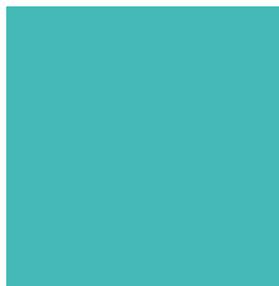




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The  
**Alberto Baillères  
 Foundation**  
 Social Model  
 A Proposal for Strengthening  
 Education Communities





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Social Model

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# Transforming as a Community

## A Message from Mr. Alberto Baillères González President, Alberto Baillères Foundation



The Alberto Baillères Foundation emerges from the conviction that education is a powerful instrument that offers children and young people the possibility to increase their opportunities for subjective well-being and collective development. This can translate into greater prosperity and better conditions of equity and justice that help to strengthen the social fabric and reinforce ties of trust and a sense of community in learning environments.

As individuals and as Mexicans, we are compelled to help improve —beyond the scope of our entrepreneurial work or professional activities— the social and human development perspectives of our country's underprivileged communities. To be able to do so is not only a commitment, but a privilege. This is why, since 2009, we at the Alberto Baillères Foundation have promoted numerous education initiatives that help to meet the learning and educational needs of Mexican children and youth, and that increase options for social mobility and quality of life improvement among socially and economically vulnerable communities.

The earthquakes of September 2017 in Mexico represented a turning point in the social and educational work that had guided the work of the Alberto Baillères Foundation until that point. Facing the severe damages suffered by certain school buildings in southern and central Mexico, the Alberto Baillères Foundation, with the support of Grupo Balcón, allocated human and material resources on two fronts: the rebuilding of damaged public schools and the planning of new school facilities. In both cases, the principles of innovation demanded by the construction of quality, safe, and appropriate school spaces, which furthermore meet the complexity and educational challenges of the 21<sup>st</sup> century, were taken into account.

In order to face this juncture, the Alberto Baillères Foundation team designed and implemented on site the Social Model we present here, which is meant to accompany education communities in creating and building sustainable educational habitats that strengthen their sense of community, foster individual and collective well-being, and favor human development.

This Social Model is composed, on one hand, of a socio-community component that fosters community organization, participation, and action around the school environment; and, on the other, by an infrastructure component that encourages collaborative design of the furnishings and physical infrastructure of the educational environment, based on participatory diagnosis, identification of potential, and the fulfillment of real collective needs appropriate to the characteristics of each education community.

One of the greatest achievements of this Social Model is that it has linked, in a committed and non-authoritarian manner, several actors who are part of the education community or are related to the school environment —students, educators, senior staff, parents, other family members, administrative staff, authorities, suppliers, and other local actors— as protagonists and transformers

of their own reality. Hence, the slogan that encompasses the subject matter and collective character of this proposal by the Alberto Baillères Foundation was defined: “Transforming as a community.”

This network of links and relationships also extends toward a group of actors outside the education community —universities, international bodies, civil society organizations, government agencies, and research centers, among others— which enables close collaboration between several entities at different levels and strengthens cooperation on and diversification of tasks, individual contributions, and shared responsibilities. It is precisely in this network that the timely and appropriate partnership established —in a natural, effortless, and highly enriching manner— between the Alberto Baillères Foundation and the UNESCO Office in Mexico, materialized in this publication as a starting point, has been celebrated.

I would like to take this opportunity to recognize the selfless role played by each person who contributed to the support and enthusiasm that this proposal is able to rely upon today: everyone at the Alberto Baillères Foundation Director’s office and operating team, the on-site workforce, allied organizations, members of education communities, and many others who, directly or indirectly, have been essential in achieving our objective.

In 2021, we celebrated the inauguration of two unparalleled projects: Escuela Primaria Amado Nervo (Primary School) and Preparatoria Oficial 94 (Upper Secondary School), both in the municipality of Ecatepec, in the State of Mexico. These schools will be the guiding force for other upcoming projects. The Alberto Baillères Foundation intends for its Social Model to become a standard transferable to other school communities and promote —from the collective will and desire for improvement— the collaborative creation of new educational spaces for many, many more children and youth.

Mexico and its population have always set an example of resiliency, and our education communities have not been the exception. Just as the 2017 earthquakes revealed how fragile some school facilities were when faced with extreme natural events and emphasized the vulnerabilities of the most socially underprivileged communities, the COVID-19 pandemic has demonstrated that the physical and human space that schools hold in individual and community development is irreplaceable. And if in 2017 rebuilding was one of the greatest challenges for the Mexican education sector, once we have passed the critical point of the pandemic, an even greater challenge will lie in restoring the value of school facilities as safe, inclusive, and resilient places where individual efforts and community participation converge. In due time, the Alberto Baillères Foundation Social Model will have the chance to prove its robustness, and education communities themselves will be able to testify to its contribution and relevance.

I hope that this document is able to convey the tremendous energy and rigorous reflection poured into this proposal and that it serves also as a testimony that collaborative, committed work can only produce positive outcomes.

# Partnerships for a 21<sup>st</sup> Century Education

## A Message from Mr. Frédéric Vacheron Oriol

### UNESCO Representative in Mexico



One of humanity's greatest challenges is and has been the creation of conditions that allow every individual and community to develop fully, create shared feelings, and live in dignity. Education has been recognized as a key element to overcome this challenge, given the possibilities it offers young people and adults for facing problems, learning throughout their lives, and transforming their world. It is through education that humanity can aspire to a present and a future of well-being for all, particularly for those who face adverse conditions that render them more vulnerable.

This historical aspiration was renewed in 2015 with the definition of the 2030 Agenda for Sustainable Development and the inclusion of targets aimed at surmounting the deep disparities that have kept millions of people from accessing the universal right to education. A fundamental part of this includes recognizing education as a public good. In other words, education belongs to everyone and thus commits every social actor to action in solidarity for the benefit of individuals and humanity as a whole.

Facing the unprecedented situation caused by the COVID-19 pandemic, inequality gaps in access to education widened and left millions of children and young people all over the world without learning options. In response, UNESCO called a global mobilization to seek alternatives in education and development that give hope amid crisis situations and socio-natural emergencies like the one we are currently experiencing.

It is within this framework that the UNESCO Office in Mexico and the Alberto Baillères Foundation have reached a productive collaboration, materialized in the Social Model described in the following pages. The Social Model is an extremely relevant initiative, as it shows one way in which schools can become the focal point of community life, as well as a space where students, educators, senior staff, and families can build the abilities to transform their reality and achieve greater well-being.

The Alberto Baillères Foundation Social Model offers an innovative experience that aligns with UN Sustainable Development Goal 4 through two key components. On one hand, it proposes decent and quality school infrastructure suitable for student needs; on the other hand, it fosters education communities capable of working in a collaborative and collective manner with a shared vision of the future. Together, these two components are part of the proposal for a 21<sup>st</sup> century educational habitat that represents a significant contribution to UNESCO's objectives.

The opportunity to learn together by accompanying the Foundation in this process is invaluable for UNESCO. In particular, I would like to emphasize that we have learned from Mr. Alberto Baillères' deep commitment to transforming Mexico and his strategic vision for creating a true laboratory of education in difficult times such as those we now face. It is not easy to attempt to explore routes like the ones explored by his Social Model, among which I would like to underscore the creation of rewarding alliances at different government levels,

coordination of first-rate academic contributions, and the propulsion of social development processes with education communities.

Of course, recognition is extensive to the team responsible for designing and implementing the Alberto Baillères Foundation Social Model, from whom we have systematized valuable lessons in work aimed at social transformation. This document presents the result of their hard work and lays the foundation to move toward better methods and strategies that promote the desired change.

For these reasons, we are sure that the Alberto Baillères Foundation Social Model will be an inspiration for action in Mexico and in other countries in the region, for institutions, governments, and organized communities who want to contribute their educational efforts for a better world where no one is left out or left behind from the universal right to education. The UNESCO Office in Mexico will always offer its capacities to the service of the Alberto Baillères Foundation for this important cause.



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# Introduction

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## The Work of Organized Civil Society to Guarantee the Right to Education

At a global level, UNESCO's mission is to lead efforts to guarantee the right to education, defined as a common good ([UNESCO, 2015, p. 79](#)) and as an enabling and fundamental human right. In the context of the 2030 Agenda for Sustainable Development and the global crisis caused by the COVID-19 pandemic, our Organization is responsible for fostering and monitoring Sustainable Development Goal 4 (SDG 4), which seeks to ensure inclusive and equitable quality education and promote lifelong learning opportunities for all.

This task is substantially based on what is detailed in Target 4.7, which conceptually and programmatically defines the type of education expected to be achieved by 2030. This is: to ensure that all learners acquire the knowledge and skills needed to promote sustainable development including sustainable lifestyles, human rights, gender equality, promotion of a culture of peace and non-violence, global citizenship, and appreciation of cultural diversity and of culture's contribution to sustainable development ([UNESCO, 2016, p. 13](#)).

Achieving the goal of an education that contributes to sustainable development and educating citizens committed to global causes requires, according to SDG 17, building partnerships and promoting commitment by all involved actors; in this case, in the objectives and goals set for education, whether they are part of the education system operated by the State or develop actions from communities, families, or civil society organizations. The same is true for traditional learning, distance learning, formal, and non-formal systems.

In this regard, the United Nations notes the following: "A successful development agenda requires inclusive partnerships —at the global, regional, national and local levels— built upon principles and values, and upon a shared vision and shared goals placing people and the planet at the center" ([UN, n.d.](#)).

In this sense, UNESCO recently took up the task of identifying, through the "Study of Civil Society Practices in Latin America and the Caribbean" ([UNESCO, 2020](#)), the education experiences developed by organized communities, associations, and local foundations —possibly in partnership with universities— that contribute to the right to education. Particularly, to some of the dimensions of Target 4.7: education for sustainable development and global citizenship education; human rights education; gender equality education; peace, non-violence, and human safety education; education for

the appreciation of cultural diversity; appreciation of culture's contribution to sustainable development education; and health and well-being education.

This first approach to the state of the art in civil society engagement in education with regard to the 2030 Agenda provided 27 important contributions in several countries in our region as well as challenges to surmount for a deeper and more extensive impact in populations worked with.

A lesson learned from the above-cited study is that the methods used to implement initiatives, financing, and partnerships —especially among institutions and between institutions and multiple government levels— require a stronger underpinning. In this case, implementation methods refer to three conditions defined by SDG 4 in order to reach lifelong equitable, inclusive, and quality education for all ([UNESCO, 2016, p. 13](#)):

- 4a.** Build and upgrade education facilities to provide safe, non-violent, inclusive, and effective learning environments for all.
- 4b.** Grant scholarships to underprivileged learners.
- 4c.** Provide training of qualified educators.

## Toward New, Inspiring Practices

Based on this empirical evidence, the UNESCO Office in Mexico has committed to continue identifying, systematizing, supporting, and disseminating initiatives and mechanisms that, from within civil society, creatively contribute to achieving the stated goals in order for the various regions of our country to advance toward fulfilling the right to education.

This undertaking considers recent guidance both from the programmatic documents of the 2020-2030 decade of action as well as guidelines created at the global level in the framework of the educational response to the COVID-19 pandemic and UNESCO's "Futures of Education: Learning to Become" initiative ([UNESCO, 2020a](#)), which consists of reflecting on the qualities desired for education by 2050.

The following represent some of the guidance that will be taken into account for this new systematization of innovations:

- Identify and promote local actions that foster sustainable development. This is one of the five axes of the action decade defined in the Education for Sustainable Development: a roadmap (#ESDfor2030) which engages civil society organizations, private companies, and community-run media together with local public authorities, including municipal governments, city halls, and education offices, as well as national and regional policy-makers, to develop skills for building a more sustainable future and for decision-making in topics of public interest ([UNESCO, 2020b, p. 44](#)).
- Search for projects aimed at transformation and societal change in the medium- and long-term for at least the next ten years, in accordance with UNESCO's perspective on education for responsible and transformative engagement, which encourages citizen actions geared toward modifying reality in favor of the common good, ranging from the individual and community levels, to the national and global systemic levels ([UNESCO, 2019, p. 3](#)).

- Record and disseminate alternatives that promote resilience and regenerative education in the face of situations of risk, crisis, or socio-natural disaster (such as recent earthquakes and the COVID-19 crisis) in the context of Education in Situations of Emergency ([UNESCO, 2016a](#)) and family participation in sustaining learning and social cohesion ([UNESCO, 2020c](#)).
- Systematize projects that weave partnerships between and among civil society, academia, companies, communities, and different levels of government (municipal, state, and/or federal) based on the formulations of SDG 17 in regard to coordinating efforts in order to increase financing, build capabilities, develop specific technologies, and monitor outcomes.
- Document models designed to strengthen communities and lifelong education which join formal and non-formal education and build safe and inclusive environments with an emphasis on vulnerable contexts due to extreme poverty, violence, or social disintegration. The aforementioned in the context of several UNESCO initiatives that regard the community and the city as educating, nurturing, and learning entities, like the UNESCO Quito campaign “Educar es cuidar” (To Educate is to Care For), and the Global Network of Learning Cities ([UNESCO, 2020d](#)).
- Build capabilities conducive to autonomy, leadership, negotiation, teamwork, planning, the implementation and evaluation of actions, accountability, self-education, and lifelong learning.
- Recover and disseminate proposals that substantially address one or several methods of implementing SDG 4: facilities, scholarships, and/or educator training. The UNESCO Office in Mexico is particularly interested in issues pertaining to designing and building the school habitat with the understanding that this idea goes beyond physical infrastructure. Even though facilities and objects within this infrastructure represent a support for educational work, the significant aspect is community engagement with, taking ownership of, and giving a new meaning to the space to foster well-being, common good, and the education of citizens.

*An education that contributes to sustainable development and educating citizens committed to global causes requires creating partnerships and fostering commitment from everyone.*

## **The Importance of Systematizing and Consolidating the Alberto Baillères Foundation Social Model**

It is not easy to find initiatives that fit precisely into SDG 4, Target 4.7, and the educational innovation guidelines described above. This makes sense because most work experiences on sustainable development, citizen participation, community education, and human rights did not necessarily begin already linked to the dimensions promoted by UNESCO. Instead, they incorporated the 2030 Agenda as their activities developed and adapted their components to the discourse on sustainability and global citizenship.

This is a relevant fact since the innovations that we seek to systematize are not the ones already established and waiting to be documented. The best practices, or inspiring practices, that we hope to disseminate from the UNESCO Office in Mexico are essentially those in the design and implementation stage.

Our desire is to take part in these types of initiatives by enriching, broadening, and consolidating them so that they can become sustainable over time and feasible from the pedagogical and organizational point of view. Furthermore, UNESCO is interested not in participating as a neutral observer of what is being done, but to “learn by participating” in the various issues associated with on-site

implementation of an education as challenging as that proposed in the 2030 Agenda. In this way, we attempt to identify encouraging practices, trends, and work scenarios that allow us to transfer valuable knowledge and skills so that communities in other contexts in Mexico and Latin America can push forward for an equitable, inclusive, and quality education.

We believe that this framework, similar to a laboratory for educational innovation, provides an exceptional opportunity for our Organization to systematize and promote the Social Model that the Alberto Baillères Foundation is developing in Mexico. The Model is implemented in communities whose access to education and a decent standard of living is limited because of violence, poverty, and socio-natural disasters or because they face problems related to concurrence, lack of common projects, or other social, cultural, financial or educational-related challenges.

This is a unique opportunity, since the design and implementation process of the Social Model contains several innovative elements rarely seen together in an initiative of this kind; it also contributes to achieving SDG 4, Target 4.7, and the right to education in the context expressed here.

The Social Model is recognized as being built through a complex and creative management with practically all participating actors in the life of the communities being served, which in and of itself is an accomplishment considering the level of engagement achieved over several years of work. The Model is supported by an arduous exercise of discussion, dialogue, and implementation of solutions developed in partnership with residents, organized communities, academic institutions, authorities from various government agencies, educators, and researchers and experts in architecture, industrial design, psychology, pedagogy, art, urban planning, policymaking, anthropology, environmental studies, digital technologies, and social development, among other areas.

Another important element of innovation explained in this document is the architectural proposal that characterizes the design of the Social Model. This is reflected in its strong coordination of strategic goals, objectives, implementation methods, methodologies, evaluation indicators, and accompaniment and linking mechanisms. The standardization, achieved following a tenacious process of analysis and reformulation in which the UNESCO Office in Mexico took part, creates high expectations for the Social Model to be sustainable from pedagogical, operating, and financial standpoints, as well as scalable to and replicable in other community contexts.

The design and construction of school infrastructure and furnishings presented in this document are essential parts of the Social Model and represent an unprecedented contribution in Mexico and Latin America. This is not only because facilities are built according to innovative standards in Mexican engineering and architecture, but because they were intended for communities to appropriate them and shape them into safe, modern, sustainable, and inclusive educational habitats suitable for quality education in which each person sees themselves as having the right to a dignified life.

Finally, the Social Model presented here contains an implicit proposal to build knowledge on transformative community education that is worth highlighting for how it can contribute to the field of specialized pedagogical knowledge. Through the action research approach, systematization of experience, and reflection on practice and participatory design, among

other approaches and tools, the Model has shown that its procedures can potentially be used by other organizations and professionals interested in educating an active citizenry and in comprehensive community development, especially in communities highly marginalized by poverty, violence, exclusion, and socio-natural disasters.

The elements of innovation described in this Introduction are not the only ones to be found in this document, but they are an invitation to scrutinize the richness of the proposal as a whole. These elements are especially important for UNESCO, as they signal the importance of systematizing, supporting, and disseminating this highly promising initiative, even as some of its components are being reconfigured in order to enter a period of maturation.

Education systems around the world are at a critical moment as they redefine the education that will be delivered in the coming decades in order to face a world at risk due to the environmental, health, economic, and social crises that we have endured in recent years. We must find experiences and testimonies that give hope that it is possible to design and build a better future for all. The UNESCO Office in Mexico is convinced that the Alberto Baillères Foundation Social Model can be a framework for many communities in need of the hope that a quality education provides, allowing them to fully exercise their right to live in dignity.



**I. Objective of**

**the Social Model**

# I. Objective of the Social Model

The Alberto Baillères Foundation is resolved to accompany education communities in the collaborative creation of educational habitats, conceived of as sustainable spaces of well-being and human development for all community members.

In order to fulfill this Objective, the Alberto Baillères Foundation Social Model is deployed based on two essential components:

- the **socio-community component**, which constitutes the Model's core, as it focuses on the strengthening and well-being of the individuals engaged in the community life of schools: authorities, educators, students, families, administrative staff, and support personnel. Likewise, it implies building partnerships in support of the development of educational habitats; and
- the **infrastructure component**, which, once the socio-community component is deployed, introduces innovations in the design, use, and maintenance of school facilities and equipment, always centered on collaborative creation.

The **educational habitat**, as a privileged space for learning, exchange, and coexistence, thus joins both components and allows education communities to:

- strengthen their social and community ties through cooperation, participatory action, and collective learning;
- promote and improve to school infrastructure in a creative and co-responsible manner; and
- appropriate spaces and turn them into places that promote the development of all community members.

In order to operationalize both components, the Foundation acts based on the following general considerations:

- **The Social Model assists education communities in contexts of vulnerability.** Vulnerability is defined as a lack of human and social development opportunities that limits the potential of a population in terms of equality, equity, and the exercise of the right to education. It may be characterized by poverty, marginalization, and lack of education, although it can also include other non-economic circumstances, such as violence.
- **The Foundation ensures the necessary conditions in order to operate.** To achieve this, the Foundation establishes the following:
  - **The will of key actors:** The Foundation selects locations where support and collaboration of groups or persons that are essential for the Social Model implementation is available; first and foremost, support from federal, state, and local authorities. It is crucial that favorable relationships be built from the beginning with all authorities and that specific, clear, and explicit understandings be reached through agreements or other appropriate means.

- **Social license:** Acceptance and determination on the part of authorities and representatives of the education community are essential for implementing the Social Model. Their wishes must be expressed in a document that formalizes agreements or in any other method accepted by the education community, education authorities, and federal, state, and local authorities, as applicable.
  - **Common purpose:** Proper conditions are required in order to reflect and establish dialogue between the members of the education community and the Foundation in order to determine a common goal that prioritizes sustainable development for the education community. Likewise, the community should display a history of perseverance, tenacity, and willpower from its members, as well as a genuine interest in education.
  - **Investment interest:** The presence of economic actors or other organizations willing to contribute with funds or their own skills to mobilize the Social Model is prioritized.
- **The Foundation ensures that the potential for sustainability is present.**  
To achieve this, the Foundation establishes the following:
    - **Current and potential beneficiaries:** The Foundation selects locations with a significant school-age population that will be sustained in the coming decades, according to demographic projections.
    - **Level of autonomy, self-management, and cohesion:** The education community is required to have the traits that enable its autonomous development, self-management ability, and cohesion between its members so that the Model can be feasible and sustainable.
  - **The Foundation makes sure that the potential for transformation is present.** This refers to the Foundation's own agency capacity toward the education community.

