an economy which generally outperforms those nations whose kids outperform U.S. kids on the educational tests? The causes are complex but Pink argues that one could be that the “education”, as delivered in today’s classroom, is largely irrelevant. He asks whether it could be that the Americans are succeeding in spite of their education system.

Over 80 years ago Alfred North Whitehead, one of the foremost philosophers of his age, was criticising the education system, largely unchanged since that time, as being full of inert ideas. To Whitehead, if education isn’t useful, then there isn’t much use in doing it.

The more I look at the current education system – or what passes for education – I wonder if we can afford to continue to waste the time of so many students.

Some teachers recognising that rote learning and/or information transmission is rather useless have latched onto “project learning”. However, most of the project learning I have seen appears to be information transmission projects rather than projects with actual output that require the use of the information. For example, children do a project on flight that results in a large poster of pictures and text about flight; however the children don’t have to use this information to design something that would fly.

High Tech High classroom
Change in learning theory and pedagogy

Over the last ten or so years there has been a lot of change in the two areas of learning theory and pedagogy. From talking to some of my curriculum colleagues I get the picture that broadly speaking the passive learner model is out and that meaningful learning requires the learner’s emotional involvement.

School for the future

For me education is all about self-reliant learners – would we need a change in property to support this?

Thinking of the school for the future, property personnel need to ask questions like:

• What are schools for? Will the knowledge economy impact on what is taught and how it is taught?

• Will new ideas on the nature of learning require a rethinking on property provision?

• What might be the impact of information and communications technology?

• What lessons can we learn from current “schools of the future”?

• What will the drive to lifelong learning mean? Do we need to provide a different type of school environment to accommodate adults?

Do schools exist that would measure up to my view of the future? I have come across three: Discovery 1 (New Zealand), San Diego’s High Tech High (California) and the Met (Rhode Island). Discovery 1 and High Tech High don’t look like the traditional school but more like an open-plan office set up like the one that Gunnar Lowenhielm has proposed (see ITiS Web site below). I’m keen to track down others and see how the school has been configured; I would appreciate all leads on possible schools for the future.

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Atkin, Julia, e-mail: bumgum@ava.com.au
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High Tech High, Web site: www.hightechhigh.org/
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The Met, Web site: www.metcenter.org/

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If you are interested in schools of the future, PEB invites you to attend its conference in Galway, Ireland, on this topic in September (see page 2). Also see the article entitled “United Kingdom’s schools for the future” on pages 7-8.
OECD Territorial Outlook: 2001 Edition

Territorial development is the newest policy field in the OECD. It responds to the two most important trends of the 1990s, globalisation and sustainability, by helping all the territories within countries – their cities and regions – to enhance and exploit their assets and endowments. Working within an increasingly decentralised governance, the public and private sectors as well as civil society are concerned to prepare territories for the future. This requires a clear understanding of the challenges they are facing and a bold imagination to conceive of the opportunities they might enjoy.

July 2001, 296 pages
OECD Code: 042001051P1, ISBN 9264186026
EUR 55, USD 48, GBP 33, JPY 5 250, MXN 452

Economics and Finance of Lifelong Learning

Learning is an essential basis for progress in the “knowledge society”; it is critical for economic growth and social welfare. OECD Member countries have committed themselves to making lifelong learning a reality for all. But the resources required to meet that goal are potentially large and countries differ in their capacity to generate them. Can OECD Member countries rise to this challenge? This report seeks to provide some answers by identifying and examining the economic and financial issues that arise in implementing the goal, and the strategies that the public and private sectors are pursuing to achieve it. It deals with issues such as individual learning accounts, recognition of non-formal learning, and measures to raise rates of return to lifelong learning. See www.oecd.org.

December 2001, 176 pages
OECD code: 912001021P1, ISBN 9264196676
EUR 26, USD 23, GBP 16, JPY 2 600, MXN 220

Higher Education Management, Volume 14, No. 1

The latest issue of the journal of the OECD Programme on Institutional Management in Higher Education includes the following papers: “There are Mergers, and there are Mergers: The Forms of Inter-Institutional Combination”, “Marketisation and the Changing Governance in Higher Education: A Comparative Study”, “The Rationale behind Public Funding of Private Universities in Japan”, “Measuring International in Educational Institutions Case Study: French Management Schools” and “Coping with the New Challenges in Managing a Russian University”.

