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School Facility Projects
in Latin America

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SCHOOL FACILITY PROJECTS IN LATIN AMERICA

Many Latin American countries are undertaking projects, in line with practices disseminated by PEB, to share school facilities with the local community, to adapt traditional schools for students with disabilities, and to collaborate with private companies to finance educational buildings. The articles below describe current initiatives in five countries:

- A new school campus being developed in Argentina whose architecture promotes exchange amongst students and teachers, in addition to contact with its surroundings.
- Two projects in poor neighbourhoods in Brazil: a school designed to accommodate students with disabilities and the related state-wide renovation programme; and Unified Educational Centres offering education for students of all ages and cultural facilities for the community.
- The evolution of Chile's school architecture resulting in improved designs that are in harmony with the country's educational reform.
- Mexico's public-private partnerships to finance school construction, a scheme involving collaboration between the federal government, state educational building agencies and the funding companies.
- Venezuela's new approach to integrating school buildings into their community.

A NEW SCHOOL CAMPUS IN ARGENTINA

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In developing Northlands School's new campus, the architects have taken special care to create open spaces that promote contact amongst students and with their teachers as well as with the outdoors. The school caters for kindergarten and primary and secondary education in the new development of Nordelta, Argentina. The construction is being carried out in stages.

The master plan organises the school's buildings around two main spaces. The first is a patio enclosed on three sides by the primary and lower secondary schools. The second is an open patio and lawn aligned with the upper secondary school buildings and gymnasium and giving onto playing fields. Both spaces are articulated by a longitudinal axis that provides the school with a sense of unity.



The project's major criteria are:

- Facilities for 1 200 students, aged 2 to 18, developed over an expected ten-year period, where the values and ethos of the original school can be preserved and developed.
- Safety, security and economy in all aspects.
- A highly academic, co-educational, bilingual school, with marked interest in music, art and sports.
- Close contact with nature in all spaces, for learning, playing and relaxing.
- Flexibility to adapt the infrastructure to the rapidly changing needs of education, allowing for developments in technology.
- Easy and fast circulation throughout the campus, incorporating facilities for the disabled.
- A modular structure, which can follow the pace of growth of a new urban development in a country of economic and political uncertainties.
- Possibility to gather students in small groups, for individual attention, or within large, open areas.
- Functional, multipurpose spaces (halls, classroom, offices, corridors, steps, patios, etc.) serving the wide range of curricular and extra-curricular activities offered by the school.
- High standards of materials and an overall approach to match the school's excellent reputation, within a limited budget.



The architects conceived the school with two images in mind: the Greek agora and the cloister. As with an agora, the school has large surfaces with steps, and galleries for protection from sun and rain. The open and covered areas allow teachers and students to meet naturally, permitting spontaneous and informal gatherings for guidance and debate.

The cloister design promotes the idea of security and protection, providing clear boundaries for the younger children. This courtyard joins the primary and lower secondary schools and houses the clock tower. The cloister is characterised by a pair of trees with wide bowers at opposite corners.

On the open side of the cloister, the lower and upper secondary schools are arranged in succession, with separate buildings for the different departments along one side of the open courtyard, opposite a set of long steps that offer a privileged view onto the sports fields. At the middle of the main axis, near the clock tower, a perpendicular axis organises the playing fields along a pedestrian's lane flanked by trees.

This campus arrangement provides diverse outdoor spaces of various scales as well as independent buildings, which facilitates construction in stages and permits flexibility for future needs. Fluid access to the different areas is ensured by a periphery system of roads and parking lots, without interfering with the links between buildings nor with pedestrian movements.

The first stage of the campus development, for kindergarten through the third year of primary school, has been completed. The school's main entrance is composed of a two-block building that opens onto the courtyard. The blocks are articulated by a partially covered two-storey multipurpose space, which gives onto the future primary patio and to the campus. A bridge uniting both blocks crosses over this access on the upper floor level.