Accompaniment provided by the Foundation to education communities is based on a methodology specifically designed to fulfill this Objective (see "[Descubrimiento y movimiento](#)" [Discovery and Movement]). It is through accompanying and training that the Foundation fosters the development of different capabilities, both individual and collective, intended to improve the physical, emotional, and social well-being of education community members ([SDG 3; WHO, 2011](#)) and to grant them tools that promote autonomous learning and self-management of transformational projects. Likewise, it seeks to encourage peaceful and ethical coexistence and the education of conscious citizens committed to their communities, school facilities, social processes, their quality of life, and their environmental conditions. In other words: jointly responsible citizens, in the broadest sense of the term.

In summary, the intention of the Alberto Baillères Foundation is that each element that comprises the Social Model will translate into actual, tangible, and sustainable improvements for all members of the education community, not only in terms of the right to quality education and access to safe, innovative spaces that are appropriate for learning, but also in terms of strong community ties and the community's own capacity for transformation toward behaviors, attitudes, and practices that prioritize the common good.

*The educational habitat  
is a privileged space  
for learning, exchange,  
and coexistence.*



**II. Principles of**

**the Social Model**

## II. Principles of the Social Model

The Principles of the Social Model are transversal ideas that firmly and consistently interweave every element of **the socio-community component** (strategies for linking, accompaniment, training, and operation) **and the physical infrastructure component** (facilities and furnishings). The four Principles listed below underpin the Alberto Baillères Foundation Social Model and expand upon:

- the right to education and human development;
- community participation;
- a systemic approach; and
- social innovation and sustainability.

### A. Right to Education and Human Development

To a great extent, education conditions individual and social well-being. While it is not the only means of improving quality of life, education undoubtedly offers an excellent opportunity to foster human development to the extent that it plays a balancing role that encourages fairer and more equitable societies. This is where the social value of education lies: it allows changes to take place in people's lives, since it affects social inclusion, promotes peace, contributes to the fight against violence, and allows people to fully exercise their own rights ([Jornet, 2011](#)). Likewise, education has positive effects on opportunity for social mobility.

In order to favor equality of opportunity in access to education—with the benefits this entails—the countries that participated in the World Education Forum in Dakar in 2000 adopted a framework for action to redouble the efforts that began a decade before with the Education for All program. This forum underscored education as a right and determined that it must be free, compulsory, and of quality ([UNESCO, 2000](#)). The first outcomes of the Dakar forum confirmed that education acts on two levels: "First, it should enable all human beings to fulfill their individual potential in constructive ways. This is the creation of human capital. Second, it must help us all to learn to live together in harmony with respect and appreciation of our human diversity. This is the formation of social capital" ([Sarbuland, 2002, p. 155](#)). This reference has its most recent example in the 2030 Agenda for Sustainable Development, which recognizes education as a public good and as an enabling right of other human rights. In light of the deep inequalities prevailing in the world, the 2030 Agenda renews nations' commitments and sets goals such as offering "free, equitable, and quality primary and secondary education leading to relevant and effective learning outcomes" (SDG 4.1) and eliminating "gender disparities in education and ensure equal access to all levels of education and vocational training for the vulnerable" (SDG 4.5), among others.

While the links between education and development are highly varied, the first challenge consists of rectifying instability in the initial phases of education, as well as redefining the role of the school in a community environment with a view toward a common future. Delors ([1996, p. 25](#)) signaled this prospectively: “The 21<sup>st</sup> century will demand from us an even greater autonomy and capacity for judgment as well as the strengthening of personal responsibility in the achievement of our collective destiny.”

*Human development-focused education depends on equality of opportunities, identification of vulnerabilities, and lifelong learning.*

Unawareness of this integral concept in education has had serious consequences for the development of individuals and countries. We know that falling behind in education and knowledge creation limits the integration and dissemination of advances in technology and consequently limits economic development. Furthermore, it is important to link productivity and equality to set plural objectives (like citizenship and competitiveness, or equity and performance), the attainment of which drive true human development through education ([ECLAC, 1992](#)).

Education is in fact the second indicator of human development after health, as stated in the UN Development Program ([UNDP, 2019](#)). According to the UNDP ([2019](#)) and World Bank ([World Bank, n.d.](#)) statistics, the literacy rate in Mexico for individuals over 15 years of age is 94.5% and expected years of schooling is 14.3, but the mean for men is 8.8 years and 8.4 for women; in other words, fewer years than required to complete secondary education. The Mexican government allocates 5.2% of GDP to education, a number slightly higher than the global average of 4.45%.

When these statistics are compared to the demographic structure of the country, it is evident that there is a long way still to go. In 2017, only 21.7% of individuals over 15 years of age had completed secondary education. Furthermore, so-called “terminal efficiency” seems to have stagnated in the last 20 years ([INEGI, n.d.](#)). Finally, data on education and human development ([UNDP, 2019](#)) indicates that statistics for women are systematically lower than those for men, which points to structural differences.

In the Foundation’s Social Model, education and human development go hand in hand. Human development-focused education depends on equality of opportunities, identification of vulnerabilities, and lifelong learning. Through accompaniment actions, the Foundation encourages education communities to find their potential and identify the best way to put them into practice ([Gluyas et al., 2015](#)), always in the service of the communities themselves. This undoubtedly promotes a virtuous circle where the members of the education community benefit from taking part in educational activities and the school benefits from the participation of the community in creating inclusive and safe environments, spaces of community well-being and lifelong learning; in other words, **educational habitats**.

Ultimately, the Foundation recognizes schools as an inevitable reference point in their communities, in the broad sense: schools catalyze education initiatives, broadcast them, and connect them to the problems and needs of the environment. Schools act as focal points which form a community that engages not only students and educators but also families, authorities,

administrative and support staff, and other related actors. **Strengthening schools therefore implies not only education, but human development and community well-being as well.** In the final analysis, the goal is to attend the vulnerabilities of the education community and to support its comprehensive development.

When Edgar Morin spoke on the education of the future, he affirmed that “true human development means joint development of individual autonomies, community participations, and a sense of belonging to the human species” ([Morin, 1999, p. 25](#)). This is the same principle that drives the Alberto Baillères Foundation: the right to education for human development.

An education that focuses on human development must therefore be comprehensive, encompassing the individual, community, and social spheres, while also being sustainable. Education must also increase opportunities for individuals and collective capacities, address gender inequalities, foster inclusion and diversity, enable a better distribution of wealth, promote justice and dignity, and reinforce the important role communities have in achieving their own development.

## B. Community Participation: Autonomy, Self-Management, and Cohesion

A community is a group of people who share distinguishing traits such as language, customary law, territory, age, or socioeconomic status, among others. These traits extend through space and time, since one characteristic that all communities share is the permanence or duration of the relationships established between their members. Additionally, the networks that are woven in a community are supportive and binding and, in many cases, exclusive ([Gracia & Herrero, 2006](#)).

Some theorists propose classifying communities based on two aspects: the structural and the functional ([Causse, 2009](#)). The former aspects define the group that comprises a community and that has an organization (formal, informal, or potential) that enables the coordination of relationships between its members. In contrast, functional aspects include needs, expectations, and interests shared by community members. Functional aspects are frequently not exclusive to one community, since they are easily found in other communities. This is relevant because it eases the transfer, translation, and application of their elements to other groups.

An education community is a group that meets the definition of community and, moreover, is a group whose members are interested in, dedicate themselves to, or benefit from an educational service. It should therefore be understood that an education community is not merely a school; that is, it is composed not only of educators, students, authorities and support staff, and other related agents, particularly the family, but also of neighbors and other close actors including alumni, service providers, and collectives or other leaderships, among others. In this way, the school and its actors are the structural aspect, while common interest in education is the functional aspect.

The concepts of “community” and “school” may be ancient, but the forms in which they are currently expressed are not: both have experienced profound transformations and the relationship between them is dynamic ([Maquilón, 2011](#)). In 2014, UNESCO stated that education for young people must be delivered in and for the life of the community, given that every person and school is part of a community ([Appadoo et al., 2014](#)). This teaching must start by identifying the needs of its environment, not only the needs of students or educators. In doing so, education will win in two ways: firstly, it will become more appealing and inspire curiosity and, secondly, it will become more relevant, more useful, and will acquire a social function.

*An education community is defined not only by what it is, but also by what it can become.*

The sense of cohesion in any community determines how strong and healthy a community is, given that a strong sense of belonging implies at least some certain degree of social cohesion; it is the subjective element by which the members of a community feel that they are part of it. However, this idea becomes problematic because the study of it seems to center on the **absence** or loss of social cohesion ([Larsen, 2013](#)) and on “social erosion” as the opposite of “social integration.”

On the other hand, the idea of “social cohesion” can also encompass mechanisms of inclusion (provided by public policies or initiatives from private entities) ([Hopenhayn, 2007](#)). In this way, social cohesion is closely related to gender inequality and inequalities in education, health, and employment, to the extent that marginalized populations must be included in order to reduce inequalities. This is why strategies for social inclusion as a motor of social cohesion must have an impact on more distributive actions aimed at well-being in order to contribute to the empowerment of marginalized communities and to social justice. Ideally, social cohesion will also foster organization, joint responsibility from citizens, and participation. These are important ingredients in confronting the different expressions of social vulnerability, such as violence.

Moreover, a community with a solid social cohesion also possesses attributes of autonomy. In possessing autonomy, community members, for example, form part of a larger community where they manage resources, identify and prioritize their needs, determine activities collectively, and learn from one other. Thus, thanks to the agency of its members, a community interacts with the society in which it is embedded and transforms it.

In an education community, then, its members share their interest in education, but that is not all. The actors of an education community are articulated in a complex network to which they contribute their specific interests and desires. For the Social Model, there is not only one community transformation, but various transformations of individuals, groups, and the community as a whole. In the best-case scenario, the dynamics of individuals and groups should give rise to a community vision as well as collective leaderships that drive the construction of spaces for co-responsible coexistence and collective well-being.

In the Social Model framework, recognizing a community’s potential allows the community to work to promote transformation from within. Thus, an education community is defined not only by what it is, but also by what it can become. In other words, an education community possesses certain

potential that spring from its will, its resources, and its capabilities. This is why one of the fundamental tasks proposed by the Model is to identify and learn how to successfully unlock community potential. The design of accompaniment stems from that community potential, from a community's collective vision, ability for integration and cohesion, level of autonomy in the development of learning, and the possibility of managing its own resources.

In light of the above, it is possible to infer that an education community is a dynamic system that develops along lines of individual and collective action: it calls for action, design and planning, collaboration, execution, and transformation. That is why the Social Model proposes to accompany community development from a systemic standpoint, where lifelong learning takes place in a complex and constantly changing environment, always in the framework of the network of interactions of its actors.

### C. Systemic Approach

For the Alberto Baillères Foundation Social Model, accompanying the deep transformation of an education community necessarily implies considering every member as part of a network of mutual influence in which it would be overly simplistic, even mistaken, to seek linear and superficial relationships. **The Social Model locates, in the education community's system, dynamics that combine material and structural aspects (infrastructure, location, institutional network, social relations) with functional and even emotional aspects (needs, conflicts, and desires), as well as value systems.** In short: the Social Model is based on the principle that education communities function as complex systems.

Complex systems possess four distinguishing characteristics: **1)** they are comprised of elements or individuals; **2)** these elements or individuals interact with each other in a non-linear manner, and their totality is greater than the sum of its parts; **3)** they are not centrally controlled, instead possessing an organization of their own; and **4)** they are unpredictable, since they adapt, self-regulate, learn, and progress ([Laguna-Sánchez, 2016](#))

Although complex system theories come from physics, biology, or engineering (cybernetics), there are also philosophical, sociological, and organizational approaches. For Edgar Morin, "There is complexity whenever the various elements (economic, political, sociological, psychological, emotional, mythological...) that compose a whole are inseparable, and there is inter-retroactive, interactive, interdependent tissue between the subject of knowledge and its context, the parts and the whole, the whole and the parts, the parts amongst themselves" ([Morin, 1999, p. 15](#)). In this way, on one hand the study of complex systems integrates without simplifying and, on the other, it advocates a multidimensional knowledge despite being aware that it is immeasurable and incomplete ([Morin, 1990, p. 23](#)).

In a formally established community (e.g., an education community), actors also create other networks; now informal and differentiated from

the community by rules and practices ([Cocho Gil, 2016, p. 43](#)). These types of relationships are highly relevant, since they tend to function as channels for transferring information, solving problems, and achieving objectives, given that they instill a sense of belonging and promote learning. In this sense, the Foundation's accompaniment and agency capacity allow for the discovery of such relationship networks to grant the education community the strength needed to achieve its autonomy, self-management capacity and, in the end, sound interaction between parties that translate into a resilient social fabric.

On the other hand, it is important to acknowledge that while communities appear to be enclosed and at times exclusionary, they are neither closed nor finished; in other words, complex does not necessarily mean complete ([Morin, 1990](#)). Therefore, from the perspective of this Social Model, the education community is understood as an open system that encourages learning, participation, and organization.

From the operational standpoint, if we define "strategy" as the possibility of imagining action-oriented scenarios ([Morin, 1990](#)), we will see that in a complex and open system, those scenarios "can be modified based on the information received during the course of an action and based on the random elements that will suddenly take place and impact the action" ([Morin, 1990, p. 113](#)).<sup>1</sup> In this way, the networks that unfold from an action can cause uncertainty, but can also drive individual and collective potential.

We must understand, then, that a community is nothing but "a reality that is not free of limitations or precise definitions" ([García, 2011](#))<sup>2</sup> and that, at the same time, forms part of a higher-level system. That is why drawing a map to represent an education community or discovering or telling its story is not enough: we must understand how its function and structure relate to each other.

If this is applied in the field of education, we can say that we need to educate to generate reflective, conscious, and transformative action, considering a specific, complex context: the community of learners, educators, school authorities, and families as agents of change. Undoubtedly, an education community shares elements with other complex entities, each with its own consistencies and inconsistencies, in permanent construction, in which information is recursive (i.e., cyclical and recurring) and fosters lifelong learning.

It is precisely in this complex sense which the Objective stated by the Alberto Baillères Foundation must be understood, as well as its goal of centering human beings to increase options for improving quality of life and to encourage autonomous and sustainable decisions by the members of the education community.

*We educate for reflective, conscious, and transformative action, considering a complex context: the community of students, educators, school authorities, and families as agents of change.*

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1 This English translation is for reference purposes only. Original in Spanish.

2 This English translation is for reference purposes only. Original in Spanish.

## D. Social Innovation and Sustainability

According to ECLAC, social innovation means “new ways of management, administration and execution, new instruments or tools, new combinations of factors oriented to improve the population’s general social and living conditions” (ECLAC, n.d.). Or, stated differently, initiatives that can offer alternate solutions to persistent problems that traditional models have not been able to address.<sup>3</sup>

Innovation also becomes a tool for sustainability and human development; in other words, through innovative experiences, capacities are set off that allow communities themselves to manage the transformation of their own environment. Moreover, innovation provides knowledge on the use of technologies that facilitate analysis of social dynamics in order to conduct linking and accompaniment strategies and thus accelerate a sustainable social transformation with development for all.

While “social innovation” may seem somewhat ambiguous (Conejero & Redondo, 2016), it can be defined using its intent: social innovation intends to fulfill unmet needs and empower a community—with certain vulnerabilities—so that it can sustainably participate and consolidate its weight in society. It is therefore not enough to fulfill material needs. We must also consider the organizational, participative, and empowering dimension of community members. Moreover, innovations “should be scalable, sustainable and able to be transformed into programs and public policies that can encompass broad groups of the population” (ECLAC, n.d.).

Since the dynamics of the components of a social innovation project tend to modify relationships between community members, this approach requires a systemic, multifactorial, and complex approach given that its final goal is systemic change (Abreu, 2011). Therefore, from the systemic point of view, **social innovation not only implies the sum of visible changes in the conditions of a community, but entails a series of minor changes, hardly quantifiable at times, that in the end produce a result greater than the sum of all these small changes.**

As with any change, a social innovation initiative may encounter obstacles and resistance. Some obstacles come from individuals themselves and are psychological, moral, ideological, etc. in nature, like resistance and aversion to novelty, interests created by pressure groups, or fear of losing influence and leadership or management powers. Other hindrances are material in nature, like a lack of budget, a remote or difficult work location, insufficient technology, or a lack of trained personnel, among others.

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3 The UN, through ECLAC, fosters the Social Development Network of Latin America and the Caribbean (Red de Desarrollo Social de América Latina y El Caribe, ReDeSoc) as a platform to consolidate and share knowledge in this field and frame it in the Sustainable Development Goals. Furthermore, social innovation is part of UNESCO’s Axis 3, Operational Strategy on Youth (2014-2021).

Some of these obstacles can be remedied; others cannot. Agents of social innovation must learn to differentiate between them.

Certainly, social innovation also requires creativity, imagination, and willpower. Likewise, empathy, courage, and the willingness to run risks are also necessary (Morales, 2009, p.167). By definition, social innovation is original and new, but also transferable and repeatable. In fact, one aspiration from an innovation project is for the community to move toward appropriation: “Appropriation demands that the community understand the experience, master it, and incorporate its methodology and principles. Once this level of appropriation is reached, the community will be capable of continuing the innovative practice on its own, continuously evaluating and improving. This does not mean abandoning its supporting partners, but does mean that its level of dependency will be reduced” (Rey & Tancredi, 2010, p. 24). In this way, the success of a social innovation initiative like the one proposed by the Social Model consists of enabling the education community to achieve autonomy and rely on self-management tools for sustainability through the collective creation and appropriation of its educational habitat.

For the Alberto Baillères Foundation, the will to change is necessary to the extent that the transformations to which social innovation aspires are internal and include all members of the education community. Social innovation initiatives should therefore be offered as an open call to collaborate toward a common goal that can only be achieved with the joint collaboration and negotiation of all interested parties.

This is not an easy task, given that systemic transformation also entails a rupture which produces resistance, conflict, and instability. In this way, the Social Model seeks to raise general awareness that it is possible to imagine a different reality. When a community’s actors realize their potential, it becomes possible to aspire to awaken the trust needed to cast off paralyzing ideas. Community participation in social innovation weaves collaboration networks joined by determination and common convictions. In this way, synergies are created to effect desired sustainable changes, because they are valuable and bring individual and collective benefits and this, in the end, is what guides the Objective of the Alberto Baillères Foundation.

*Social innovation  
fulfills unmet needs and  
empowers a community  
to sustainably participate  
and consolidate its  
weight in society.*



# III. The Socio-Community

## Component

## III. The Socio-Community Component

The Social Model's socio-community component is based on a set of **strategic guidelines** that orient the task and conduct of the Alberto Baillères Foundation within education communities and with all actors involved in order to collaboratively create sustainable educational habitats. Each one of these actions is implemented through an **operational chain** that efficiently and objectively manages, integrates, guides, organizes, and punctually articulates the Foundation's fieldwork based on a self-developed accompaniment methodology called *Descubrimiento y movimiento*<sup>®</sup> [Discovery and Movement].

This social and community dimension is understood as part a process of lifelong learning, construction, and change; a path of gradual and progressive transformation in which each individual, community, institution, and organization adopts a relevant role within an intricate system of resonances, echoes, and ripples that allow broad results to be achieved for the benefit of education communities and the individuals who comprise them: students, family members, educators, authorities, and support personnel.

### A. Strategic Guidelines of the Social Model

The Alberto Baillères Foundation has defined five strategic guidelines based on the Principles that sustain its Social Model:

- agency capacity for linking efforts;
- quality improvement of school infrastructure;
- accompaniment for the transformation of education communities;
- assimilation of learning experiences; and
- the transfer and exchange of knowledge.

Each of these guidelines aims to accompany education communities and provide them with tools to strengthen their community ties as well as their social and collective learning practices, thus improving the school environment and their quality of life.

#### 1. Agency Capacity for Linking Efforts

Because of its core function in managing the Social Model and its main role as an agent that enables and activates cooperation between the different actors engaged in this proposal, the Alberto Baillères Foundation has been set up as an **actant** (Latour, 2005); in other words, a mediator that directs reflexive and conscious action in favor of social transformation; a facilitator

that mediates, acts, and promotes partnerships; that weaves networks and strengthens collaboration; that encourages the search for agreement and determined action; that joins different individual and collective efforts, directed toward the same Objective: participation aimed at the transformation of education communities through the collective creation of their educational habitats.

*The social and community dimension is part of a lifelong process of learning, construction, and change.*

The Foundation uses its agency capacity to initiate and lead the necessary procedures with, on one hand, institutional actors (government authorities, civil society organizations, partner organizations, international organizations, private entities, universities, and research centers) and, on the other, actors of the education community itself (school authorities, educators, students, administrative and support staff, family members), among other actors engaged in the project, whether actual or potential (e.g., community leaders, independent professionals). In this way, the Foundation implements one of the strategies that the international community has deemed necessary given the challenges implied by the full exercise of the right to education: the joining of efforts among different actors. UNESCO, for example, recommends fostering these types of collaborations and synergies: “Since systemic problems require multiple actors and diverse perspectives, stronger efforts are needed to involve all partners at the local and national level and across sectors” ([UNESCO, 2017, p. 163](#)).