March 2002, 120 pages
OECD code: 892002011P1, ISSN 1013-851X
Three issues per year
EUR 80, USD 85, GBP 55, JPY 7 500, MXN 640
OTHER PUBLICATIONS

National Education at the Beginning of 2001

In this publication Turkey’s Ministry of National Education describes in detail its education system, recent innovations and quantitative and qualitative developments, the ministry’s organisation, investments and budget, educational administration and supervision, student-oriented and teacher-oriented studies, and international educational relations.

December 2000, 392 pages
To request a free copy, contact:
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Primary and Secondary Schools: Options When Designing School Buildings
By architect Karin Buvik

Norway’s national curricula for primary and secondary schools emphasise that each school is independently responsible for creating a good learning environment and contributing to a safe and stimulating environment for children to grow up in. This booklet is a thematic study of the choices one faces when designing schools and is meant to help architects and local building committees in planning and developing school buildings. It presents different models of planning principles and examples of existing buildings through descriptions, plans and colour photographs.

For a free booklet, contact:
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Rapport annuel 2001 de l’Observatoire national de la Sécurité des établissements scolaires et d’enseignement supérieur

The 2001 Annual Report of the French National Agency for the Security of Schools and Universities presents major advances in the organisation’s work throughout its second mandate from 1995 to 2001. A large section addresses work in 2001 around the prevention of major risks; security, health and hygiene; building fire and safety; sports equipment; scientific, technical and professional teaching activities; and maintenance.

December 2001, 172 pages
To obtain a free copy, contact:
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PEB DIARY

2002

September

1-4 – PEB and Ireland’s Department of Education and Science will hold an international seminar and exhibition to look at some recent attempts to conceive the “school of tomorrow”. See page 2.

12-13 – “ITC@EDU 1st International Workshop on Construction Information Technology in Education” is the title of an event being organised by CIB (International Council for Building Research Studies) and Slovenia’s University of Maribor. It will take place in Portoroz, Slovenia. Contact: Dr. D. Rebolj, fax: 386 2 2524179, e-mail: rebolj@uni-mb.si, fg.uni-mb.si/ITC@EDU

16-18 – The 16th General Conference of member institutions of the OECD Programme on Institutional Management in Higher Education will take place on the theme “Incentives and Accountability: Instruments of Change in Higher Education”. Contact: Richard Yelland, OECD/IMHE, tel.: 33 (0)1 45 24 92 60, e-mail: richard.yelland@oecd.org

29 September - 2 October – LETA 2002, the biannual schools planning conference of Learning Environment Technology Australia, will be held in Adelaide, South Australia. The conference is entitled “Leading the Learning Edge”. This year’s partner is the Australian Council for Educational Administration. For further information visit www.acea.edu.au/conference2002/

October

19-22 – The 79th Annual International Conference and Trade Show of the Council of Educational Facility Planners International will take place in Phoenix, Arizona, USA. “Innovative Building, Lifelong Learning” is this year’s theme. Contact: CEFPI, tel.: 1 480 391 0840, e-mail: cefpi@cefpi.org, www.cefpi.org

November

13-15 – The United States Green Building Council is launching its First Annual International Conference and Exposition in Austin, Texas, on green building practices and sustainability issues. Among the topics that will be addressed are productivity, retrofits, regulatory issues, renewable systems, regional planning and urban design, education and training, indoor environmental quality, materials and waste reduction, and international and regional initiatives. For more information, visit www.usgbc.org, write to abstracts@usgbc.org or call 1 607 277 6240, ext. 251.

2003

February

A PEB experts’ meeting will focus on the relationship between investment in “bricks and mortar” and investment in technology, based on the findings of a recently completed research project. The seminar will primarily address technical and further education. The Department of Education and Training of Australia will host the meeting in Brisbane, Australia. Contact: Richard Yelland, OECD/PEB, tel.: 33 (0)1 45 24 92 60, e-mail: richard.yelland@oecd.org