Each of the two blocks has nine classroom units (some temporarily equipped as special classrooms, libraries and offices) and wheel-chair accessible bathroom units for boys, girls and adults. Stairs and a lift give access to the first floor. Classrooms are equipped with electrical cabling for computers and central heating.

Feedback has been positive. Susan Magenta, Head of Nordelta, recognises the advantages of the school's use of glass: "The feeling of being in close contact with nature is brought about by large windows; with so much glass everywhere the outdoors are brought inside. At the same time, the classrooms are open to the inside, with glass windows forming a good proportion of the walls giving

onto the inside corridors. This allows permanent observation of what is going on in each class. Another advantage of this 'openness' is evident when one shows the school to new parents, as this can easily be done without disturbing classes in progress. The glass throughout, including in offices, responds to the modern concept of people seeing each other and not being closed off. This promotes community spirit and a sense of belonging, both of which are important to the school."

The school principal, Susana M. Price-Cabrera, acknowledges limits to constructing the campus in stages but is happy with the project overall: "The major problem has been the lack of staff working areas and storage space (especially for maintenance), which will be created as further buildings progress. The latter has also been neglected by the limited budget available while the school is growing and teaching spaces are required.

"Before the project started, the architects worked with the school staff (administration, teachers and non-teaching staff) in researching the school's needs and expectations. We are delighted with the results of the project and with the continuous support of the architects, who have managed right from the start to solve any problem that has arisen."

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ADAPTING BRAZIL'S SCHOOLS FOR THE DISABLED

A school built in a shantytown of São Paulo, Brazil, has successfully led to a state-wide programme to adapt schools in order to welcome students with disabilities. The Peixe School's architecture is described below, along with the São Paulo state renovation programme.

At the beginning of the 1990s, the São Paulo state government selected architects to plan schools that diverged from the education system's standards, with a view to re-evaluating certain established norms. Teuba Architecture and Planning was contracted to develop a project for a school in a settlement on the extreme eastern edge of São Paulo City.

São Paulo's rapid growth, coupled with timid housing programmes, led to the development of shantytowns, often with public areas occupied by families from the country's poorest regions or by those who could no longer afford rent in the city's central districts. In general, the shantytowns have a higher proportion of children with physical disabilities resulting from accidents or urban violence. Also a large number of children have mental problems, given the higher incidence of cerebral palsy resulting from births in substandard conditions.

The Peixe School was built in one of these settlements on the only site available, one which was used as a football field. Acquiring the site for the school building required close contact with the community which could have chosen not to cede the grounds.

The Peixe School was planned so that children with disabilities spend half their day with the other children and attend special classes for the rest of the day.

The school was a pioneer of inclusion, now official policy in the state's public education system, but one which gave rise to considerable debate. Some dissension exists among teachers, who must adapt to a new system, but also, for example, among those with hearing impairments who do not regard themselves as disabled. However the majority of educators today are in favour of inclusion, if only because it is a right guaranteed by state law.

The school was greatly welcomed by the students and the community at large. By including people with hearing, visual or learning disabilities, the Peixe School teaches its students to befriend people who are different from themselves.

The Peixe School's architecture

Access to the site is rather narrow, but it gives out onto a square large enough to accommodate a building, a playing field as well as an outdoor area, next to the canteen, used for open-air meals and various other activities.

The Peixe School is arranged around a central courtyard; part of the building has two floors and part has three. A ramp linked to a stairway gives access to all the floors. The corridors, aligned with the central courtyard, permit the students to see the whole school and be aware of what is going on in every corner. This all-round view contrasts with the fragmented view characteristic of traditional school buildings where the only point of contact between floors is the stairway.



The central courtyard is linked to the outside through large pivoting doors which allow it to be integrated with the playground and the square, both day-to-day and on special occasions. The building accommodates leisure activities at the weekend, community and family celebrations, parents' meetings, events organised by local associations, etc. It is common in Brazil, whether on the outskirts of large Brazilian cities or in the country's remote areas, for the school to be the only public space available and therefore be used for activities other than education.