Given the aforementioned, the Alberto Baillères Foundation promotes the construction and activation of networks of collaboration and shared responsibility as one of its primary tasks. Taking part in these activities are actors from various backgrounds whose actions impact the system comprised by the education community; consequently, becoming acquainted with them and understanding how they interact is a starting point for the entire process. These networks entail the following efforts, among others:

- **Coordination with public administration actors:** Managing the proposal begins with authorities at all decision-making levels: federal, state, and local. Project coordination and liaising in the framework of public administration is perhaps one of the most challenging stages from a liaising standpoint, one of the largest investments in terms of time, and one of the most complex efforts made in the management of the Model. This is due to several reasons: on one hand, the presence of several levels of dialogue, authority, and decision-making; on the other, the inevitable administrative, legal, technical, social, and even cultural challenges (e.g., the prevalence of communities governed by customary law) that at times increase the complexity of establishing links, coordination, and reaching understandings. The role of the Foundation as an unbiased mediator and interlocutor is thus highly valuable: it acts not only as a benefactor but also as an actual liaison that drives efforts and wills; it also creates partnerships and intersectoral collaboration networks in response to common interests. The possibility—or lack thereof—of setting the Social Model in motion in several contexts nationwide depends on the success of these processes.



**Photo 1:** Partnerships are the result of mutual agreement and the willingness to collaborate.

- Partnerships with non-governmental actors and academic and research centers:** Because the Alberto Baillères Foundation is a “lean” organization, partnerships with different non-governmental actors—national and international organizations, universities, research centers, civil society organizations, and independent professionals, among others—are not only strategic but vital. Partnerships allow the Foundation, firstly, to achieve a greater scope of action and expand upon its installed capacity for accompaniment in the field. Additionally, these actors help to strengthen and scale the operation of the Social Model in other environments. Likewise, these entities can orient action and contribute to the development of monitoring and evaluation indicators, as well as improve and guarantee the safety of processes, individuals, and work facilities and tools. The greatest advantage of these types of partnerships is that they are streamlined relationships, binding but not compulsory, that result from mutual agreement and the willingness to collaborate. This improves the general flow of individuals, institutions, resources, and information within the social system itself.
- Liaising with the education community:** As a collective actor, the education community is at the center of the Social Model and is the axis around which the entire transformation proposal is structured, through the collective creation of an educational habitat. The education community is comprised of all the actors who, directly or indirectly, are related to schools and their environments. It is considered to be a collective actor because any action by one of its members reflects on the community as a whole. It is for this reason that the Social Model of the Alberto Baillères Foundation holds, from a systemic standpoint, that the education community cannot be reduced to the sum of its parts, as each individual relates and connects nonlinearly to the others: it is a public, diverse, flexible, and dynamic entity with an identity of its own. For this reason, distinctions must be made when liaising with each actor, because while a

general strategy does exist, each community member has their own characteristics and role in the system: it is not the same to talk to a student as to a family member; it is not the same to interact with an educator as with a member of the local community. In general terms, we have observed that education communities participate in the decisions that are incumbent upon them as long as spaces exist that encourage these contributions and that are relevant and appropriate for each actor. This is what makes the role of the Foundation as a liaison agent essential: by encouraging active participation from all members of the education community, the Foundation contributes to strengthening community ties so that all members identify with and benefit from new practices of organization and management, and from the establishment of collective consensus and objectives, in such a way that the potential for social transformation can be developed and originate from the community itself, promote equity and autonomy, and be sustainable. Likewise, as a result of this new way of liaising within the education community, it becomes possible to improve relationships with other actors and establish meaningful partnerships and bonds of collaboration.

Through joint efforts of education communities, local actors, authorities, and government bodies, together with the Foundation and key partners, it becomes possible to underpin the framework that supports the Social Model, make it strong and stable, and guarantee its long-term sustainability.

Consistently and closely related to one of UNESCO's Sustainable Development Goals, which encourages and promotes the integration of "effective public, public-private and civil society partnerships" (SDG 17.17), this strategic guideline is unquestionably the driving force of the Social Model: it is the constituent element that sets in motion the complex operating machinery which executes the proposal on site and influences the transformation of individuals, education communities, and their environments.

**Photo 2:** *The education community is at the center of the Social Model.*





**Photo 3:** Infrastructure is a vehicle for social transformation.

## 2. Quality Improvement of School Infrastructure

As has been pointed out, in order to promote and build dignified and safe educational facilities that foster quality education and comprehensive human development in education communities, the Social Model consists of two components: the socio-community component and the infrastructure component. Although this distinction enables better organization and management of human and material resources, from the operational point of view, both components are inseparable. In other words, the social component directly impacts the design and proper use of infrastructure and, vice versa, infrastructure becomes a vehicle for social transformation and a privileged means to encourage participation from education communities and the actors who comprise them in the collective creation of the ideal school.

The precarious conditions of the social environment and basic public services can cause social stigma, weaken the self-image of the community, and deplete “its capacity to organize and coordinate” ([UN-HABITAT, 2010, p. 15](#)).<sup>4</sup> This is why dignified school facilities equipped not only for the proper realization of educational activities but also for cultural, social, and sporting activities offer new opportunities for human development, improve the education community’s self-esteem, and, in general, can become a place of safety and well-being for children and young people.



<sup>4</sup> This English translation is for reference purposes only. Original in Spanish.

According to the **social innovation principle** that this Model gives rise to, improving the quality of school infrastructure consists not only of offering technical solutions to structural problems, deficiencies, and failures, but also of formulating initiatives and alternative responses in terms of the organization, management, and implementation of proposals to transform schools into “exemplary places that breathe sustainability” and are “more inclusive, participatory, and healthy” (UNESCO, 2017, p. 163). The Social Model incorporates different innovations into the environment of school infrastructure based on the socio-community component which, as mentioned earlier, centers on the strengthening and well-being of the people involved in the community life of schools. In this way, the school space is constructed as an **educational habitat** that fosters and promotes study, learning, dialogue, coexistence, and collaboration, but is also an environment where each member of the education community is empowered, centered in any improvement initiative, and the protagonist of their own transformation (see “[Objective of the Social Model](#)”).

One of the greatest innovations introduced by this proposal consists of embarking upon participatory processes in the environment of the school community: in this way, school infrastructure is no longer an issue exclusively for specialists and authorities, instead becoming part of the priorities, demands, and aspirations of the education community.

Contributions to the education community in terms of its concrete needs regarding specific school facilities and equipment arise from a series of meetings convened by the Alberto Baillères Foundation to create, in a mutually agreed-upon and collective manner, a participatory consultation process in which each actor presents their vision and expectations.

This type of diagnosis, reached through the joint exercise of finding answers and solutions to common concerns, allows the education community and the actors that converge in it to identify the main problems and their causes, as well as strengths and capacities (individual and collective). Using this tool, the education community itself identifies the conditions of its tangible (infrastructure, services, human, and financial) and intangible resources (customs, organizational capacity, stories, traditions, history) and seeks ways to meet needs and address deficits. The participatory consultation provides a preliminary picture, budding but alive, of the community, of how its networks work, and of possible scenarios of cooperation and mutual trust. Thanks to this set of narratives and visions, it becomes possible to create a map of the dynamics, interactions, perceptions, and histories of the different members of the education community.

Likewise, as part of these participatory activities, the community is oriented in beginning a process of co-design and co-creation of school infrastructure in terms of social and technological innovation. In this process, the school community harnesses its capacities and creativity to reach feasible solutions consistent with the needs of each school’s context. A development project that considers the community’s mindset as a starting point, and that is aware of its interests, needs, abilities, and potential, increases the possibility of having a positive impact and of being sustainable in the long term.



**Photo 4:** *The educational habitat promotes study, learning, dialogue, and coexistence.*



**Photo 5:** Accompaniment takes place in schools, but outside the classroom.

Another relevant aspect in this participatory social innovation process is the commitment which the community acquires to the educational infrastructure, both school spaces and equipment. On one hand, this proposal enables the school community to change the way it conceives of school spaces and equipment, given that ideas and design are the result of a collaborative and horizontal effort, of the search for understandings and, in general, of a community consensus that includes all actors involved. In this way, infrastructure acquires a new meaning, both personal and

collective: the actors involved gain a better understanding and appreciation of the virtues, hindrances, and costs of the process of creating, producing, and installing school infrastructure. On the other hand, this proposal entails new responsibilities in regard to the care and maintenance of spaces and furnishings and encourages community members to participate directly in the tasks of repairing and preserving infrastructure.

In summary, participation by all actors in the process of diagnosing, designing, and co-creating school infrastructure inspires the community with a common feeling of belonging and ownership of school facilities and equipment. Well-being, equity and inclusion, safety, security, and democratic and constructive exchange between the members of the education community are essential elements that guarantee the right to quality education anywhere, but especially in vulnerable environments. On the whole, this translates into a change of attitude; a new way for citizens to understand the principle of collaboration, inclusion, plurality, and joint responsibility; greater cohesion; new ties of trust and peaceful coexistence within the community; and the development of new collaborative and supportive self-management skills.

### 3. Accompaniment for the Transformation of Education Communities

The idea of **accompaniment** is intrinsically related to the **community strengthening principle** established as part of the Social Model. This is a practice of mediation and of building spaces for horizontal dialogue that takes place directly on site and collectively between the different actors of the education community and the Foundation's accompaniment teams. Accompaniment is not meant to intervene in or lead community projects, but to assist "without being 'assistentialist,' by facilitating resources and quality of life/learning opportunities aimed at self-management and empowerment" ([García-Pérez & Mendiá, 2015](#)).<sup>5</sup>

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5 This English translation is for reference purposes only. Original in Spanish.

An accompaniment proposal is a resource to promote the constitution of school spaces as places of shared learning, an educational habitat that transcends school-based content and activities: accompaniment takes place *in schools*, but *outside the classroom*. In other words, no function is attributed to accompaniment that corresponds explicitly to formal teaching or to the work of an educator; rather, accompaniment “is structured from experiential learning and service to the community” (García-Pérez & Mendía, 2015),<sup>6</sup> considering collective well-being and its impact on the quality of education. Accompaniment teams encourage the community to identify and expand its potential for development, to create its own relevant projects based on its needs and expectations, and to look for the means to make these projects feasible and sustainable.

Likewise, support teams are tasked with strengthening the personal and collective growth of individuals and education communities; identifying leadership; channeling willpower; being mindful of the community’s knowledge and social sense; strengthening the capacity of the community to make conscious and informed decisions; and recording and tracking planned objectives and understandings attained within the education community (particularly in regard to facilities, furnishings, and school equipment). Ultimately, it is a “process that educates through the quality of the relationship: by conveying interest, enthusiasm, and motivation for the shared project; by coexisting and communicating in an environment of respect and freedom; and by handing the lead role over to everyone who is living their educational processes from within so that they can feel valued, capable, and in possession of a relevant and transformative social role” (García-Pérez & Mendía, 2015).<sup>7</sup>

Finally, what distinguishes the efficiency of an accompaniment process is the fact that it is time-bound; in other words, at a certain point, a strong community can act autonomously and be self-managing. This means that the accompaniment team has been able to facilitate the construction of useful and significant knowledge as well as to support the process of creation and appropriation of community projects.

### a. The Accompaniment Approach

In order to put accompaniment actions into practice in education communities, multidisciplinary teams with different functions and levels of responsibility are assembled in which Foundation personnel, external teams, and strategic partners all participate. Accompaniment teams are made up of the following elements:

<sup>6</sup> This English translation is for reference purposes only. Original in Spanish.

<sup>7</sup> This English translation is for reference purposes only. Original in Spanish.

**Photo 6:** All actors participate in the process of diagnosis, design, and co-creation.



- **Aides:** The aide team is composed of operational personnel of the Alberto Baillères Foundation. It is an interdisciplinary group whose members possess field experience and are passionate about becoming socially committed to education communities in vulnerable situations. Their accompaniment role is horizontal with respect to the communities. In other words, aides do not represent any authority or act as guardians: they simply make use of strategic actions and various techniques in community and participatory work to identify and properly channel specific demands expressed by the community. In this way, aides help community members strengthen their ties with each other, as well as their capacity to participate and organize around a shared vision.

The accompaniment team promotes a series of activities to help the education community recognize common interests, design projects, and implement these projects. Likewise, it guides fieldwork, always through a collaborative approach. Aides are responsible for recording and monitoring activities that the community deems important, as well as for taking community agreements into account and for providing human and material strategic resources, all in accordance with the Principles of the Social Model.

During their work, aides encourage the members of the education community to collectively set goals which are attainable in the short term so that they can observe tangible achievements and contemplate their capacity for self-management. In accompaniment work, effective communication with a community outlook becomes an essential element for orienting collective action.

- **Strategic partners:** Strategic partners are, on one hand, civil society organizations that participate in fieldwork and in the on-site implementation of the Social Model. These organizations are familiar with the reality and needs of education communities, and their involvement is based on participatory action and collaboration with the communities themselves. On the other hand, “expert” partners are also present whose support consists mainly of documenting, systematizing, evaluating, and communicating learning experiences and project milestones. Organizations interested in collaborating as partners are selected based on a set of criteria that the Foundation has established to evaluate the suitability of their contributions based on the profile of each organization:
  - the alignment of its objectives with the Principles and Objective of the Social Model;
  - its capacity to design strategies that encourage community participation and improve the educational environment;
  - the feasibility and sustainability potential of its proposals for collaboration;
  - its capacity for synergy to create networks of cooperation for the benefit of education communities; and
  - its acceptance of the terms of the Alberto Baillères Foundation’s Social Liaison Policy.<sup>8</sup>

<sup>8</sup> The Alberto Baillères Foundation’s Social Liaison Policy defines the general guidelines on the establishment of links and partnerships with education communities, authorities, and strategic partners so that all of these can meet the values and principles of conduct established by the Alberto Baillères Foundation during the implementation of its Social Model.



- **Internal observers:** Carry out ongoing monitoring of the process among the various education communities with social projects in progress. The perspective of these observers allows for a comparative analysis of the behavior of the different communities where the Foundation is involved and for verification that the Social Model is operating in accordance with its Principles.

Alongside aides, observers visit a community at least once a week to identify the mindset and behaviors that show perceptible and significant changes in the community and its surroundings which can be taken as progress in the community's process of collective transformation. This is, for example, the moment when bonds of trust or collaboration manifest in a joint project.

**Photo 7:** Aides identify and channel the demands expressed by the education community.

Likewise, the observer must be insightful and perceptive in order to identify weak points in the process; pinpoint individuals not showing interest; veiled conflicts; vested interests; detrimental leadership; destabilizing initiatives; or even vulnerabilities in the safety of any community member or accompaniment team. The purpose of observing is to be able to draw upon elements to reverse, as much as possible, any aspect that may hinder or even impact the development of the project and endanger its continuity.

To put its **accompaniment approach** into practice, the Foundation seeks to create relationships that build trust and credibility, thus laying the foundations for an optimal and thorough accompaniment of education communities. To this end, members of accompaniment teams must meet the following conditions:

- **Be sensitive and adaptable to the political, social, and cultural context of the education community.** The Foundation encourages aides, partners, facilitators, coordinators, observers, and other Foundation collaborators to demonstrate sensitivity to their surroundings and thus find common ground with the members of the education community to create selfless interactions and strengthen the creation of bonds of empathy and trust.
- **Be clear and honest.** Team members must transparently convey the Objective of the Social Model, the objectives of each experience, and the scope and limitations of the Foundation, and must avoid raising expectations in the education community or making any kind of promises. For security reasons, team members must avoid addressing unnecessary or sensitive information.
- **Steer clear of any political or social disputes.** If facing a dispute that interferes with the fulfillment of the Objective of the Social Model, collaborators must seek to ease tensions by promoting dialogue and the bonds of trust inherent to the accompaniment strategy. While they must inform and analyze the impact of disputes on the Social Model, they must remain unbiased, avoid taking any position, and, when appropriate, direct concerns to the relevant area of the Foundation.
- **Guarantee confidentiality of personal information.** Information collected in the field can only be used for purposes of the Social Model. Aides, partners, facilitators, coordinators, observers, and other Foundation collaborators are responsible for protecting the personal data of the education community and must refrain from sharing them with any external actors.
- **Foster the potential of education communities** through a holistic-humanist approach ([Gluyas et al., 2015](#)), the promotion of dialogue, and reflection on the reality of the education community in order to reach agreements as well as to encourage co-creation processes for the common good, transparency and accountability, and community participation.
- **Act professionally.** While the accompaniment process creates deep bonds with communities, these relationships must remain professional and abide strictly by the Principles, without losing sight of the Objective of the Social Model.

### **b. Individual and Collective Capability Building**

Training for the development of individual and collective capabilities is key in the advancement of the Alberto Baillères Foundation Social Model. Focusing on human development capabilities allow individuals and communities to identify their potential, increase their knowledge on aspects which are relevant and favorable to the community, improve their capacity for organization and collective action, and achieve not a random transformation but a profound and permanent one that “goes beyond performing tasks; instead it is more a matter of changing mindsets and attitudes” (UNDP, 2009). Likewise, capability building must be oriented toward strengthening opportunities for autonomy, understood as spaces of freedom that can be translated into actions for the common well-being (Nussbaum, 2012). Accompaniment work must therefore be oriented toward building these capabilities, starting with the individual and within the community, to bring about new learning experiences, new practices and attitudes, and greater access to freedoms and rights (UNDP, 2009). In this case, education communities are provided with the tools they need to build the specific capabilities needed to autonomously and sustainably create and manage the educational habitat that stems from the Objective of the Social Model.



**Photo 8:** Collaborative work helps achieve common goals.

In this way, in a progressive and organized manner and through the *Descubrimiento y movimiento*® methodology, the Foundation promotes a change of attitudes and behaviors and accompanies education communities in building the following capabilities:

- **personal, collective, and environmental care** that promotes a culture characterized by the appreciation of each person in their dignity and rights, and by a sense of collective belonging that invites people to care for each other, community assets, and the environment, from a sustainable perspective;
- **empathetic and effective communication** that encourages responsible participation through a style of interaction characterized by empathy, listening, and understanding, as well as by the clear and timely expression of ideas, feelings, and opinions that strengthen the education community;
- **collaborative work** that contributes to attaining common objectives in a conscious, supportive, organized, complementary, participatory, and effective manner to promote sustainable states of well-being for all;
- **management of transformational projects** as a capability that promotes the planning, implementation, and evaluation of participatory projects to improve the educational habitat from a perspective of equity and inclusion; and

- **learning to learn** to build and use strategies that allow one to learn and continue learning throughout their life in an autonomous, conscious, and increasingly efficient manner, according to the specific needs and challenges of personal and collective life.

In this sense, capabilities are built on two different levels: the first being capability promotion in education communities themselves, supported by the *Descubrimiento y movimiento*<sup>9</sup> methodology; and the second being the capabilities required by the Alberto Baillères Foundation's operational and collaboration team to strengthen its support work.

- **Descubrimiento y movimiento<sup>9</sup>: a methodology for personal and community development.** This methodology promotes building a series of capabilities oriented toward providing education communities with the tools needed to attain **autonomy**, to make key decisions about their own learning and development based on their needs and the demands of their context and spaces; **self-management**, to organize and actively participate with others to take charge of their own transformation; and **community cohesion**, to achieve peaceful coexistence and work together in a safe environment where values such as respect and appreciation for people and surroundings are fostered. With a participatory action-research approach (Anisur & Fals Borda, 1988),<sup>9</sup> this methodology strengthens community members' capacities and awareness of their own potential (**discovery**) so they can begin processes that enable them to transform their individual and collective reality in a sustainable manner (**movement**). The capabilities built through this methodology correspond fully to the objective of creating sustainable educational habitats.

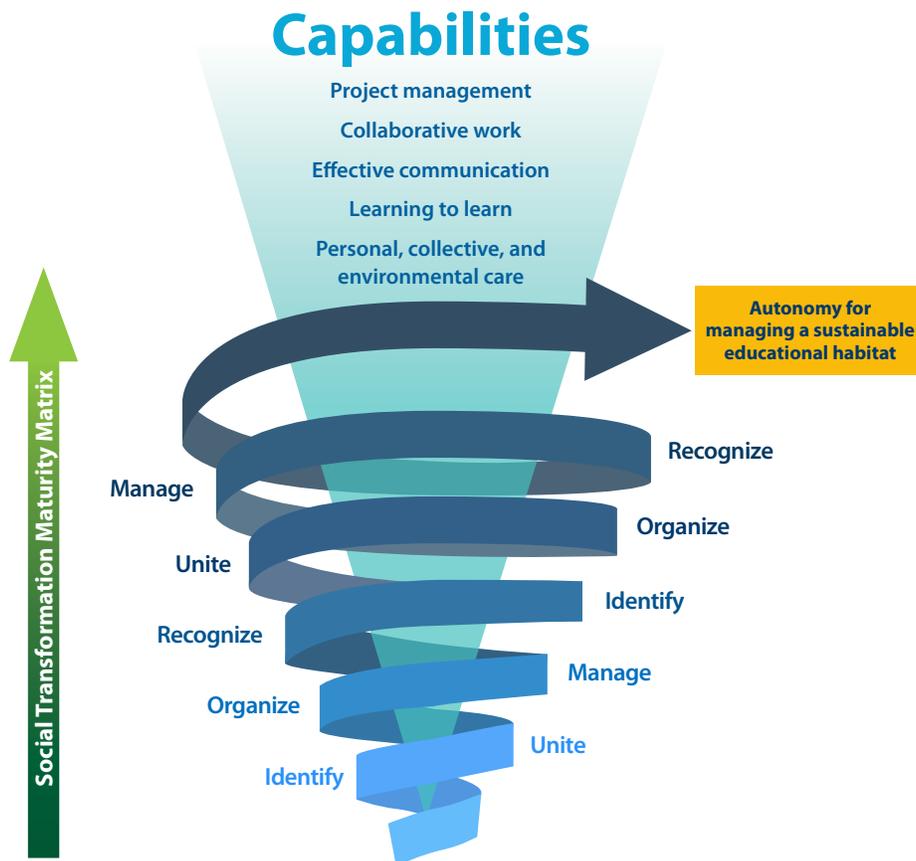
*Descubrimiento y movimiento*<sup>9</sup> unfolds as an upward-spiraling, non-linear cycle that allows forward movement toward increasingly broad and complex processes of learning and transformation in which the actors of an education community:

- **identify**, through participatory diagnoses and evaluations, their transformation needs and potential, organizational structures, and educational needs;
- **unite** on the basis of recognizing what brings them together for building a shared vision and goals;
- **organize** to complete projects and planned strategies;
- **manage** their own resources, processes, and relationships with other organizations and collaborate in spaces of reflection and education; and
- **recognize** achievements, learning experiences, and contributions on the part of all members in order to identify new goals and greater capabilities, and in this way convene the participation of more members from the education community itself.

<sup>9</sup> Participatory Action Research (PAR) is a dialogical, collective, and ongoing process in which the researcher is an active subject in and of their own practice of inquiry as well as in transforming themselves and their surroundings.

Finally, to evaluate the progress of different capabilities in the education community, the Foundation has created a scoring guide that defines the community's level of maturity in terms of the proposed transformation. This **Social Transformation Maturity Matrix** allows for the adaption of accompaniment actions and the reinforcement of other strategic guidelines to be reinforced in order to set each capability according to its level of progress. Likewise, this tool promotes working with other civil society organizations and helps in recognizing educational needs or critical aspects of each education community in which the participation of a partner is appropriate. Moreover, this provides resources for monitoring and evaluation tasks, given that this process can produce specific indicators for evaluating goal achievement and decision making can derive from this process.

**Figure 1: The Descubrimiento y movimiento® Methodology**



In general terms, the Social Transformation Maturity Matrix sets five evaluation levels per capability: initial, in progress, advanced, developed, and sustainable (each level will be addressed in detail in the corresponding section). This scoring guide also serves as a decision-making guide during the operational process.



**Photo 9:** Individuals and communities improve their capability for organization and collective action.

**Table 1** presents an example of the *Descubrimiento y movimiento*<sup>®</sup> methodology applied to a groundbreaking ceremony. It shows, over the course of one year, the completion of a full cycle in the methodology for developing the capability for **collaborative work**.

• **Accompaniment and community action internal training program.**

To guarantee that the Foundation’s accompaniment is performed in an efficient, informed, committed, and safe manner, a training model for action was designed to enable each aide to stay apprised of human development tools, strengthen their community accompaniment skills, and reinforce their understanding of social service as a personal life project. The success of this training largely depends on aides’ performance on site and on their potential for influencing

the strengthening of school community members’ individual and collective capabilities. The Social Model takes into account the development of various training activities aimed at the operational and accompaniment team:

- **Communities of learning and practice.** Based on participatory action research practices, through these activities, members of the operational and accompaniment teams reflect on their own tasks, the way in which fieldwork is carried out, and lessons learned.
- **Workshops on tools for community action.** In these sessions, workshops are designed around the objectives and scopes of the Foundation’s Social Model, as well as attitudes and skills for fieldwork. Likewise, in accordance with the needs of each education community, content-based programs are designed that allow the operational team and aides to carry out their work in an optimal manner specific to each community.
- **Internal strategy sessions or sessions with specialized professionals:** Action protocols are collectively established to face new challenges that emerge out of accompanying education communities.
- **Professional development guidance groups:** These groups seek to guarantee the well-being and safety of aides as they carry out their tasks. Specialized courses are offered in self-care and social-emotional accompaniment strategies (among others) so that aides can perform optimally in education communities.

**Table 1: Activity Using the Descubrimiento y movimiento® Methodology**

- **Activity:** Groundbreaking ceremony
- **Capability:** Collaborative work
- **Place:** Primary School, Primaria Amado Nervo “La Presa Tulpetlac,” in Ecatepec de Morelos, State of Mexico
- **Dates:** November 2017 - November 2018 (1 year)

No.	Activities	Actors	Participation	Identify	Unite	Organize	Manage	Recognize	Evidence
1	Initial visits by Alberto Baillères Foundation Board members to select schools	Education authorities, municipal authorities, and the Foundation team.	10 people	Identify					Photographic evidence, field report
2	Interviews and group sessions to meet and identify education community actors	Education authorities, local leaders, families, educators	10 people	Identify					Report on interviews
3	First workshops to comprehend the context of the education community	Families, school administrative staff, and educators	10-20 people	Identify	Unite				Photos of the first awareness workshop, field report
4	Establishment of planning committees for the groundbreaking	Families	20-30 people		Unite	Organize			Photographic evidence, field report
5	Focus group with children to learn what they would like to see at the groundbreaking ceremony	Lower and upper primary students	10-20 people	Identify					
6	Follow-up sessions with families and school senior staff for event planning	Families and school administrative staff	20-30 people		Unite	Organize			Photographic evidence, field report
7	Listening spaces to learn about the activities envisaged for the celebration event	Families and school administration staff	20-30 people	Identify	Unite	Organize			Photographic evidence, field report
8	Logistics planning by the Alberto Baillères Foundation, school administration staff, and families’ representatives	Families and school administrative staff	5-10 people		Unite	Organize			
9	Designation of the families responsible for managing tasks specific to the organization of the groundbreaking	Families	10-15 people		Unite	Organize			Photographic evidence, field report
10	Signatures of consent to determine agreement on the rebuilding project	Parents	100+ people	Identify	Unite	Organize			Signatures in agreement with the project
11	Organization sessions with the Alberto Baillères Foundation to define key roles in the event	Students, families, and school administrative staff	5-10 people			Organize			Event program
12	Design of the “Transforming as a community” banner that includes signatures of consent	The Alberto Baillères Foundation				Organize	Manage	Recognize	“Transforming as a community” banner
13	Assignment of tasks within the education community to clean the school areas where the event took place	Parents	30-40 people			Organize			
14	Participation of families in charge of cleaning, decorating, and preparing meals for the event	Families	60-70 people		Unite	Organize	Manage		Photos of the organization process for the groundbreaking ceremony
15	Construction of a time capsule containing letters, fingerprints, and photographs of Primaria Amado Nervo students, supplied by students themselves	Families and students	100+ people		Unite	Organize	Manage		Video of the families to be placed in the capsule
16	The groundbreaking had broad turnout from community members, as families from La Presa also attended, given that this was a moment of recognition of the community responsible for the school’s rebuilding	Parents, students, education authorities, school administrative staff, municipal authorities, the Foundation team	100+ people			Organize	Manage	Recognize	Groundbreaking ceremony video
17	Presentation of a render of the new school during the event	Parents, students, education authorities, school administrative staff, municipal authorities, the Foundation team	100+ people	Identify	Unite			Recognize	Video
18	Closing session with a few representatives of the families to recognize their achievements during the event	Families	5-10 people					Recognize	Photographic evidence Field report

#### 4. Assimilation of Learning Experiences

This strategic guideline refers to the systematic process of reflection, analysis, and critical interpretation of the Foundation's practices with education communities, always in relation to the development of the educational habitat. This exercise enables the recognition of learning and the production of knowledge that improves the Social Model and promotes social innovation.

In order to enrich the systematization process as “a process of social construction of knowledge that allows reflection on the practice in order to learn from it, to conceptualize, understand, and strengthen it” (Cifuentes, 2016),<sup>10</sup> learning communities —both virtual and in-person— and communities of practice have been formed to reflect on how to improve attitudes and skills in education communities, as well as collaboration and dialogical and collective learning among all actors. Both learning communities and communities of practice make use of participatory action-research strategies to strengthen their work.

The participatory action-research tools developed in communities of learning and practice as well as the methods of the monitoring, evaluation, and development area of the Social Model are aimed at the constant improvement and sustainability of the proposal.

Besides participatory resources for systematizing the experience, aides use a learning log to clearly record observations and evidence of improvement that account for the interactions and experiences in the operational process of the Social Model. Systematically, upon the preselection of school communities, all information is carefully entered from day one in living documents that are expanded upon every week. Information is gathered in a series of field templates designed to enable standardized and systematic recording of the interaction between accompaniment team and education community members.

For each education community that the Foundation works with, a dossier is compiled with the most relevant documents in order to provide timely monitoring with each community and monitor its level of maturity for social transformation. This corpus is used to demonstrate and document the trajectory of interactions, establish trends and relationships between actions and results in a given cycle and project, and provide robust elements to reflect upon and use to prepare new educational proposals and content for lifelong learning. The systematization of information, understood from the recognition of collective learning experiences in a learning community, gives value and meaning to a task that might otherwise be considered a mere delivery of institutional plans and reports.

As explained throughout this document, the systematization of experience and the reflections that derive from it are a style of work whose ultimate



<sup>10</sup> This English translation is for reference purposes only. Original in Spanish.



goal is the sustainable appropriation of the project by education communities and the Foundation's team. This appropriation allows the proposal to be scaled and replicated, adapting it based upon the specific characteristics of other contexts. Likewise, this reflection puts "doing" on pause to focus on "thinking," in order to recognize the framework that results in new learning experiences through creation, transfer, and exchange of knowledge.

The foregoing demonstrates that the Social Model presented here is in a continuous process of validation and improvement which is enriched every day through the several tools it uses to reflect the identity and tasks of the Foundation. The systematization of this action-research process is meant to provide new knowledge on the processes of social transformation that enables the comprehensive empowerment of an education community.

**Photo 10:** *Collective reflection puts "doing" on pause to focus on "thinking."*



**Photo 11:** *The systematization of experience results in sustainable appropriation of the project.*

## 5. Transfer and Exchange of Knowledge

As a result of assimilating learning experiences and through the knowledge transfer and exchange strategy, the Alberto Baillères Foundation intends for its Social Model to extend to and be replicable and adaptable to various national and international contexts. Supported by the Foundation's system of monitoring and evaluation, this strategy is directed, in a differentiated manner and according to specific objectives, to the various networks of actors with whom the Foundation has links and has established different levels of dialogue.

On one hand, it is important to disseminate the Foundation's work among public administration actors, as well as some contributions and innovations introduced into education communities, since these can be taken into account to develop public policies or to reconsider or evaluate certain criteria and guidelines that the Social Model has put into practice on site (as in case of the infrastructure component presented in this document). Likewise, possible public-private partnerships and social investment projects can be anticipated that directly benefit education communities and lay the groundwork for shared responsibility between the government and society. In this regard, dissemination of the Social Model is also important in some regional or state public agencies with similar projects.

On the other hand, in the field of non-governmental organizations (civil associations, international organizations, consulting agencies) and academic centers (universities and research centers), the exchange of information, experiences, and lessons learned is a fundamental practice in order to enhance the practical-theoretical knowledge of social action in the framework of the right to quality education. This exchange of information and the Foundation's contribution to the construction

of scientific knowledge can be achieved through inter-institutional collaboration agreements, participation in academic forums, training of applied research groups, or academic and informational publications. The scope of these contributions may be national, regional, or international.

Finally, keeping a permanent space open for education communities to transfer and exchange information is not only a need but a responsibility the Foundation has to these communities. In light of this, networks created between education communities as well as participation in community events (such as the groundbreaking ceremony or celebrations of the process of collectively creating an educational habitat) are also part of the strategy. This also allows the Social Model to be understood, known, and eventually replicated in other communities with interests and characteristics similar to the project.

In this way, the Alberto Baillères Foundation's role as a liaison enables different institutional and academic actors to collaborate in disseminating and transferring the Social Model and collectively contribute to improving the quality of education and the spaces where it develops, as well as contribute to the recovery of the social fabric through education in communities that have had few opportunities to improve their conditions of human development.

**Photo 12:** *Maintaining a space for communication is a need and a responsibility.*



## B. The Operational Chain

The operation of the Social Model activates strategic guidelines in an organized manner, defines different moments of the management process, and guarantees its methodical implementation at the education community level. In this way, the Foundation guarantees the presence of the minimum conditions that allow the impact and return of the social investment to be optimized.

One of the most important contributions of the Social Model is the development of an operational blueprint that guides the action of the Foundation's team in the implementation of the proposal in education communities. Strategic guidelines are operated through the activation of this **operational chain**, which establishes an ordered and methodical linking process and participatory action with education communities. The operational chain develops in seven stages: preselection, selection, diagnosis, immersion, strengthening, consolidation, and completion.

### 1. Preselection

The Alberto Baillères Foundation has defined some general criteria for the preselection and selection of the education communities where the Social Model will be implemented. First, preselection involves the Committee of the Foundation, given that this is a strategic decision of impactful social investment. In this process, the Agency and Liaison team takes on great importance.

The preselection process begins with an evaluation of state and municipal contexts, in which political, social, and security conditions are analyzed to catalog and map risks and evaluate the project's feasibility. Once these analyses are complete, the Foundation possesses the necessary information to focus on local conditions. After a specific community is selected, the Foundation prepares a list of the schools that meet a series of requirements in order to be eligible: for example, the conditions of their facilities, characteristics of their context, and possibilities for community participation, as well as initial levels of autonomy, self-management, and cohesion.

Subsequently, after gathering information on political, legal, social, educational, and prevention aspects, as well as risk and infrastructure, **the social and technical feasibility of the project** is analyzed and a **preparatory action plan** is designed to select the education community.

### 2. Selection

Once the aforementioned information has been assimilated, the selection process formally begins. To this end, the following actions take place:

- **Management of legal requirements:** Management of specific agreements begins with the parties in the preselected community.



- **Program of needs:** A program of needs is created with the participatory collaboration of the community. This moment is critical given that the Social Model, in keeping with its Principles, takes into account and seeks to meet the expectations and specific needs of the environment of the education community which will be accompanied.
- **Project design:** The project is developed with the education community as a result of the participatory collaborative process. The proposal must be approved by institutional and community actors and validated by the Alberto Baillères Foundation Board.
- **Polygon of influence delimitation:** The area where collaboration will begin is defined in the technical sense. To this end, safety and security maps of the polygon, a local-level risk agenda, and maps of the geographical conditions (topography, hydrography, ecosystem, environment) are created; likewise, access to transportation infrastructure (roads, streets, accesses) and utilities (water, power) is identified. Additionally, on the social side, economic activities and the use of resources are analyzed, and the school's physical and social obstacles, including each community's sense of belonging, are identified.

Based on such criteria, the Foundation has enough detailed information to make an informed decision and, at the same time, minimize risks and unexpected events. At the end of this process, a **project is approved** by each of the parties involved.

**Photo 13:** *The aim is to meet the expectations and specific needs of each education community.*



### 3. Diagnosis

Once the education community where the Social Model will operate has been selected, a diagnosis is made through a dialogical exercise in which the actors of the education community collectively give an account of the school's history and background. This first approach allows the Foundation to identify features of the context and dynamics found within the system of the education community and to evaluate the community's potential for transformation. Additionally, the Foundation invites the education community to analyze its level of autonomy, self-management, and cohesion through different participatory techniques.

As a result of this self-diagnostic exercise, a first agreement is established between the Foundation and the community and a dossier is assembled which will serve as the starting point for activating the Social Model and systematically guiding the experience. In this way, an accompaniment strategy that emanates from the education community itself and a proposal that regards its identity and fulfills specific needs based on its particularities are defined. As a result of these exercises, a **master plan** (with the endorsement of the relevant authorities) is created and a **memorandum of understanding** with the education community and the necessary **agreement(s)** needed to begin the collaboration are signed.

### 4. Immersion

This stage consists of the operational team becoming immersed in the community to learn about its internal dynamics and networks of interaction and consequently establish links between the participants that allow them to set a common goal and begin the necessary actions for achieving it. Likewise, the team works on building trust to engender transparent and meaningful interpersonal relationships between the members of the education community and the Foundation. It is on the basis of establishing these links that a concrete project of improvement and mutual benefit can be collaboratively created as a product of a vision shared between the members of the education community.

In this way, the first **coexistence and shared responsibility agreements** are defined between the Alberto Baillères Foundation and the education community: collaboration objectives are established and incentives are identified to promote the participation of actors in the Social Model. At this point, the Foundation requests that the first agreements be established and signed as evidence of the understanding and determination of each party to work in a jointly responsible manner. Once this stage is completed, a **groundbreaking ceremony** and **construction work kick-off** event is organized.



**Photo 14:** Task groups are created and organized around a common objective.

## 5. Strengthening

This stage focuses on building individual and collective capabilities to strengthen education communities through the *Descubrimiento y movimiento*<sup>®</sup> methodology. To this end, task groups are created and organized around a shared objective or a vision to be attained in the short, medium, and long term, as determined by each organized group. These structures (new or existing) begin to develop a **community work plan** that sets out the roadmap of the actions (defined in terms of objectives, goals, and expected results) that the education community itself will implement to attain its objectives. The formal definition of these organizational structures should encourage the inclusive participation of

their members on a voluntary and proactive basis.

At this stage, the community's dossier is updated and the education community's maturation process for achieving its transformation is reflected upon and monitored (see "[Monitoring and Evaluation](#)"). The education community will then be capable of receiving the school as a **donation**, as it will have developed its capacity for autonomy and self-management and will have shown cohesion in terms of community organization and collaboration.

## 6. Consolidation

At this stage, the Foundation accompanies the community in the design and execution of the **sustainability plan** for the educational habitat. Likewise, agreements and commitments are established with non-governmental actors and associations to support the community in the continuation, monitoring, and evaluation of its self-managed projects. The Foundation analyzes, for instance, the number and relevance of projects, inclusion and representativeness of participants, the dynamics of organizational structures, progress made in the level of maturity, and the maintenance conditions of and appropriation of infrastructure, among other aspects. This evaluation is fundamental in preparing the last stage of the **operational chain**: the conclusion or completion of the accompaniment process.

## 7. Completion

At this stage, achievements are celebrated and the learning experiences that stem from the successful execution of the development plan are recognized and identified. First, the education community reflects together with the Foundation on actions implemented, outcomes, experiences, and lessons learned in order to consolidate its autonomy, its capacity for self-management,

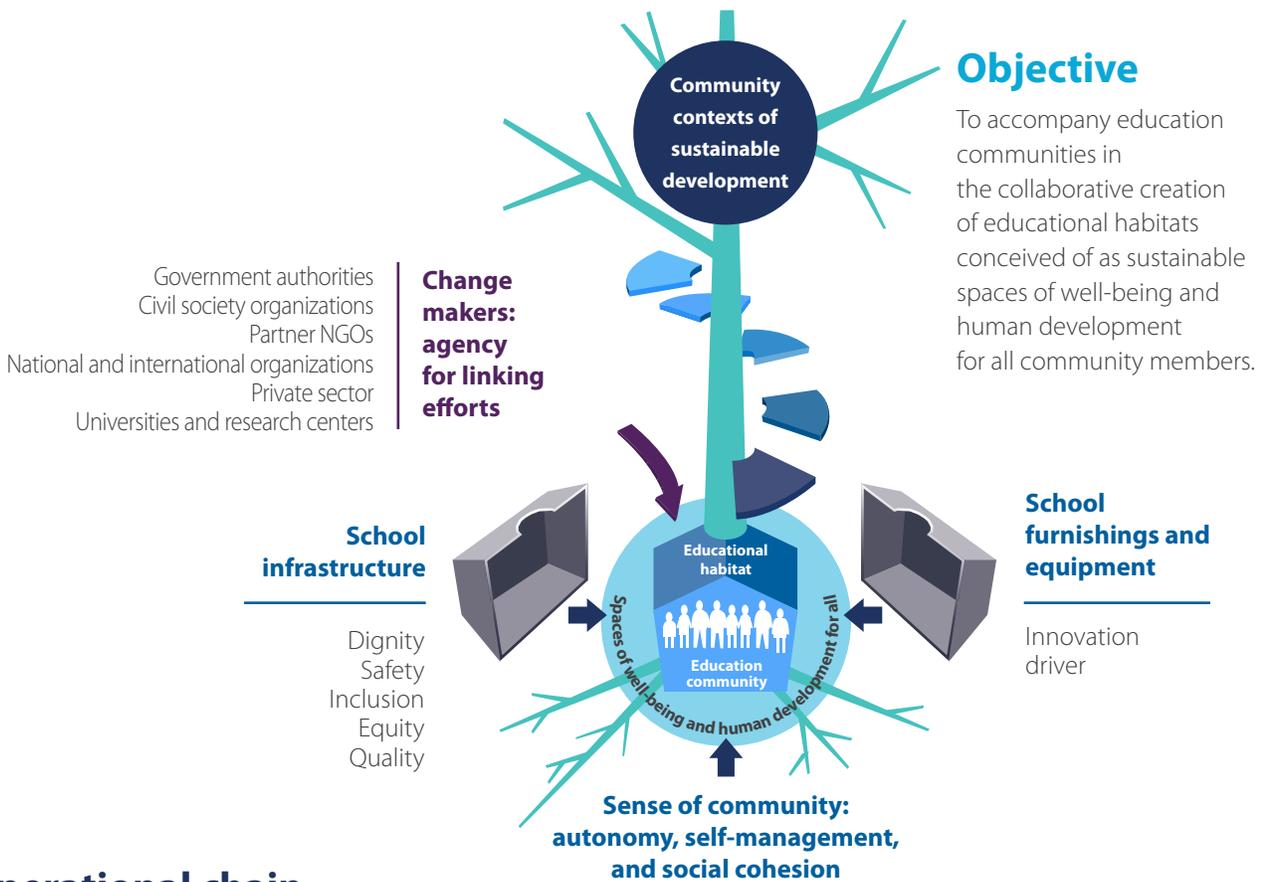


and its path toward cohesion. With this exercise, new goals can be envisioned that enable the community to enrich and take ownership of the project of maintaining and building its educational environment. All this encourages the continuity and growth of learning experiences and of the initial project. It is at this moment that the participation of an external evaluator is requested to **measure impact indicators** and to render an **outcome report**. Finally, an event is organized to celebrate the culmination of the accompaniment process by the Foundation.