The structure of the building is reinforced concrete, while the roof, stairs and ramps are made of steel. Standard components were used for partitions, window frames and doors, but some new components were developed, such as the pivoting door and the slatted stretched steel awnings which protect the internal areas from excessive light and also protect the window glass.

Better flooring materials than usual were used, a few of the walls were made of glass bricks, some walls were faced with ceramic tiles and a mural was created using the same tiles as those used in the external facings.

The renovation programme for inclusion

In the 1990s, the process of inclusion expanded and children who had never attended school began to arrive in ever-increasing numbers. While some chair-bound students could depend on their classmates to carry them up stairs, when they grew and became heavier their friends could no longer help them. Court cases proliferated and the state drew up a policy to renovate over 6 000 schools to receive students with disabilities; many of the schools, however, proved impossible to adapt.

Teuba Architecture and Planning developed a programme of state and local plans to resolve the dilemma based on three basic principles:

- The process of adapting schools must be planned and not reactive.
- While the entire system need not be adapted, places must be provided for all disabled children.
- The government must provide transportation for children with disabilities between home and school.

The state plan lays out five stages for adapting one third of the school system over a 12-year period. The first stage requires all cities with over 20 000 inhabitants to adapt at least one primary and one lower secondary school for every 150 000 inhabitants or fraction thereof. The plan sets the maximum distance a student must travel on his or her own between home and school at 2 km in urban areas and 15 km in rural areas.

A local plan is being drawn up for each of the cities or capital districts which classifies schools into three categories according to the difficulty and cost of adapting them, and an additional category of schools where renovation is not viable or is uneconomic. Teuba was charged with managing the local plans prepared by some 60 architectural firms contracted by the Foundation for the Development of Education.

In the first stages of the programme, available resources are being spent on adapting schools in the easy and intermediate categories that are situated in central areas and highly accessible, in order to reach a large number of people quickly.

The inclusion programme is designed to address all forms of disability, providing accessibility for those with motor disabilities (ramps, balconies, differences in levels), under-foot tactile walkways for the visually impaired, special paints for people with reduced vision and illuminated signs for those with impaired hearing. Conflicting arrangements, *i.e.* those which may help a person with a particular disability but be an obstacle for another, are eliminated. The renovation is also extended to outdoor areas including gardens, playing fields, and even paved areas, with lower curbs, the removal of obstacles, auditory signals at pedestrian crossings, and marking of holes and pavements repairs.

To date, 150 plans and projects have been drawn up to adapt 400 schools in São Paulo State.

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BRAZIL'S UNIFIED EDUCATIONAL CENTRES

The São Paulo municipal government has undertaken a programme to build Unified Educational Centres (*Centros Educacionais Unificados, CEU*). A total of 45 centres (21 of which have been completed) will be constructed to meet a lack of educational and cultural facilities in poor residential areas, often in the shantytowns on the city's outskirts.



CEU Rosa da China



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CEU Butanta



The Unified Educational Centres provide education for students of all ages, from nursery school to adult training, and offer a pleasant space for exchange between students, teachers, parents and the community at large. The centres apply the pedagogical methods advanced by the Brazilian educationalist Paulo Freire. The buildings accommodate 2 400 students in two class periods per day. In addition to classrooms, the centres are equipped with playgrounds, pools, kitchens both for student lunches and cooking classes, art rooms, theatres and other spaces for cultural, leisure and sports activities.

The centres are constructed of precast prestressed concrete components and have a surface area of about 14 000 m², on sites measuring from 19 000 m² to 70 000 m².

The architects who designed the prototype were Alexandre Delijaicov, André Takiya and Wanderley Ariza.