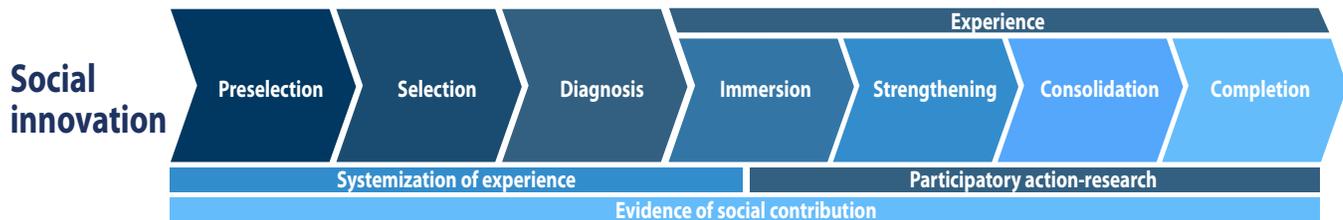
In this way, the socio-community component lays the groundwork for a reflective, deliberate, coordinated, and participatory action with the school communities to fulfill the Objective of the Social Model of accompanying the process of collaboratively creating dignified and healthy educational habitats that allow the achievement of significant and democratic social transformations which are transferrable to other educational contexts. As outlined above, both the socio-community component and infrastructure component interact and develop simultaneously at every stage of the Alberto Baillères Foundation Social Model.

**Photo 15:** Finally, achievements are celebrated, learning experiences are recognized, and actions and experiences are reflected upon.

**Figure 2: The Alberto Baillères Foundation Social Model**



**Operational chain**



**Figure 2** presents a summary of how the approach of the Alberto Baillères Foundation Social Model centers the different members of the education community (students, educators, parents, and authorities). Recognition of the individual, their dignity, and their potential are regarded as essential elements for people to promote cohesion and transform reality themselves through a project of education with a common vision based on collective awareness. The role of the **operational chain** as the basis of the operation of the Social Model can be seen. It is through this chain that a methodological process of accompaniment and liaising with communities is promoted in order to attain, first, a sense of community that allows the creation of significant learning environments and, consequently, the experience of a collective and lifelong learning to promote community contexts of sustainable development through education. Agents of change (government authorities, civil society organizations, national and international organizations, private



sector, universities, and research centers) are revealed as key figures who collaboratively contribute to strengthening the autonomy, self-management, and social cohesion of education communities during implementation. The creation of partnerships for their participation is one of the main tasks of the **agency for linking efforts**. As explained above, it is on the basis of this strategic guideline that a collaboration network is created to sustain community processes and grant them sustainability.

The implementation of the **operational chain** is based on the systematization of experience and on a participatory action-research protocol that enables the observation and monitoring of the implementation of community experiences, as well as plans created by the education community, in order to gather evidence of social contribution. This process fosters reflection and analysis on the most significant shifts that occur, in accordance with fundamental principles, deliberate actions, and monitoring and evaluation indicators. The systematization undertaken in this participatory action-research process seeks to adjust, provide new knowledge, and guide decision-making on processes of social transformation that take place in the relationships and empowerment of the education community, in order to develop self-management aimed at social cohesion and their school's inclusive and democratic well-being.

Along with this community process, the development of educational habitats is also solidified through an innovative proposal for architecture and furnishings that offer dignity, safety, inclusion, and equity, and that promote creativity, communication, interaction, and comprehensive development for all community members. The following section addresses this subject.

**Photo 16:** *Recognition of the individual, their dignity, and their potential are essential in the promotion of social cohesion and the transformation of reality.*



# IV. The Infrastructure

## Component

# The Construction Process

1

## Foundation

Site clearing and leveling to build a solid foundation that supports the structural load of the school infrastructure.



2

## Structure

Setup of the infrastructure's framing.



3

## Brickwork

Construction of walls and other complimentary elements additional to the school infrastructure, built with various materials.



# 4

## Installations

Placement of all secondary elements —electric, plumbing, hydraulic, gas, and special systems— required for correct use of the school infrastructure.



# 5

## Finishes

Work carried out at the end of the project: surface preparation, painting, plastering, and installation of doors, screens, and metalwork, as well as equipment.



## IV. The Infrastructure Component

The Social Model's infrastructure component encompasses two dimensions: on one hand, the improvement and collaborative design of sustainable, inclusive, and safe educational spaces as a result of a series of innovations that meet the actual needs and expectations of education communities. On the other hand, this component addresses the development of a proposal for appropriate, flexible, and versatile classroom furnishings that meet the pedagogical requirements of classrooms and other school spaces.

The infrastructure component is therefore the realization of Alberto Baillères Foundation's Objective of collaboratively creating educational habitats: spaces of well-being for all, in which school infrastructure and community participation play an essential role.

### A. Spaces

A school space is, by definition, a place where people congregate and which encourages academic education, socialization, and community participation. It is a privileged area for generating and combining all types of social interactions and strengthening relationships between the actors of an education community. An ideal school space shelters the members of its community, facilitates exchange, and provides appropriate environments for the best development of pedagogical, social, and cultural activities. Particularly in socioeconomically-disadvantaged locations where vulnerable population groups converge, schools can help create a healthy and violence-free environment that improves quality of life perspectives in the education community and its environment.

In 2016, the Inter-American Development Bank produced a report on educational infrastructure in Latin America in terms of equity, adequacy, and effectiveness. Among its main findings, the study highlights that significant inequalities prevail in the countries in this region, particularly in relation to economic and social vulnerabilities ([IADB/UNESCO, 2017](#)). These findings are consistent with the observations that the Alberto Baillères Foundation has made during its fieldwork, which became a diagnosis of needs in terms of school infrastructure in which different education community actors participated, including authorities, educators, students, and families.

In view of the urgency to improve schools in order to enable populations to exercise their right to a quality education, the Alberto Baillères Foundation has taken on the task of developing, as part of its Social Model, a proposal on physical school infrastructure that not only offers the best elements of design, sustainability, inclusion, and safety, but that also becomes a constituent component of a **new educational habitat** in which all education community



members find opportunities for individual and collective development and shared alternatives for well-being.

**Photo 17:** *Innovation dialogues with tradition.*

## 1. Innovation: In Dialogue with Tradition

There is a longstanding tradition in Mexico of designing, building, and managing physical school infrastructure, as well as significant experience in organizing and encouraging participation from members of the education communities in various school activities.

The Alberto Baillères Foundation's proposal cannot be understood without considering the relevance of the preceding institutional projects that have largely served as its basis. In particular, the Administrative Committee of the Federal School Construction Program (Comité Administrador del Programa Federal de Construcción de Escuelas, CAPFCE) and the National Institute for Physical School Infrastructure (Instituto Nacional de Infraestructura Física Educativa, INIFED) have played essential roles in achieving the large coverage which basic school infrastructure currently has in our country. More recently, UNESCO has accompanied analysis and reflection concerning best infrastructure practices for the education sector as well as the importance of relying on the active participation of education communities in order to create environments of peaceful coexistence that enable the full exercise of the right to a quality education.

Undoubtedly, an appreciation of these precedents and the ability to dialogue with tradition have served as the starting point for carrying out a diagnosis and introducing elements of social innovation that meet the needs of the present and complexities of education in the future.



**Photo 18:** The infrastructure component is the realization of the Objective of the Social Model.

### a. From the CAPFCE to INIFED

In the second half of last century, Mexico stood out internationally for proposing models of managing and building physical school infrastructure that, at different times, appropriately met the needs of a country that spans a huge territory with extremely diverse physical, social, economic, and cultural characteristics.

In 1944, in the midst of the country's modernization, which was expressed in the consolidation of the Mexican state and its institutions, the Secretariat of Public Education (Secretaría de Educación Pública, SEP) established the Administrative Committee of the Federal School Construction Program (Comité Administrador del Programa Federal de Construcción de Escuelas, CAPFCE), an agency responsible for building physical school infrastructure to foster national basic education. The CAPFCE established a set of general construction guidelines for basic education facilities which were flexible enough to take into account the geography of the country's regions and the possibility of implementing solutions that, in practice, would be implemented by regional committees established for this purpose.

At first, the CAPFCE intended not to create a model construction design for the country's schools, but to respond to "the need for a new system that would allow construction that was widespread, plentiful, and capable of resolving in the short term the serious shortages that afflicted the country," according to the architect Pedro Ramírez Vázquez, one of the project's creators (INIFED, 2014, p. 34).<sup>11</sup> However, years later, the CAPFCE embraced the design and construction recommendations made to UNESCO by the International

<sup>11</sup> This English translation is for reference purposes only. Original in Spanish.

Union of Architects. Consequently, the CAPFCE's initial flexibility gave way to a set of mandatory regulations for regional committees ([Miranda, 2013, p. 352](#)).

In the late 1950s, the idea of using prefabricated classrooms was implemented. Prefabricated classrooms offered an appropriate solution to the CAPFCE's needs from both the technical and the financial points of view: "these were very simple and light structures, [with] low-cost production, adaptable to diverse climates, which could be assembled in situ by the population itself, [and which had] correct dimensions and a precise functional layout, simple and effective plumbing installation, simple finishings, plastic materials for windows, complete instructions, [and were] easily transportable to any point in the country" ([INIFED, 2014, p. 34](#)).<sup>12</sup> Construction materials were delivered along with a 'school manual' that included instructions on how to assemble the classrooms. The Regional Center for School Construction (Centro Regional de Construcciones Educativas), founded in 1963 and supported by UNESCO, promoted Ramírez Vázquez's project ([UNESCO, 2019a, p. 6](#)) and built prefabricated classrooms using the same design in 17 countries ([Sierra, 2019](#)). Approximately 30,000 classrooms were built in Mexico between 1958 and 1964.

In 2008, over six decades later, the CAPFCE became the National Institute for Physical School Infrastructure (Instituto Nacional de Infraestructura Física Educativa, INIFED), "an agency with regulatory, consultancy, construction, and quality certification authority over school infrastructure in the country, and an advisory body for the prevention of and assistance in case of natural, technological, or human disasters in the educational sector" ([INIFED, n.d.](#)).<sup>13</sup> INIFED took over the CAPFCE's functions, now with a more formal structure that was closely aligned with the state's development strategies, and with a broader framework of supervision and monitoring of construction projects. Among its functions, INIFED established federal guides and guidelines for the construction of school infrastructure and granted state institutions autonomy in setting their own guidelines.

From its beginnings, the infrastructure component of the Alberto Baillères Foundation Social Model addressed, on the one hand, the designing of comprehensive architectural projects for public schools and, on the other, specific actions to rehabilitate school spaces which have been damaged or undergone deterioration for a number of reasons. Naturally, the SEP, INIFED, and state agencies<sup>14</sup> are strategic interlocutors for generating inter-institutional links and partnerships between the public and private sectors in order to expeditiously and transparently improve school infrastructure, expand possibilities for investment in social innovation, and strengthen education communities' participation in their own development.

The Social Model's architectural proposal is based as much on the analysis of the educational content of courses of study (SEP) as it is on the various activities that promote comprehensive development. It also takes into account a detailed study of federal and state architectural requirements as well as the specific needs and

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**12** This English translation is for reference purposes only. Original in Spanish.

**13** This English translation is for reference purposes only. Original in Spanish.

**14** Such as the State of Mexico Institute for Physical School Infrastructure (Instituto Mexiquense de la Infraestructura Física Educativa, IMIFE) in regard to the projects in Ecatepec.

vocation of each school the Foundation works with. One central strategy is the development of participatory diagnostic exercises with education communities. All of these analyses are used to design a project that is both flexible and aligned with institutional requirements, the needs of each location, and the aspirations of each community. In other words, taking the expert knowledge that SEP and INIFED have accumulated over decades as a point of reference, and through fieldwork carried out with the education communities, the Alberto Baillères Foundation has managed to produce an architectural proposal which is not only innovative and socially appropriate, but also feasible and efficient in terms of material and financial resources.

### ***b. Educational Habitat***

Various specialists agree that the quality of school spaces exerts a positive effect on learning, given that appropriate design can be the first element in an environment that promotes collaboration, dialogue, coexistence, pedagogical activity, and concentration. The school is no longer the exclusive province of educators and pedagogues, but an area which sees participation by architects, psychologists, engineers, planners, and philosophers, among others. Likewise, “advances in the cognitive sciences, recognition of multiculturalism, and the strong presence of digital technology, as well as problems associated with inequality, different forms of cultural chauvinism, and global climate change, among other recent phenomena, are impacting daily life in educational centers and have forced educators to rely on new conceptual tools in order to rethink the current role of education and the educational institution in the education of new citizens” (UNESCO, 2019a, p. 25).<sup>15</sup>

A watershed moment in this discussion was the School Habitats for Quality Education in the 21<sup>st</sup> Century International Forum (Foro Internacional “Hábitat escolar para el aprendizaje de calidad en el siglo XXI”), organized by the UNESCO Office in Mexico and INIFED in October 2018. Attended by experts from all over the world, this forum was intended to acknowledge best practices in school infrastructure design in general and to analyze how these elements directly impact the quality of learning experiences.

**Photo 19:** *The quality of school spaces has a positive effect on learning.*



During the course of these reflections, experts acknowledged that quality educational spaces require not only the material solution of deficient school infrastructure or equipment, but also an adequate response to the challenge of building learning environments that enable “education communities to become true places or habitats open to learning, where students and educators work together as a team, carry out projects, develop creativity, coexist peacefully and healthily, and appreciate the diversity which exists in their community” (UNESCO, 2019a, p. 6).<sup>16</sup> Other aspects such as playful learning, school day length, and emotional, social, and physical development were also topics of discussion.

<sup>15</sup> This English translation is for reference purposes only. Original in Spanish.

<sup>16</sup> This English translation is for reference purposes only. Original in Spanish.

Beyond a doubt, schools must certainly adapt to new situations and realities. They must situate themselves in their contexts, but at the same time provide an alternative space in which community problems are not reproduced; on the contrary, schools must be spaces where solutions are found. A school must be an “organization that learns, a dynamic and systemic entity whose relationships and interactions give the school its pedagogical meaning. In this way, a school, understood as a habitat or place of learning, is the support (buildings and objects) that gives meaning to its residents’ (educators, students, authorities, parents, community) significant interactions (teaching, learning, coexistence, management)” (UNESCO, 2019a, p. 26).<sup>17</sup>

The conception of the educational habitat derived from the Objective of the Alberto Baillères Foundation Social Model has guided and inspired each stage of the architectural project. The infrastructure component is based on this unifying idea, which conceives of the individual as an inseparable part of their physical and social environment: the education community develops in a space that promotes (rather than hinders) interaction and learning and encourages the entire education community to collaborate and actively participate in its own learning process. The goal is to promote the collaborative creation of environments in which learning leads community members toward comprehensive development and offers tools for equitably and inclusively accessing knowledge that is relevant to their reality, enables their well-being, and is appropriate and pertinent to the vocation of each location.

**Photo 20:** A flexible project is designed which is aligned with institutional and community requirements.

## 2. Modular Design: The Baillères Foundation Prototype

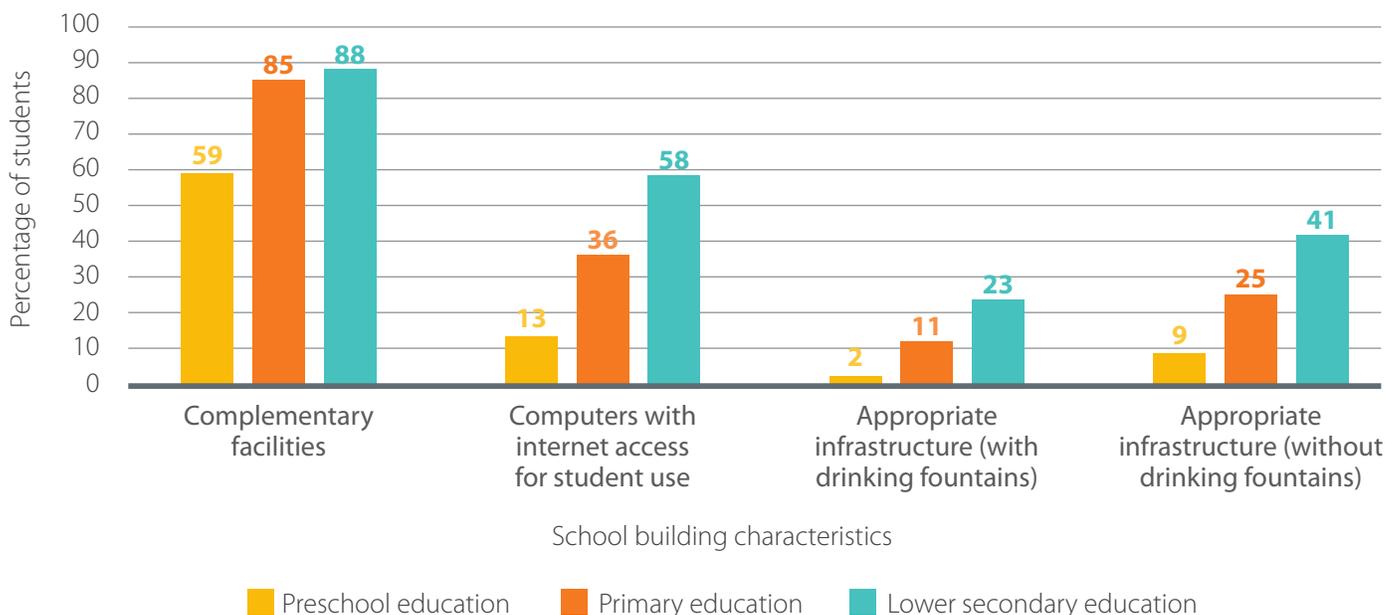
While the joining of institutional efforts allowed Mexico to reach 98.7% physical school infrastructure coverage for primary schools and 84% for lower secondary schools in the 2018-2019 school year (Mejoredu, 2020, p. 120), serious difficulties from different factors have been identified: a lack of budget for maintenance of facilities and equipment or for expanding and renovating existing infrastructure; a lack of personnel for supervision and monitoring of construction; a shortage of basic utilities (such as drainage, water supply, or plumbing) in areas with social lag (marginalized urban areas, majority-indigenous rural regions); damaged infrastructure as a result of natural disasters (including earthquakes, hurricanes, and floods) or “irregular” constructions outside of regulated standards; a lack of furnishings and appropriate spaces for educational or administrative activities; poor access and accessibility; and vandalism or burglary in facilities, among other problems.

According to the National Council for the Evaluation of Social Development Policy (Consejo Nacional de Evaluación de la Política de Desarrollo Social, CONEVAL), in Mexico only 2% of early childhood education students, 11% of primary education students, and 23% of lower secondary education students have access to all necessary,



<sup>17</sup> This English translation is for reference purposes only. Original in Spanish.

**Figure 3: Percentage of Students Who Attend Public Schools With Complementary Facilities, Computers With Internet Access, and Appropriate Infrastructure, by Level of Education (2013)**



Source: [CONEVAL \(2018, p. 70\)](#)

Notes: “Complementary facilities” are considered to be libraries, auditoriums and art rooms, cafeterias/canteens, and ICT availability. Sport facilities were not included in the calculation of this indicator. “Appropriate infrastructure” means construction which meets the minimum requirements for health, durable materials, basic and complementary utilities, and basic and complementary furnishings.

quality facilities in their schools: basic infrastructure, complementary facilities, and computers with internet access ([CONEVAL, 2018, pp. 69-70](#)). This means that, although the coverage of school buildings is broad, few schools offer sufficient services and quality spaces for fostering the acquisition of meaningful learning and the exchange of practical knowledge.

On the other hand, although there is no overall deficit in spots for students in primary schools in relation to demand ([IADB, 2015, p. 148](#)), availability is not evenly distributed throughout the country or at all educational levels: there are insufficient spots for both preschool and upper secondary schools. In informal urban settlements, for instance, where growth is disorganized and utilities are absent, there is also a lack of schools, or places within them. However, in city centers that have depopulated in order to accommodate business, there are schools with unoccupied spots.

This information is relevant because it allows us to note three realities: first, the presence of schools being left empty due to population movement; second, overcrowding in schools that, due to their location and demand, cannot take more students; and finally, the demand for new schools in areas where population has increased.

All the aforementioned, in addition to the earthquakes of September 7<sup>th</sup> and 19<sup>th</sup>, 2017 —which severely damaged several school buildings in Mexico’s

southern and central states<sup>18</sup>— led the Foundation to concentrate its efforts on two tasks: first, on establishing design standards for renovating existing schools to meet the requirements of new educational environments; and second, on the Social Model's Objective of collectively creating **educational habitats** in which education communities find opportunities for comprehensive human development which allow them to strengthen their bonds, as well as their social practices and collective learning, and consequently improve their quality of life.

### ***a. From the Diagnosis of Needs to the Architectural Project***

In developing an architectural project, the starting point is always a **diagnosis of needs** in the field of school infrastructure which documents a project's technical and design requirements, the study of the physical environment and associated risks, and the profile of the population which will benefit from the project.

Although these considerations apply generally to any architectural project, the objective of the Alberto Baillères Foundation's diagnosis of needs is not to build school facilities, but to accompany education communities in identifying their own needs in order to collaboratively create sustainable educational habitats that foster local development. This diagnosis therefore involves, in a broad and specific manner, the following analyses:

#### **• Territorial Analysis**

Territorial analysis studies the construction area in its physical, demographic, productive, urban, economic, and environmental dimensions, as well as the interrelations between each of these dimensions. The purpose of this analysis is to achieve an understanding of the geographical space which enables the definition of the area's vocation, infrastructure capacities, and, of course, the way in which the education community relates to this territory, integrates itself within it, and responds to its context.

In addition to identifying spaces and their geographic and topographic layouts, dimensions, boundaries and land use, and security conditions, among other technical aspects, this analysis also incorporates a demographic study which determines population density and distribution throughout a given region, at the local level, and in the area of influence, as well as demographic projections and the relationship between population density and land use.

Information on existing physical school infrastructure is an essential element in this analysis, as it enables orientation in terms of primary, secondary, and upper secondary education equipment and consequently allows deficiencies to be identified and urgent community needs—in terms of supply and demand for educational services—to be prioritized.

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**18** According to INIFED and as cited by CONEVAL (2018), "13,029 schools reported minor damages; 6,822 reported severe or moderate damages; and 210 reported serious damages" (p. 69). [This English translation is for reference purposes only. Original in Spanish].



**Photo 21:** *The area's physical, demographic, productive, urban economic, and environmental dimensions are studied.*

#### • **Legal Analysis**

The legal framework of the field of school infrastructure has its own complexities. On one hand, there are general, federal laws such as the General Education Law; the General Law on the Inclusion of Persons with Disabilities; the General Law on National Assets; the General Law on Civil Protection; the General Law on Administrative Responsibilities; the General Law on Human Settlements, Spatial Planning, and Urban Development; the Federal Law on Archaeological, Artistic, and Historical Monuments and Areas; and the Federal Law to Prevent and Eliminate Discrimination. Each law has its own corresponding regulations, as well as legislation by each autonomous federal entity. Occasionally, local legal criteria can come into conflict with federal provisions; this happens, for example, in the coordination and organization of labor, which presents a challenge in management. Likewise, sites may be encountered which have undefined legal status (e.g., in terms of land ownership or indigenous customary law) that may eventually be inconsistent with legislation or even contradict it.

The same situation occurs with the education authorities responsible for authorizing construction, which include the federal Ministry of Public Education and its corresponding state agencies; state and federal agencies in charge of public works and finance; and institutions like INIFED and its corresponding state agencies. Each organization establishes its own standards and specific criteria regarding, for instance, the use of land, an area's vocation, and land ownership; they may even abide by the customary law by which governs some local communities.

Finally, it is important to consider the fact that INIFED maintains strict standards on studies and projects of construction and facilities, technical requirements for proper land selection, and architectural design standards, in addition to guidelines on construction, basic services, maintenance and infrastructure renovation, as well as quality and safety standards, among others.

The purpose of performing a legal analysis is, therefore, to study the conditions of the land selected for building a school upon and the "legal clearing of the property" ([IADB, 2015, pp. 149-150](#)) in such a way that all legal criteria are aligned and prepared for the implementation of the Social Model. Nonetheless, the possibility of difficulties appearing at the community level should be foreseen, even in areas where prevailing legislation is fully complied with; dialogue must therefore prevail in order for legal criteria and social demands to be in agreement. In these cases, negotiation and consensus are essential tools for the resolution of real or potential conflicts, and the agency capacity of the Alberto Baillères Foundation is critical.

#### • **Social Analysis**

In addition to studying a population's characteristics, socioeconomic conditions, age and sex profiles, and levels of education, among other demographic features related to inclusion and diversity, in a social analysis it is essential to identify collaboration networks and to recognize the needs and aspirations of community members. Consulting quantitative information or any information in databases is not enough: this analysis requires direct fieldwork with the education community involved in order to promote their active participation from the beginning of the project, as detailed in the socio-community component section (see ["The Socio-Community Component"](#)).

Fieldwork involves interviews and meetings with education community members in order to identify their needs, conflicts, and desires regarding the collective creation of an educational habitat, as well as their expectations; it also involves documenting their interrelationships and styles of coexistence in the school environment. The objective of qualitative social analysis is to use the information gathered in this analysis to help guide decisions which will be included in the architectural program,



**Photo 22:** An education community's collaboration networks, needs, and aspirations are identified.

since they stem from the shared vision of the community itself.

It is important to remember that the socio-community and infrastructure components are two prerequisites without which the Alberto Baillères Foundation Social Model cannot be implemented. In other words, the socio-community component directly impacts the design, use, and proper management of infrastructure and, vice versa, the infrastructure component becomes a vehicle for social transformation and a privileged means of encouraging participation among education communities and the actors who comprise them.

#### • Document Analysis

This analysis allows a closer approach to the background of the architectural project to study institutional structure from the community context and carry out comparative analyses to identify best practices in the area of school infrastructure.

Documentary research is a critical input for conceptualizing and theoretically substantiating a project. In this sense, involving academic, local, or regional partners at this point in the diagnosis can be of great value in building the conceptual and methodological basis of the architectural project.

Likewise, national or international organizations which are experts in community work and designing educational projects can be consulted in this analysis, as well on technical issues (e.g., pedagogy) or social and cultural ones.

As can be observed throughout this document, one fundamental assumption of the Alberto Baillères Foundation Social Model is that offering quality education requires spaces, furnishings, and equipment to be specifically organized in order to configure a learning environment fit for social interaction, cooperation, and the development of autonomous and meaningful learning capabilities. This analysis is fundamental to delving into the specific configuration of physical school infrastructure, planned for all aspects from classrooms to common areas.

#### • Risk Analysis

The greatest risks associated with school infrastructure in Mexico are typically related to natural disasters, given the country's general climate, topography, and tectonic activity; these disasters are more prevalent in certain regions than others. Risk analysis considers the possibility of extreme events such as hurricanes, floods, earthquakes, or abrupt changes in weather which can

damage facilities or harm their occupants. This analysis goes so far as to consider certain health risks, such as epidemics.

On the other hand, safety hazards may be identified in educational structures; as explained above, structural problems can be the result of improvisations in construction or errors in calculation and design. Likewise, social risks are analyzed that may arise from a project's implementation, such as demonstrations, threats, or attempts by political organizations or parties to take over the project. Finally, this analysis examines risks to the security of the Foundation's fieldwork teams who accompany education communities during the operation of the Social Model, including aspects such as health, well-being, and physical integrity.

For all potential or foreseeable risks, the architectural program sets guidelines and strategies and designs response protocols in order to prevent or face these contingencies.

#### • **Impact Analysis**

As with any project, it is crucial to consider the quantitative and qualitative aspects of the project's impact on its surrounding physical and social environments.

First, the occupancy coefficient (in other words, the ratio of the size of the built structure to the size of the plot) and facilities-in-use coefficient are analyzed, as is the value acquired by the land in terms of these coefficients, population density, and basic services. Possible impacts on the environment and other infrastructure and services are also studied. The purpose of these analyses is not only to evaluate and mitigate any negative impacts the project may have, but also to be able to turn these into positive impacts (that is, to resolve potential conflicts through community participation and involve the education community in decisions that may impact the environment). Use of ecotechnologies, the installation of streetlamps, or artistic intervention on the school's exterior, for example, may have positive social and environmental effects.

The importance of this analysis also lies in the fact that it allows indicators to be designed that measure the physical and social impacts of school infrastructure.

#### • **Financial Analysis**

A project's feasibility partially depends on its financial analysis. Accordingly, a flexible, modular design adaptable to different environments presents a highly cost-effective solution. In fact, as will be observed further on, the Foundation's proposal considers all variables in the use of materials and structural design in order to reduce construction costs per square meter without compromising the safety of facilities. Likewise, costs are analyzed which derive from the use of facilities and from any preventive and corrective maintenance.

For this reason, financial analysis identifies the actors involved in the investment and those responsible for managing the corresponding funds with the relevant authorities, as applicable. Likewise, this analysis defines the flow of resources, the timing of support, and how the application of funds will be supervised and monitored. In this sense, the Alberto Baillères Foundation’s Social Liaison Policy is a fundamental instrument of transparency and commitment in terms of the resources invested in a project.

• **Analysis of Educational Content and School Life**

As previously mentioned, the architectural project is developed, to a large extent, on the educational content and requirements necessary for the comprehensive development of its members.

Spatial requirements (classrooms, administrative offices, service facilities, and common areas) as well as indoor-to-outdoor-space ratios can be established by analyzing courses of study/curricula in accordance with program type (primary, lower secondary, and upper secondary education), level, and learning system. An architectural program that meets the needs of each community is then created based on a space’s capacities and use in terms of the educational content taught and class-hours spent in each space.

**Photo 23:** Educational content and the community’s comprehensive development needs are taken into account.



**Figure 4: Diagnosis of Needs and Architectural Program Roadmap**



Source: The Alberto Baillères Foundation

Another aspect taken into account is students' ages given that both their physical characteristics as well as their attitudes and skills vary. Differences should even be considered among students in the same grades. In the end, the goal is to offer students appropriate spaces as they advance from early childhood to upper secondary education to help them achieve comprehensive development and lifelong learning (UNESCO, 2019a).

The above-cited analyses give rise to an **architectural program** which defines requirements, design solutions, and the way spaces and their usage relate to the community which uses them. Likewise, equipment, furnishings, and support materials needed for the use of spaces are identified and defined.

The architectural program thus clearly indicates project objectives and priorities so that the needs of the education community and of the area of influence are met according to a progressive and organized planning process. Throughout this exercise, the vocation of the area and its community is identified, the technical and social feasibility of the project is defined, and the optimal use of school spaces is established to grant the intervention the greatest possible scope and likelihood of success.

In the Social Model's infrastructure component, the diagnosis of needs and architectural program always regard the school as an educational habitat that promotes environments of learning and collaboration and fosters community development, participation, and social cohesion, always from the perspective of educational innovation.

### ***b. The Modular Design<sup>19</sup>***

As a result of collaborative work with the federal and state institutions involved in the project, as well as input from the education communities in which the architectural program will be implemented, the Alberto Baillères Foundation, in collaboration with the Tecnológico de Monterrey, has presented an innovative proposal which responds firstly to the tradition of physical school infrastructure construction in Mexico; secondly, to the need for new educational environments that place schools at the center of community transformation; and, finally, to the results of a thorough diagnosis synthesized in an **architectural prototype** that offers a model of the school space in a modular design intended to comply with the requirements of a quality school environment.

The principle that introduces the project's greatest innovation is the **module**. A module is the minimum unit of measurement for building a space, which meets all the necessary conditions (of shape, size, and material) for easy, safe, and efficient assembly.

**19** The images and illustrations which appear in this section are for reference purposes only. Space zoning and layout, finishes, materials, and colors may vary according to project-specific solutions.

As mentioned above (see “[Innovation: In Dialogue with Tradition](#)”), the system of building with prefabricated structures was explored, applied, and generalized by the CAPFCE (later INIFED) several decades ago. Though this system has seen variations over time, it has been used as part of the construction standards of INIFED and its state-level analogue agencies for the design and installation of school infrastructure in Mexico.<sup>20</sup> However, it is also recognized that, as a result of various circumstances, not all schools strictly adhere to the characteristics of the INIFED prototype or are imitations that fail to follow guidelines. This was clearly observed during a study of school structures affected by the 2017 earthquakes ([World Bank/ UNAM / INIFED, 2018](#)).

The greatest challenge for the Alberto Baillères Foundation has consisted of developing a proposal that addresses and remedies or improves some of these failures, based on an update of the basic module proposed by INIFED, in order to achieve greater efficiency in construction without losing sight of the guiding principle of this component of the Social Model: the collaborative creation of educational habitats that meet new educational needs and promote sustainable community development.

All of this has implied intense management work at all decision-making levels, since the proposal introduces an innovation, and any innovation must have a firm articulation and basis to justify its validity, acceptance, and importance to the common interest.

### **c. The FB Mx-2.440 Module**

With this context and in order to develop a proposal to update and design a new module that can be used as the basis for new school construction, the Foundation initiated an exhaustive review of documents related to construction criteria set out by official public institutions. Perhaps the most important finding from this review was that the Foundation identified particular construction systems which took the international system of measurement —the metric system— as the basis for the configuration of the module.

Based on this evidence, the Foundation’s first proposal consisted of designing a unified module that would use the foot (ft) as its unit of measurement, given that materials available in the Mexican construction industry are standardized using this measurement and its multiples: wood panels, falsework panels, floor measurements, false ceiling measurements, etc. Therefore, the proposed base unit of measurement is 0.305 meters by 0.305 meters; i.e., one square foot.

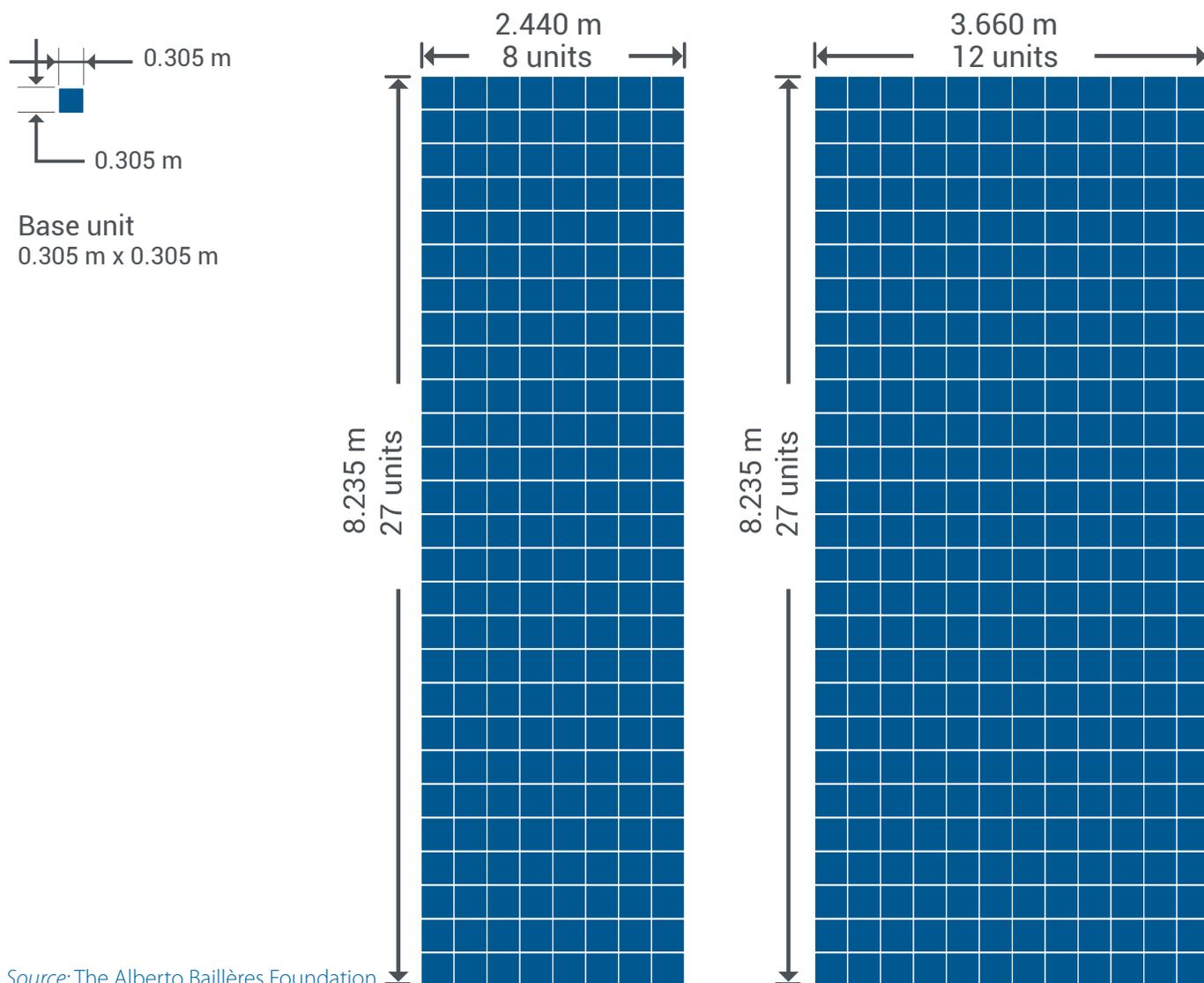
Thus, in addition to a technical argument, the foot standard is also substantiated on arguments of finances and availability. And although

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20 INIFED’s building typology catalog can be consulted at the following link: [https://www.cmic.org.mx/comisiones/Sectoriales/educacion/Reuniones/Reuni%C3%B3n\\_de\\_Trabajo\\_CMIC-INIFED/REUNI%C3%93N\\_06-08-2104/CATALOGO%20DE%20ESTRUCTURAS%20CAPFCE.pdf](https://www.cmic.org.mx/comisiones/Sectoriales/educacion/Reuniones/Reuni%C3%B3n_de_Trabajo_CMIC-INIFED/REUNI%C3%93N_06-08-2104/CATALOGO%20DE%20ESTRUCTURAS%20CAPFCE.pdf)

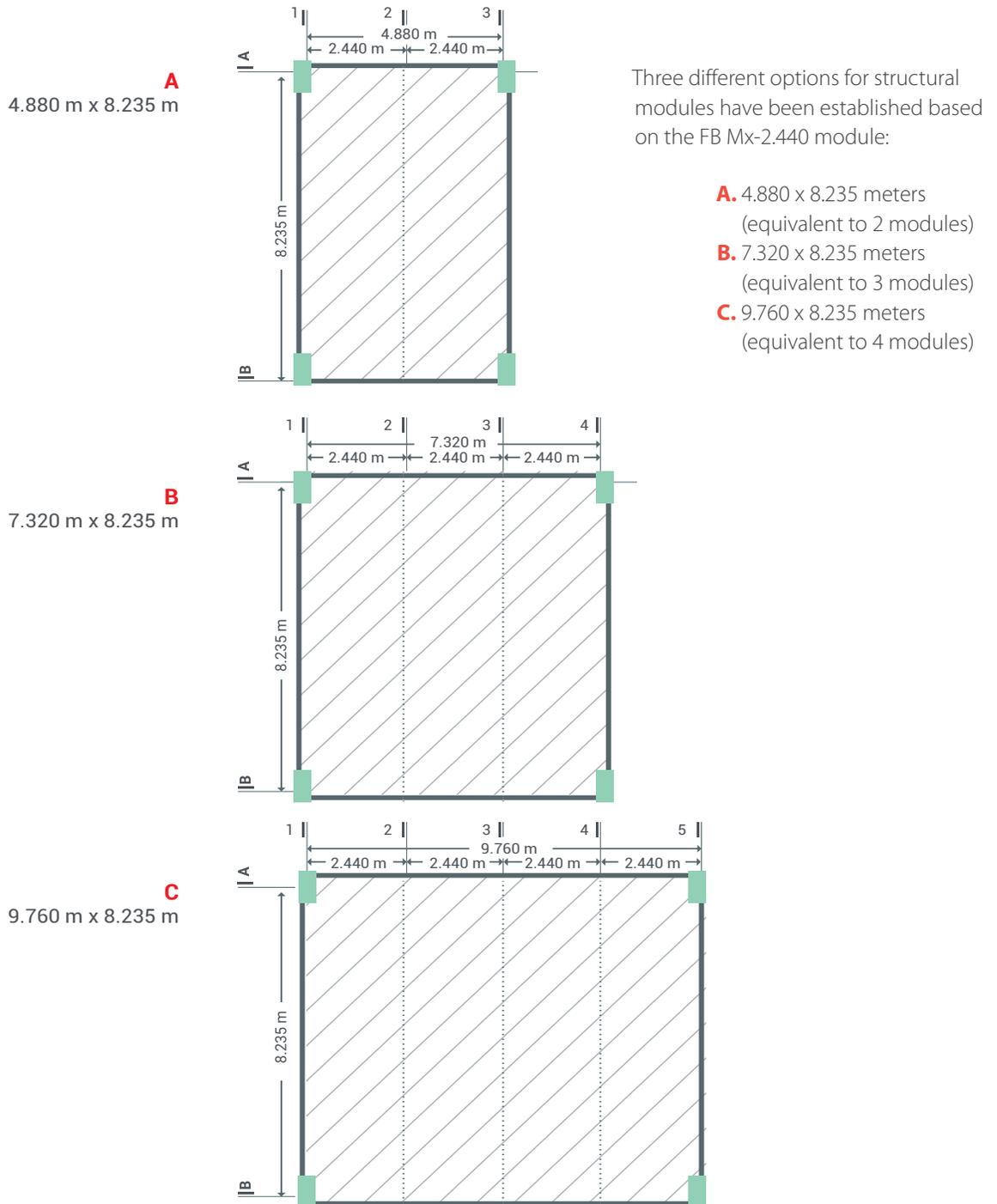
in this proposal there is no major difference in total classroom space in comparison to the INIFED prototype, there are significant differences from the points of view of projection (in structural calculation), construction and spatial layout, and the quality and safety of spaces, as explained further on (see “[A Safe and Resilient School: The Buildings and Individuals](#)”).