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BETTER BUILDINGS FOR CHILE'S EDUCATIONAL REFORM

Chile's school architecture has changed considerably over time, reflecting the building trends of different periods. Since the 1990s, educational reform coupled with major investment in infrastructure has led to better learning environments. Today's designs vary greatly and take account of new teaching methods and each school's surroundings.

History

It was only at the end of the 19th century, when teaching became more systematic and demand increased, that the need began to be felt for specific buildings for education. That was the time when teacher-centred education attached the greatest importance to the classroom.

Only in 1920 did the approach begin to widen, and during the mid-1930s the idea spread of having a technical body specialising in school buildings to address the shortage of facilities and to increase the coverage of formal education. Thus, in January 1937, the

Educational Building Construction Company (*Sociedad Constructora de Establecimientos Educacionales*, SCEE) was formed, a body which, for the following 50 years, was responsible for overcoming the country's shortage of school buildings.

Initially, until about 1950, the SCEE and the Ministry of Public Works reacted with functional architecture adapted to each project, with a certain degree of monumentalism, as was the trend at that time.

In the 1960s, the SCEE responded to population movements and the needs of new urban areas with a major school building plan, based on a standard architectural design involving prefabrication. The standard modular systems spread to practically all school buildings. Given that increasing coverage was the priority in the 1960s, the main effort was directed towards mass-production of schools, instead of individual buildings.

With the process of local decentralisation in the early 1980s, with the transfer of the administration of state schools to the municipalities and with the closing of the SCEE in 1987, responsibility for investment in educational infrastructure was dispersed.

From 1990 to today

In the early 1990s, the Ministry of Education proposed a method of work which united the isolated efforts of each of the ministries and institutions responsible for schools, opening the way to joint and integrated efforts which allowed interdisciplinary and inter-institutional technical teams to be formed at various levels of activity.

The first steps were aimed at improving management, financing and quality. While in 1990, some USD 17 million were invested in school buildings, in 2003 expenditure amounted to around USD 190 million.

In addition, work began in the early 1990s on the educational reform which came to fruition at the end of the decade; its chief objective was to improve the quality and equality of the Chilean educational system. The process set a powerful qualitative challenge for school architecture, resulting in unprecedented relationships between architecture, education and school management. One aspect of the architectural challenge was the attention to diversity and setting educational processes in a broader framework.

The emphasis on quality comes from teaching centred in active and co-operative learning, which requires flexible spaces that serve multiple functions and facilitate inter-

action. Part of this process involves opening educational institutions to the community and extending participation to all concerned in educational planning and decision-making.

One of the reform's objectives, which most affects Chile's infrastructure in quantitative terms, is the length of the school day, requiring major investment. In general terms, schools must double their capacity. Whereas in the past, half of the students attended classes in the morning and the other half in the afternoon, beginning in 2007 all students will attend the entire day.

The major investment in infrastructure and the process of educational reform offered unique opportunities for rethinking the school building in the light of educational needs and the country's decentralisation. This led to a qualitative review of the investment needed both to respond effectively in enhancing the quality of education and to introduce the changes necessary to meet the new teaching requirements, as well as reducing the deficit accumulated over a number of years.

"Standard" projects have been dropped and projects are now considered individually, on a case-by-case basis, so as to satisfy the educational aims of each school.

Increasingly, buildings are designed to adapt to innovations in teaching and to the wider social function played by education, expressed in openness to the community and treating the school as part of the public domain.

The changing role of the classroom is enriching the architectural programme. The shift from standardised teaching requires replacing the classroom designed for frontal, discursive and teacher-dominated classes with a flexible and dynamic space which facilitates interaction and multiple uses. And the school ceases to be centred solely on the classroom; learning resource centres, computer rooms, and meeting places contribute to the educational space as a whole.

The educational environment is designed to be a motivating space which incorporates technology and artistic and cultural expression, with cheery and colourful areas for play and external areas designed for greater contact with the surroundings. Value is placed on spatial flexibility, both to facilitate interaction within the buildings and to incorporate transitional areas between the "open" and the "enclosed".

Putting these ideas into practice requires an architecture which draws on a dialogue between educators and architects, an architecture which satisfies the school's

educational approach and the socio-economics and culture of its location. The architecture must “speak the local language” and respect its natural surroundings.

Today conditions are favourable for meeting these challenges. Thanks to the work begun by the SCEE, pressure to continue expanding access to the school system and coverage rates have slackened. Also contributing favourably are the country’s economic growth and the priority attached to education which allows diversification and creativity in school architecture.

Thus it is possible to combine architectural and educational ideas in each local setting and achieve a relationship which has not always been possible. The days of precariousness and standardisation are over. However, many of the innovations cited remain confined to specific projects and should be applied more widely.

Below are examples of new school buildings constructed during Chile’s reform period which take account of the efforts by the various social actors to bring about change in the teaching environment.

Buen Pastor School, Copiapó

Set on a narrow, irregularly shaped site, the buildings are aligned diagonally to the building line, with the courtyard in the front linking the school to the public area as a way of opening it to the community. At the entrance is a small square with three sculptures painted in primary colours, one of which serves as a seat. The multiple views from the school’s pathways and enclosed areas are designed to give children an outward-looking view of the world of which they are part, reinforcing their sense of belonging and participation in what is happening around them.

El Chañar Elementary School, Copiapó



On a small, steeply sloping site, the building echoes the ruggedness of the terrain and turns it to its advantage. It uses the different levels to create courtyards and corners, to give movement to the spaces, provide terraces and bridges and create views of the surroundings and the community. The entrance is from the pavement and creates a public square with a seat and raised flowerbed which also serves as a security barrier.

Francia School, Valdivia

The school’s classroom block stands out at the centre of the complex which was conceived as an educational village with multipurpose buildings. This set of buildings with floor-level windows and the use of bright colours has become an urban landmark in Valdivia.

Llano Blanco Boarding School, Los Ángeles

This comprises a modern complex for use by the entire scholastic community. Most appreciated by the students are the better lighting, heated rooms and play areas which contrast with the old building which was destroyed by fire.



Luis Cruz Martínez School, Ancud

The building materials are suited to the cold climate, allowing a warm environment to be maintained inside the building. Its three floors look out on to an interior courtyard which contains a giant chess set as an educational game. This courtyard, lit through a translucent ceiling which acts like a greenhouse, is the heart of the school.



México de Michoacán School, Osorno

The prevailing cold and rain in the area were determining factors in the design of this building. The solution was based on a large court, with a translucent ceiling, on to which all the classrooms open, thus creating a large space suitable for a variety of activities.

Buill Rural School, Chaitén

The project combines a school and boarding house. The interiors have been improved to create courtyards linking the rooms. By using materials such as local stone and vegetation, the school blends harmoniously into the rural and hilly surroundings.

Mariano Latorre Polytechnical High School, Curanilahue

Situated at the centre of Arauco Province, the Mariano Latorre High School has transformed the mining town of Curanilahue. The architects' main idea was to focus on interaction with the community, so that the school would be fully integrated in its socio-cultural context. The complete project, which will be built in stages, is intended to form the most important public area in the municipality offering a wide variety of educational, sports, artistic and cultural activities.

Pulmahue High School, La Ligua

The educational community's concerns and suggestions were taken into account in the design during its development. The classrooms are subject-based, with pupils rotating depending on their subjects. This arrangement allows each subject area to define its own identity and gives teachers their own space for continuity in their professional work.