This is why the Foundation has proposed that the basic module have a standard measurement of 2.440 meters (8 feet) by 8.235 meters (27 feet). Classrooms and all other school spaces have been designed using this base module, known as FB Mx-2.440.

**Figure 5: Base Unit and FB Mx-2.440 and FB Mx-3.660 Modules' Configuration**



Source: The Alberto Baillères Foundation

**Figure 6: Module Dimension Diagram**

Source: The Alberto Baillères Foundation

Application of the module in the classroom prototype design is based on a comparative study of classrooms in four Latin American countries —Argentina, Chile, Colombia, and Venezuela— and one case in Barcelona. Likewise, comparisons were made between INIFED’s standards (U-1C prototype) and those of the State of Mexico Institute for Physical School Infrastructure (IMIFE, the State of Mexico’s INIFED analogue). The point of reference for this study was the optimal square-meter-to-student ratio in each primary school and

upper secondary school classroom. To make this comparison, the Foundation developed a “traffic light” based on classroom area per student, minimum and maximum classroom capacity, and students’ grade level, in which green means acceptable, yellow means regular, and red means unacceptable. The following tables present a summary of the results from this comparative study.

**Table 2: Comparative Study on Primary School Classrooms**

Primary School							
	Module		Area	Clearance height	Students		Area / Student
	Width (m)	Length (m)	(m <sup>2</sup> )	(m)	Min.	Max.	(m <sup>2</sup> )
Argentina			45.000	2.800	30	36	1.500
Chile	8.000	7.500	60.000	2.400	30	45	2.000
Colombia	9.000	8.000	72.000		40		1.800
Venezuela			52.500	3.000	30		1.750
European Union	9.500	6.500	61.750	2.500	25		2.470
Mx-IMIFE	6.000	8.000	48.000		40		1.200
Mx-INIFED	9.720	8.000	77.760		45		1.730
FB Mx-3.660	10.980	8.235	90.420	2.700		45	2.010
<b>FB Mx-2.440</b>	<b>9.760</b>	<b>8.235</b>	<b>80.370</b>	<b>2.700</b>		<b>40</b>	<b>2.010</b>

● Upper values    ● Mean values    ● Lower values

Source: The Alberto Baillères Foundation

**Table 3: Comparative Study on Upper Secondary School Classrooms**

Upper Secondary School							
	Module		Area	Clearance height	Students		Area / Student
	Width (m)	Length (m)	(m <sup>2</sup> )	(m)	Min.	Max.	(m <sup>2</sup> )
Argentina			50.000	2.800	36	40	1.390
Chile	8.000	7.500	60.000	2.400	30	45	2.000
Colombia	9.000	8.000	72.000		40		1.800
Venezuela			61.250	3.000	35		1.750
European Union	9.500	6.500	61.750	3.000	35		1.760
Mx-IMIFE	6.000	8.000	48.000		40		1.200
Mx-INIFED	9.720	8.000	77.760		45		1.730
FB Mx-3.660	10.980	8.235	90.420	2.700		45	2.010
<b>FB Mx-2.440</b>	<b>9.760</b>	<b>8.235</b>	<b>80.370</b>	<b>2.700</b>		<b>40</b>	<b>2.010</b>

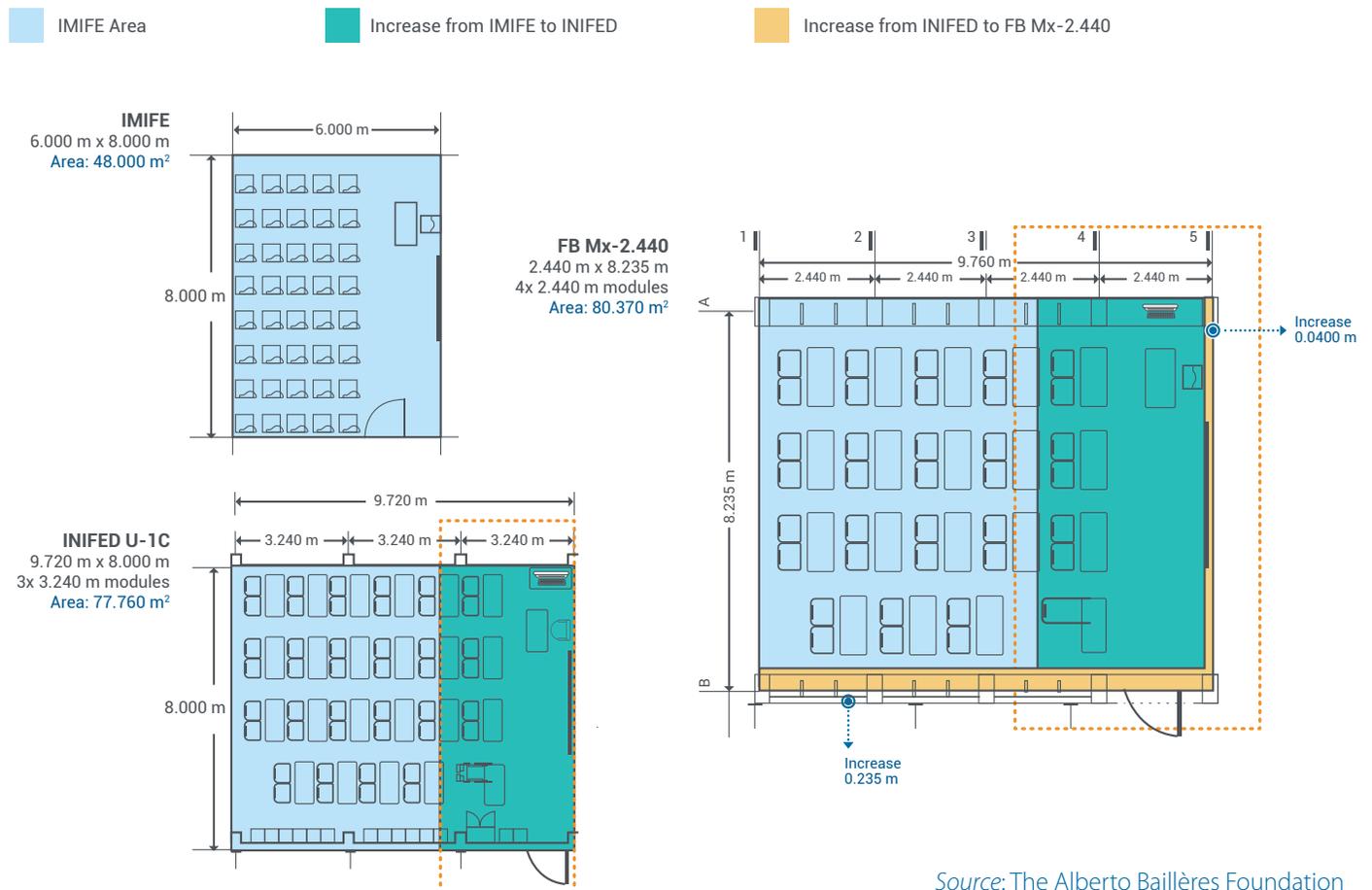
● Upper values    ● Mean values    ● Lower values

Source: The Alberto Baillères Foundation

As observable above, the FB Mx-2.440 module (and the equivalent FB Mx-3.660) is always within the acceptable range. Moreover, the classroom proposed by the Foundation offers between 20 and 30 square meters more than most classrooms in the study do, and the area-to-student ratio is the second largest after the European Union case (Barcelona). Minimum and maximum student capacity were calculated based on the criteria used for Mexican classrooms, specified in IMIFE's technical data sheet; in this rubric, the FB Mx-2.440 module appears as the best option, since even when its maximum dimensions are used, it is still within regular parameters. This renders important advantages in terms of classroom safety, comfort, and flexibility, with the attendant benefits in quality of learning and social interaction.

Based on IMIFE's classroom dimensions (6.000 x 8.000 meters), INIFED's dimensions (U-1C, 9.720 x 8.000 meters), and the Foundation's proposed dimensions (9.760 x 8.235 meters), calculations were made and all updates were designed for every module. A visual synthesis of these modifications presented in the diagrams below shows the process of updating each prototype and the modifications in the changes they imply for the original designs of the IMIFE and INIFED prototypes.

**Figure 7: Comparative Study on IMIFE, INIFED, and FB Mx-2.440 Modules**



Source: The Alberto Baillères Foundation

Although modifications of the INIFED module and the prototype proposed by the Alberto Baillères Foundation may seem insignificant, when other variables are analyzed comparatively —space (areas for students and educators, aisles, space between desks), visibility (from front rows, side rows, and the backmost row), exit routes (distances, areas of circulation, bottlenecks, inswing/outswing of exit doors), construction effectiveness (columns, flexibility, structural work, formwork, etc.) and general aspects (façade, total area, capacity, storage space, collaboration space, space for school bags, etc.)— it can be objectively observed that the proposed FB Mx-2.440 module offers better conditions and stands out as a feasible alternative.

From the pedagogical point of view, one of the main advantages offered by the FB Mx-2.440 module proposal in terms of other spaces is that it allows classroom furniture to be easily and immediately arranged in different ways according to the activity at hand —traditional class arrangement (educator in the front), group discussions (from two to six students), parent-educator conferences, meetings between educators, and recreational activities, among other activities— thanks to the fact that total available space has been extended. Additionally, the layout of spaces that meet ergonomic criteria and which also include spaces to store and organize work material (school bags, notebooks and books, teaching aids, classroom supplies) produces a feeling of organization and tidiness that contributes to improving the psychological environment of the space, as well as personal comfort. This versatility, flexibility, and layout without a doubt meet the need for new educational spaces meant to facilitate interaction between the members of an education community.

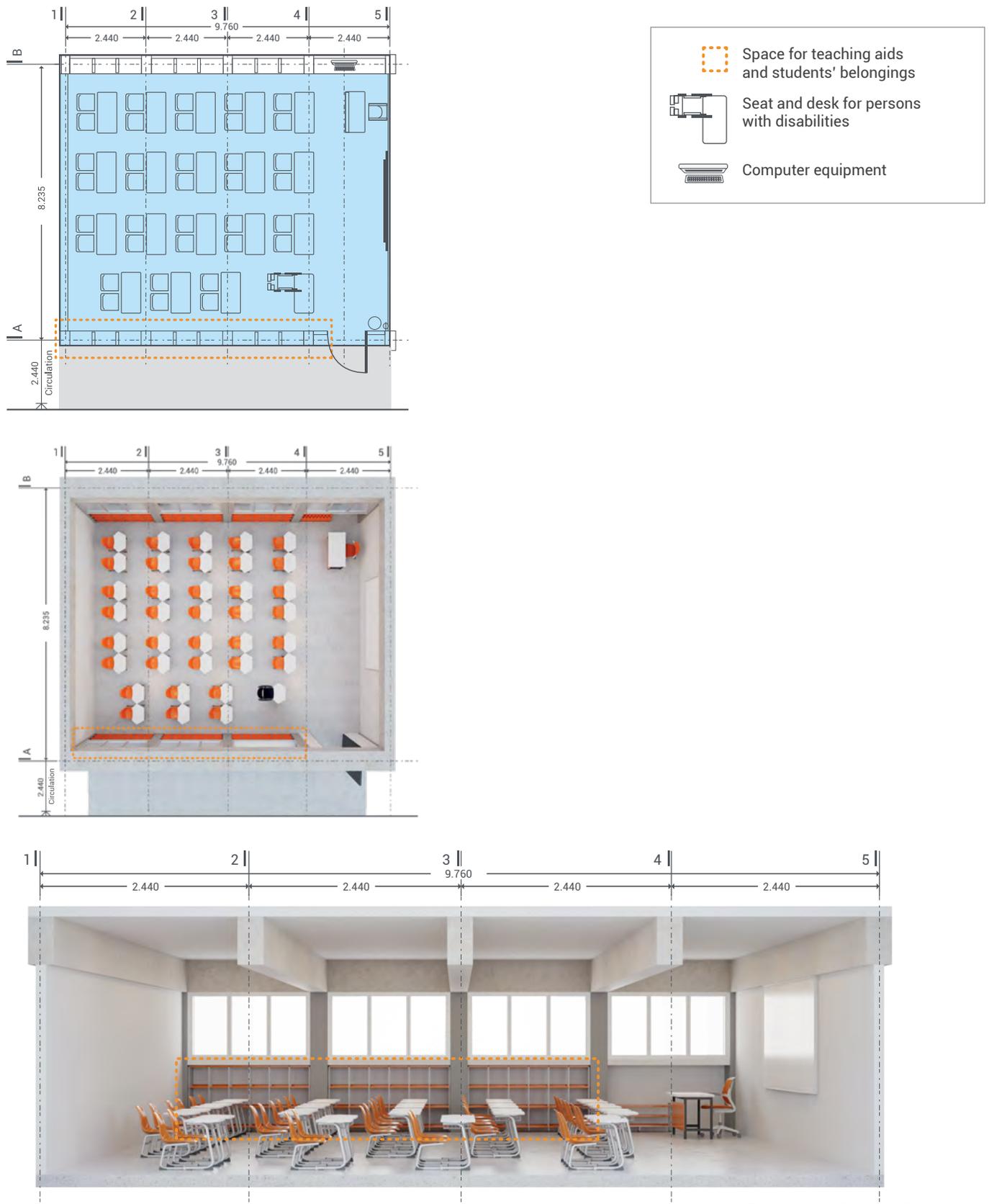
Additionally, in terms of construction, this module easily adapts to materials and diverse construction systems because of the use of industrial materials with standards in feet, as explained previously. This makes it possible, for instance, to adjust openings (for doorways and windows) according to what materials are available on the market and thus save on construction and installation times. Likewise, significant savings are achieved in terms of waste, since all materials are modulated and can be easily accounted for.

The following is a graphic explanation of the different features of the classroom prototype based on four FB Mx-2.440 modules, calculated for 40 students.

### **General Features**

- Capacity for 40 students; includes an accessible space for persons with disabilities.
- 2.440 x 8.235 m module compatible with the rest of the spaces and divisible by 0.305 meters to facilitate the cutting of construction materials.
- The 80.370 m<sup>2</sup> area is 3% larger than INIFED's proposal and has a ratio of 2.010 m<sup>2</sup>/student.
- Broader space to move through and to arrange classroom furniture in facilitates the development of collaborative work and socio-emotional skills.
- Space for teaching aids and students' belongings integrated as part of the architectural proposal.

**Figure 8: Classroom Type: 4-Module FB Mx-2.440 Proposal for 40 Students**

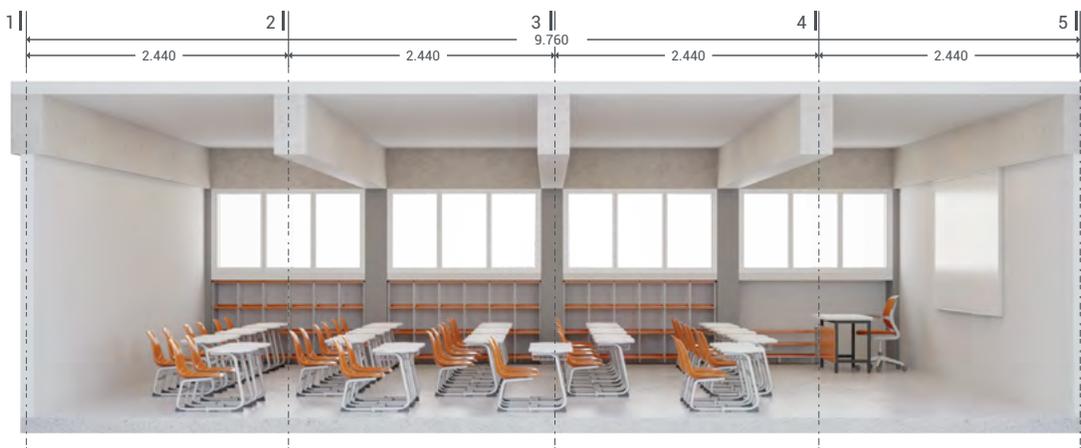
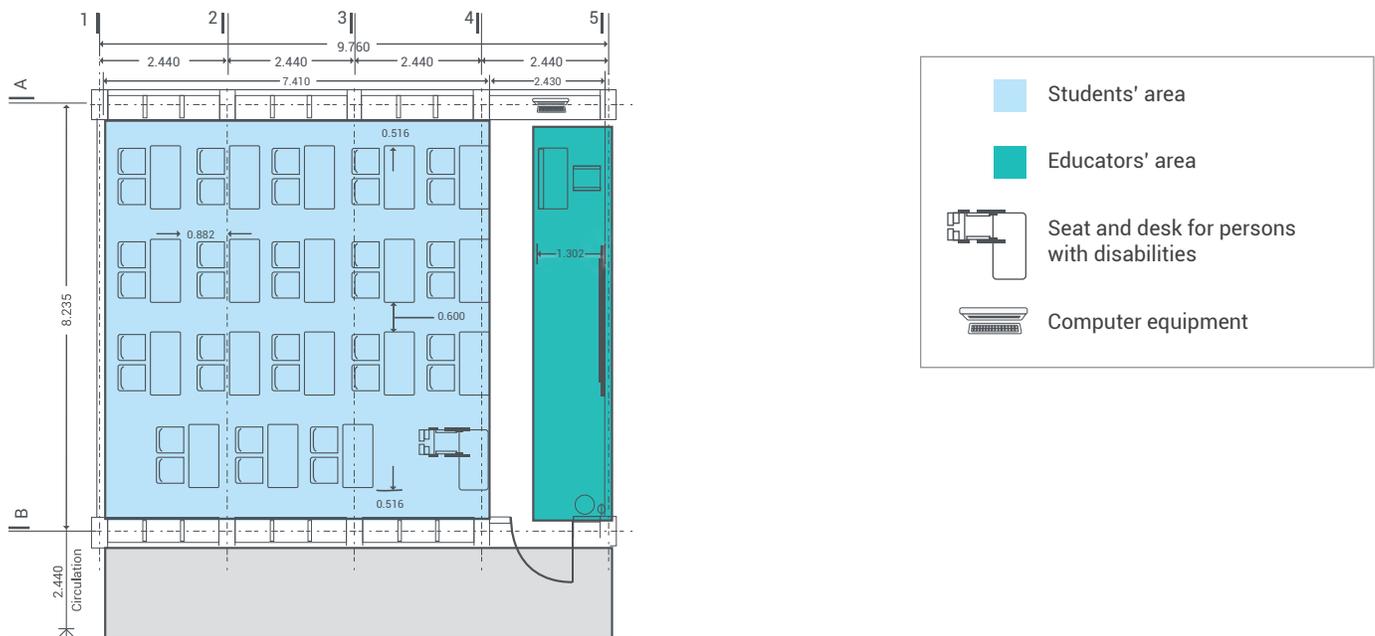


Source: The Alberto Baillères Foundation

### Spaces for Students and Educators

- Space for educators is  $1.302 \times 7.640 = 9.930 \text{ m}^2$  (11% of total area).
- Space for students is  $7.410 \times 7.640 = 56.610 \text{ m}^2$  (70% of total area).
- Storage area is  $7.00 \text{ m}^2$  (8% of total area, integrated into the architecture).
- Aisle space is 0.600 meters and space between each desk is 0.882 meters.