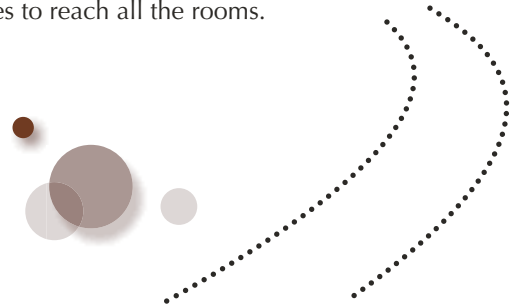
Fundación Minera Escondida School, Antofagasta

The school is in an area where the hills dominate the landscape, thus the challenge was to design a building that was practically "suspended" from the hillside. Its high position gives it a panoramic view of Antofagasta and the sea in the distance. The space is linked to the surroundings by terraces, offering children a sense of openness to the world outside.



El Palomar High School, Copiapó

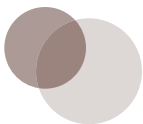
The most important area of the school is the sports ground. This is linked to a central area which is the core of the project, containing the various workshops opening off a covered central courtyard. The second floor is reached by a ramp, which allows people with disabilities to reach all the rooms.



Donald McIntyre Griffiths High School, Cape Horn

This is the most southerly high school in the world and given its remoteness, the building was designed to cater for the community and its activities, especially in winter. Hence the large multipurpose hall, whose curved wall is synonymous with involvement, motivation, participation and freedom.





***Josefina Gana de Johnson Elementary School,
Puente Alto***

This is an extension where the new buildings are arranged so as to provide a public meeting area. The integration of the new buildings with the old built in the 1930s relies on contrast. The interior of the new complex offers a more random geometry, creating a fun landscape for learning and play.

***Reverendo Padre Patricio Cariola School,
Antofagasta***

“Winged creatures”, insect-shaped sculptures in the courtyard for children to play on.



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PUBLIC-PRIVATE PARTNERSHIPS FOR BUILDING SCHOOLS IN MEXICO

Financing the construction and renovation of state schools in Mexico has undergone considerable change in recent years. In a significant departure from traditional practice, establishing partnerships with the private sector and between different levels of government is becoming more and more common, often benefiting the country’s most marginalised areas. Even though the phenomenon is in its infancy, using public-private partnerships (PPPs) as a complement to the work of government authorities is increasing.

The mechanisms of PPP collaboration have taken many forms. In some cases, private companies or social assistance organisations undertake the school construction or renovation projects with the support of a few local authorities, drawing on private funds provided by their members or civil society donors. Other companies, however, use their own funds and work almost exclusively with a private contractor, only rarely interacting with public school-building agencies.

The Mexican federal government is promoting its own PPP scheme which during the period 2000-2003 led to the construction of 24 elementary/lower secondary schools, serving 4 200 children in 17 states. In 2004 the construction of a further five educational complexes is programmed with the support of an international drinks company. The programme is driven by the Administrative Board of the Federal School Construction Programme (CAPFCE), a decentralised agency of the Ministry of Education.

This PPP scheme was built around three main parties who work together: the federal government (represented by CAPFCE), the state educational building agency (one in each of the 32 federal entities of which Mexico is composed) and the company or organisation providing the financial resources. The specific mechanism is as follows: In the framework of the programme’s promotion campaign conducted by CAPFCE, a link is established with a private organisation which indicates the amounts that it is prepared to invest, the area of the country which it is most interested in supporting (normally the areas where it operates) and its investment criteria. With this information, CAPFCE contacts its state counterpart and they jointly analyse the cases in most urgent need of



Durango School



Quintana Roo School



Zacatecas School



Tlaxcala School

support, while appraising the state's ability to contribute additional funds (donor companies often require matching finance). Once the project's specifications have been defined, the three parties sign an agreement establishing the obligations of each throughout the construction or renovation process.

This collaborative effort is taking place within a new administrative environment. A few years ago CAPFCE ceased to be the direct builder for the majority of the country's school buildings, after some 50 years in that role. In line with growing demand for greater decentralisation of public services, CAPFCE has recently sought to consolidate its position primarily as a standard-setting and regulatory body; it advises all federal entities on building functional, safe and high quality facilities which meet changing educational and technological needs.

Public-private partnerships have provided many benefits while taking into account the budgetary constraints that the federal government currently faces. By involving the state, educational facilities can be better adapted to the context and needs of each locality. In addition, the private company involved can enhance its image among its employees and the community at large in a spirit of social responsibility, and more generally contribute to the development of the country's human capital, a fundamental condition for sustained growth of economic activity.

For its part, CAPFCE undertakes on-going technical and financial supervision based on the highest national and international standards, while ensuring that the new schools, located in regions of greatest need, have an adequate operating budget (included under the umbrella of the Ministry of Education). CAPFCE also provides training, on request, to the local community in preserving and maintaining school facilities. It has been shown that involving civil society results in better building preservation by giving parents a sense of sharing in the future of their children's school.

Mexico is thus acting decisively to join in the trend towards public-private sector partnerships in the provision of educational infrastructure, measures which appear to have the potential to be powerful tools to consolidate a more effective and sustainable educational building policy.

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VENEZUELA'S APPROACH TO BUILDING SCHOOLS

Venezuela's national body responsible for school buildings approaches educational infrastructure as an integral part of the community. Created in 1976, the Foundation for Educational Buildings and Equipment (*Fundación de Edificaciones y Dotaciones Educativas*, FEDE) today seeks to establish a direct link between the National Education Project and the school building as integrated into the social, cultural and political context of local communities, regions and the country as a whole.

FEDE has developed instruments for evaluating the country's school facilities, established "Regulations and Specifications for Educational Buildings and Equipment", identified planning instruments, standardised architectural plans, and defined criteria for building design, equipment and outdoor areas (see "Requirements for new school buildings" below).

Soon after its creation, in order to quickly make up for a shortage of school facilities, FEDE established a major national school building policy and carried out an experimental pilot programme using prefabricated buildings.

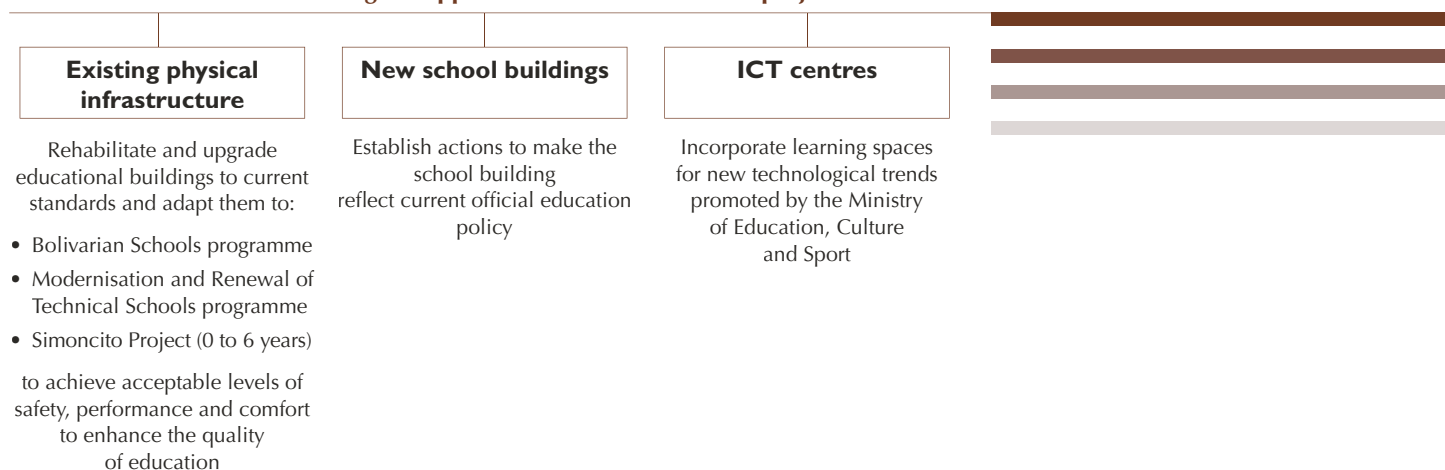
After evaluating the programme and under a policy to increase the country's employment rate via the construction industry, FEDE developed its current construction schemes for conventional and rationalised use adapted to schools' various locations, from urban to rural. Under these special schemes, either construction firms supply

materials and labour, or the buildings are constructed through professional training programmes by the community's young people who for various reasons are outside the formal education system. The construction schemes, together with the "Regulations and Specifications for Educational Buildings and Equipment", and other applicable rules and design criteria make up the FEDE System of Educational Buildings Projects, which allows implementing specific project plans within a minimum time frame and without resorting to unsuitable model projects.

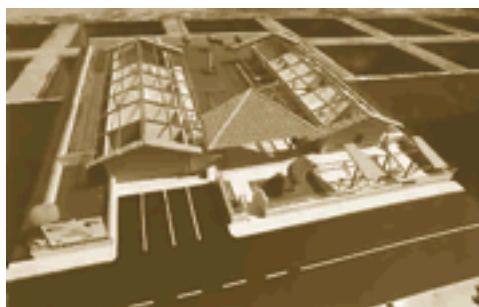
FEDE's approach is based on its 28-years' experience in developing the country's physical educational infrastructure, analysing the evolution of Venezuela's school buildings and reviewing current trends in Latin American educational architecture. School building provision takes account of the country's socio-cultural needs and history, the diversity of existing buildings, their high level of dilapidation, the multiplicity of organisations responsible and the reform of educational models. FEDE aims to stress the importance of the physical educational infrastructure as a symbol of Venezuela's pursuit of sustainable development and to recognise the educational community as the lead player in determining their facility needs and resolving related conflicts.

Under this approach, FEDE plans to construct new school buildings, rehabilitate and upgrade existing ones, and add teaching, administrative and service areas to satisfy new space requirements. New facilities must meet the requirements of the National Education Project and of specific projects undertaken by the Ministry of Education, Culture and Sport: the Bolivarian Schools programme, the Modernisation and Renewal of Technical Schools programme, and the Simoncito Project which covers children at preschool level up to the age of six.

The school building to support the national education project



FEDE's schemes for constructing new school buildings address four specific locations: urban areas, marginal urban areas, peripheral urban areas and rural areas. These take account of the marked differences that exist in terms of geography, climate and socio-cultural conditions.



Requirements for new school buildings

All new school buildings in Venezuela must meet the following ten requirements:

1. Combine the three basic aspects of the educational process – curriculum, teachers and physical infrastructure – in a pursuit to improve the quality of life through cultural, social and political change.
2. Incorporate outdoor areas, belonging to the educational establishment or to the community, as an active part of the educational environment.
3. Consider sharing existing facilities (e.g. libraries, exhibition rooms, information and communications technology (ICT) centres) with the local community.
4. Place special emphasis on design, taking into account potential natural or human threats that could affect not only the school building but the community in general. Consider measures to reduce risks to which the school is exposed.
5. Promote community integration, social participation, and environmental and ethical awareness. Generate a sense of ownership, identity and inclusion, which can strengthen the role of the community not only financially but as an active partner in conserving and maintaining the school building.
6. Include the community in determining the building's needs, design, construction, evaluation, management, maintenance and future improvements.
7. Consider maintenance in design and construction.
8. Study the possibility of applying bioclimatic architecture and local construction techniques. Use new approaches and methods to solve safety- and comfort-related problems.
9. Comply with current technical regulations in finding solutions to new educational and cultural needs which ensure the safety, performance and comfort of the buildings, including their use by people with disabilities.
10. Provide educational environments suited to the new requirements of the Bolivarian Schools programme, specifically pupil presence throughout the day in a single morning/afternoon shift; services such as a canteen; and increased community integration through sports, civic and cultural activities, and ICT centres.

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