**Figure 9: Specifications of Space for Students and Educators**

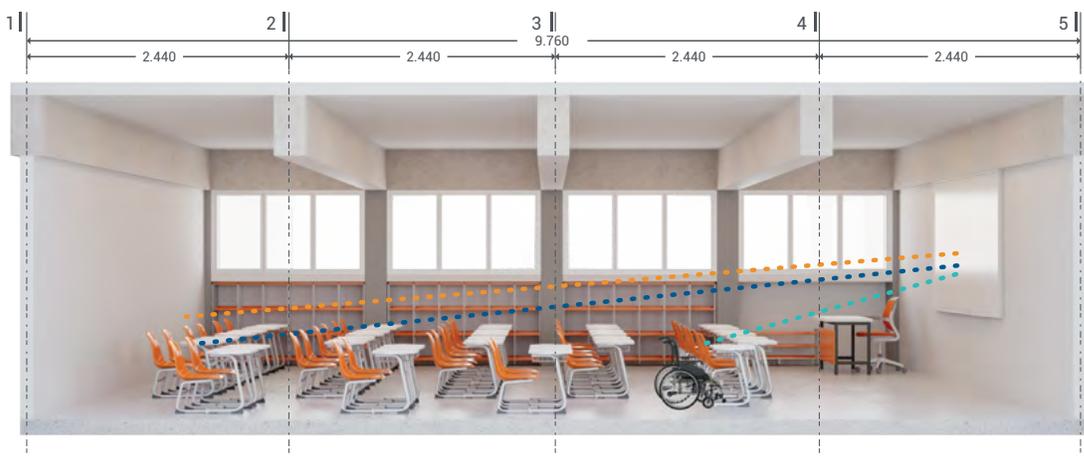
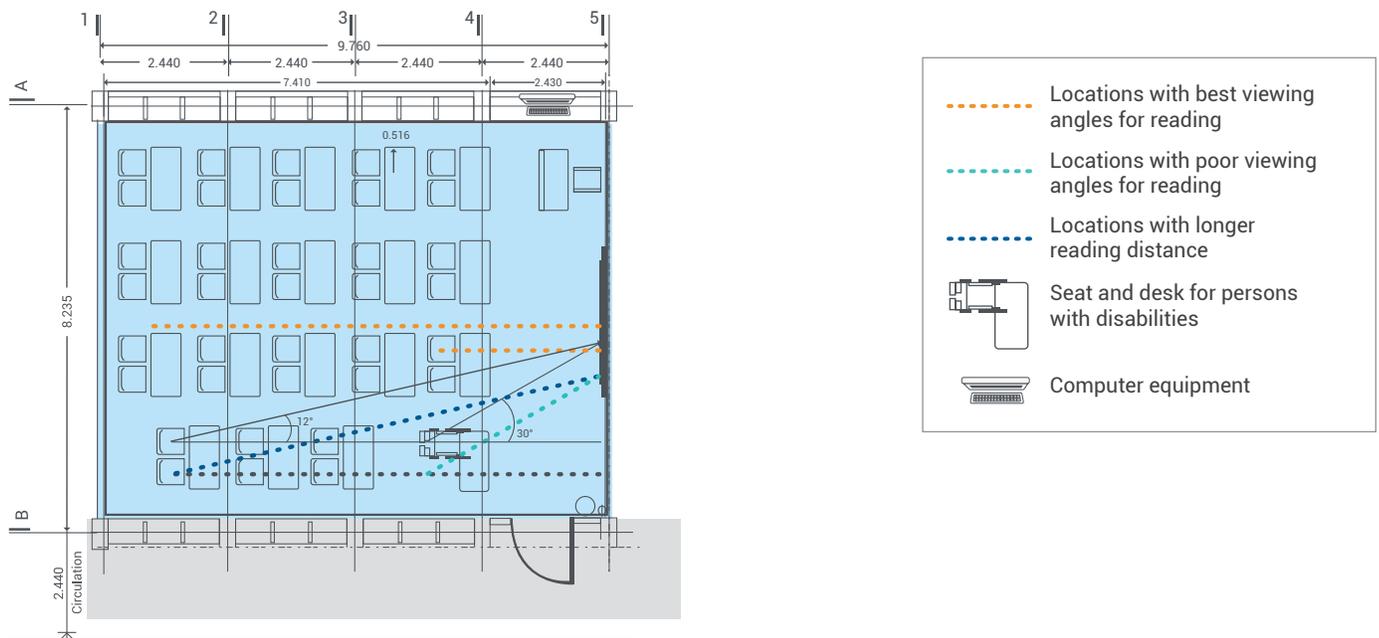


Source: The Alberto Baillères Foundation

### Visibility

- For desks facing the front of the classroom, the distance from the first row is 2.730 meters and 8.650 meters from the backmost row.
- For desks at the sides of the classroom, the distance from the first row is 3.580 meters with a 30-degree viewing angle, and 8.220 meters with a 12-degree viewing angle from the backmost row.

**Figure 10: Visibility Specifications**

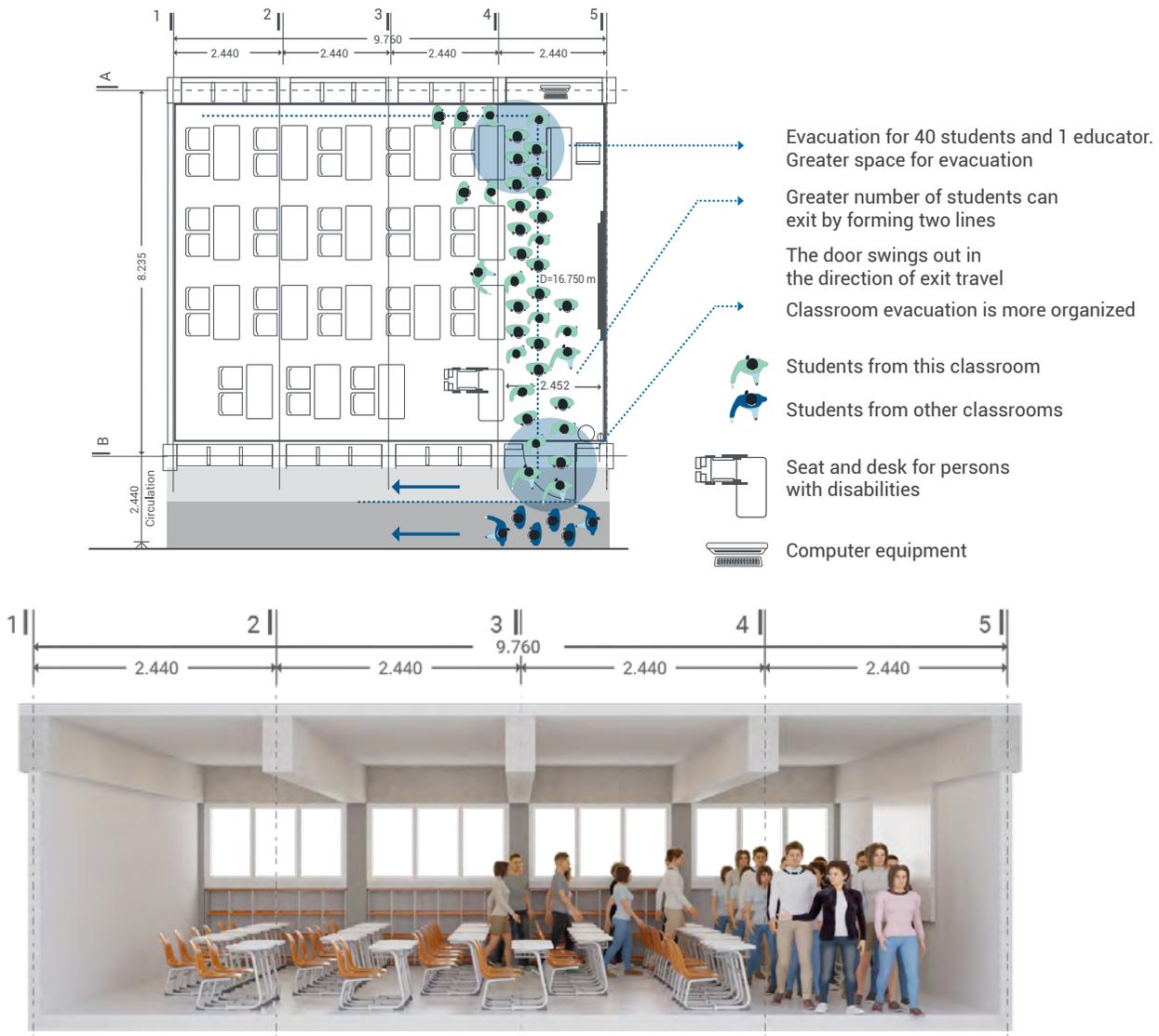


Source: The Alberto Baillères Foundation

### Evacuation

- Aisle space between every two-desk row is 0.600 meters, and the aisle leading to the exit door is 0.920 to 2.452 meters.
- Maximum walking distance is 16.750 meters and exit circulation area is 36.300 m<sup>2</sup> (45% of the area available); this represents a 0.900 m<sup>2</sup>/evacuee ratio.
- There is sufficient space to circulate and arrange desks. Availability of space for teaching supplies and students' belongings also enables evacuation.
- Door swings out to facilitate evacuation, but partially blocks outside circulation.<sup>21</sup>

**Figure 11: Representation of a Drill in an FB Mx-2.440 Classroom**



Source: The Alberto Baillères Foundation

<sup>21</sup> INIFED Project Management considers that the outswing door criteria can be adopted provided that architectural analysis dispels concerns regarding circulation on the opposite side of the door in a corridor with an extra width of 1.665 meters or, lacking this, that the appropriate legal basis be presented for the adoption of this criteria.

## Layout

- This classroom offers various options in its layout, from a traditional desk arrangement with the educator at the front of the classroom to an arrangement in teams of up to 6 students each, as explained further on (see [“Spaces: Functionality, Flexibility, and Collaboration”](#)).

Given the features described in this section, we can assert that the Alberto Baillères Foundation’s modular building proposal offers the possibility of controlled and standardized construction to guarantee safety and comply with the minimum required conditions in terms of school spaces and student capacity per group. At the same time, the modules enable flexibility and their own adjustment to different land types, environmental conditions, and specific needs that stem from the community itself, as they can easily be arranged and adjusted to the characteristics of the space.

Likewise, in accordance with requirements set out by education authorities, the module enables quality control and excellent efficiency in terms of costs, construction times, and use of materials. In budgetary terms, this means that the module facilitates its own planning. In terms of maintenance and repair, the modules can be easily replaced without needing to make modifications that can affect the entire structure. Furthermore, the Alberto Baillères Foundation’s modular system makes educational spaces easily scalable to an education community’s needs without compromising schools’ safety and security or overall activity.

Additionally, this new configuration takes into account the ergonomic criteria which, in the context of a school space, become especially relevant: the relation between students’ heights (among students in different grades) and the heights of other classroom users in regard to school furniture (see [“The Combination of School Furniture and Architectural Space”](#)); distance and space between furniture; visibility; the layout of doors and windows; ceiling height; acoustics; lighting; and temperature, among many other considerations. Ergonomic criteria were also determined based on the objective of offering appropriate and adequate spaces for students to collaborate, participate, and integrate in the learning process.

Finally, the modular proposal of the Alberto Baillères Foundation offers excellent environmental advantages, as it enables an optimal use of materials by meeting the standard measurements established by the construction industry (in feet). It is also based on a bioclimatic design and promotes the use of ecotechnologies, as detailed below.

### ***d. Spaces: Functionality, Flexibility, and Collaboration***

Based on the diagnosis of needs, the architectural program defines and distributes spaces according to the specific needs of each education community. These criteria vary based on the number of students, grade level, and educational program content, as well as the characteristics of the plot and of the area available for construction.

In general terms, these spaces are classified as follows:

- **educational spaces:** classrooms, library, computer lab, language room, multi-purpose room, auditorium, laboratories, etc.;
- **administrative staff and educator spaces:** office spaces for the Principal, Assistant Principal, and secondary administrative staff, meeting rooms, teachers' lounges, areas for academic counseling and career guidance, secretarial area, waiting room, academic record storage, student services, storage room for teaching supplies, restrooms for administrative staff and educators, etc.;
- **community and interaction spaces:** outdoor assembly, sports and artistic facilities, green areas, school gardens, etc.; and
- **services areas:** modules for student restrooms, cafeteria/canteen and kitchen, janitorial area, storage room, waste disposal, parking lot, etc.

In addition to the abovementioned improvements, general innovations are introduced according to the characteristics of each location, such as accessibility criteria throughout the facilities; flexibility of spaces so as to be used for various purposes and achieve better interaction between educators, students, and the rest of the education community's members; finishes with resistant thermal and ecological materials; a variety of colors for different spaces chosen according to pedagogical as well as aesthetic and psychological criteria; the introduction of bioclimatic elements for ventilation and natural lighting; the availability of internet access points; use of clean energies, water-saving devices, and other ecotechnologies; spaces which are shared along different schedules or made available to community members; and close relations between open and closed and indoor and outdoor spaces, among other characteristics that enable this prototype to offer inclusive, high-quality, and functional spaces to meet the needs of an educational model that promotes participation, collaboration, and coexistence and which is open to all education community members: educators, students, support staff, administrative staff, and parents.

### 3. A Sustainable School: Bioclimatic Criteria and the Use of Ecotechnologies

Sustainability and the efficient use of spaces and natural resources have been fundamental in designing the architectural projects of the Alberto Baillères Foundation. The Foundation's proposal seeks to establish a balance between indoor and outdoor spaces in such a way that the environment will favor a sustainable development in which infrastructure does not compete against the environment, but rather contributes to its protection and preservation in the short, medium, and long term.

UNESCO (2019a, p. 71) suggests that any sustainable architectural space should consider and balance the following dimensions:

- **material** space, which includes the design and technical and structural characteristics of the construction;
- **comfort** space, which enables lighting, ventilation, visibility, and acoustic conditions, among others, to produce well-being and respond to the particularities of the environment and an infrastructure's users;

- **psychological** space, which includes formal and aesthetic specifications of the environment which must positively affect mood and social interactions;
- **social** space, which encourages encounters outside of pedagogical contexts and allows group identity, for cultural, anthropological, or historical reasons; and
- **sustainable** and **resilient** space, which proposes architectural solutions to natural hazards, whether potential or real, and which includes different ecotechnological proposals such as alternative energy sources and the efficient use and conservation of natural resources, etc.

Moreover, in Mexico the General Education Law stipulates that any infrastructure intended for education “must comply with requirements of quality, safety, functionality, opportunity, equity, sustainability, resilience, relevance, integrity, accessibility, inclusivity, and health, and include benefits derived from the development of science and technological innovation in order to provide high-quality, equitable, and inclusive education, pursuant to the standards that the Ministry issues to that effect” ([General law on education, Section 99](#)).<sup>22</sup> In this sense, the incorporation of bioclimatic design and the use of ecotechnologies address domestic demands and international recommendations in terms of the development of spaces which are **sustainable** in their use of natural resources and over time, always taking into account the characteristics of and resources available in each location where the project is developed.

### **a. Bioclimatic Design**

Bioclimatic design sets guidelines intended to improve consumption of resources (energy, water, air, land, labor, raw materials) as well as to reduce air pollutant emissions and environmental impacts which result from architectural intervention. Likewise, it proposes solutions to ensure user comfort and well-being during a structure’s useful life without implying greater project costs in general, or greater construction, operation, and maintenance costs in particular.

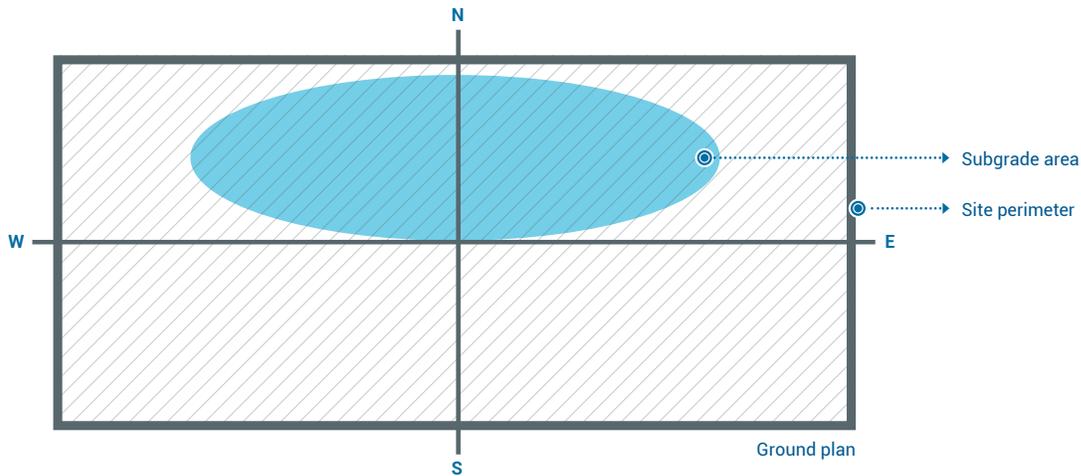
To achieve this, bioclimatic design takes into account geographical and ecological as well as technological and human aspects in order to best adapt spaces to land and human conditions. Architectural designs depend to a large extent on features of the climate and space in question. Moreover, in the case of school infrastructure, the use of each space, convergence of people, types of activities, and schedules of activities, among other conditions, must be taken into account.

In addition to the aforementioned, in the architectural proposal of the Alberto Baillères Foundation, buildings are designed based on six specifications which determine whether or not a bioclimatic design proposal is appropriate for the characteristics of each school:

■  
22 This English translation is for reference purposes only. Original in Spanish.

- **Site characteristics:** Analysis of the geographic location, orientation, and shape of the site which will be covered by the architectural project; the building should be facing north (polar alignment) to ensure the greatest amount of direct sunlight and the least amount of shade from other adjacent architectural elements or even from vegetation.

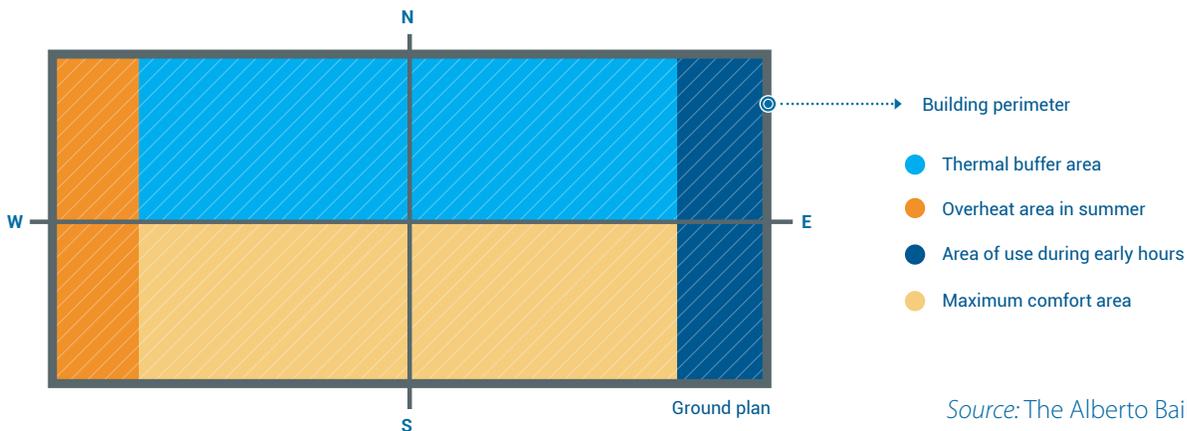
**Figure 12: Construction is North-South Facing**



Source: The Alberto Baillères Foundation

- **Building shape and location:** The design of the building should primarily be elongated in shape along its east-west axis. Based on this shape and location, the architectural program properly lays out comfort zones, taking into account the types of activities and the uses of each school space, the characteristics of users, and seasons, as well as class schedules.

**Figure 13: The Architectural Program Lays Out All Comfort Zones**



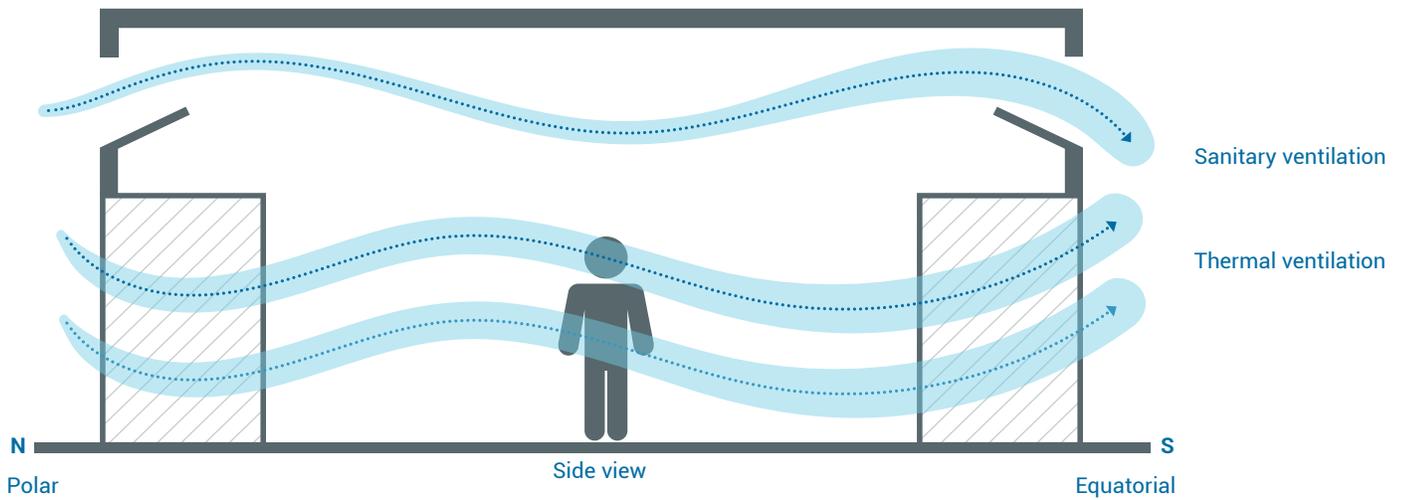
Source: The Alberto Baillères Foundation

- **Ventilation:** The architectural design considers the dominant wind direction in the area to ensure proper ventilation of spaces based on their orientation. In a classroom, this specification is fundamental to ensuring an appropriate work environment.

Two types of ventilation are taken into account:

- Sanitary ventilation: Used in cold climates or cold seasons to recycle stale air; ventilation is located on an upper level not in direct contact with users; and
- Thermal ventilation: Used in warm climates or seasons to ensure cooling and ventilation of spaces and users; ventilation is located at a height that comes into contact with users.

**Figure 14: Two Ventilation Types are Considered: Sanitary and Thermal**

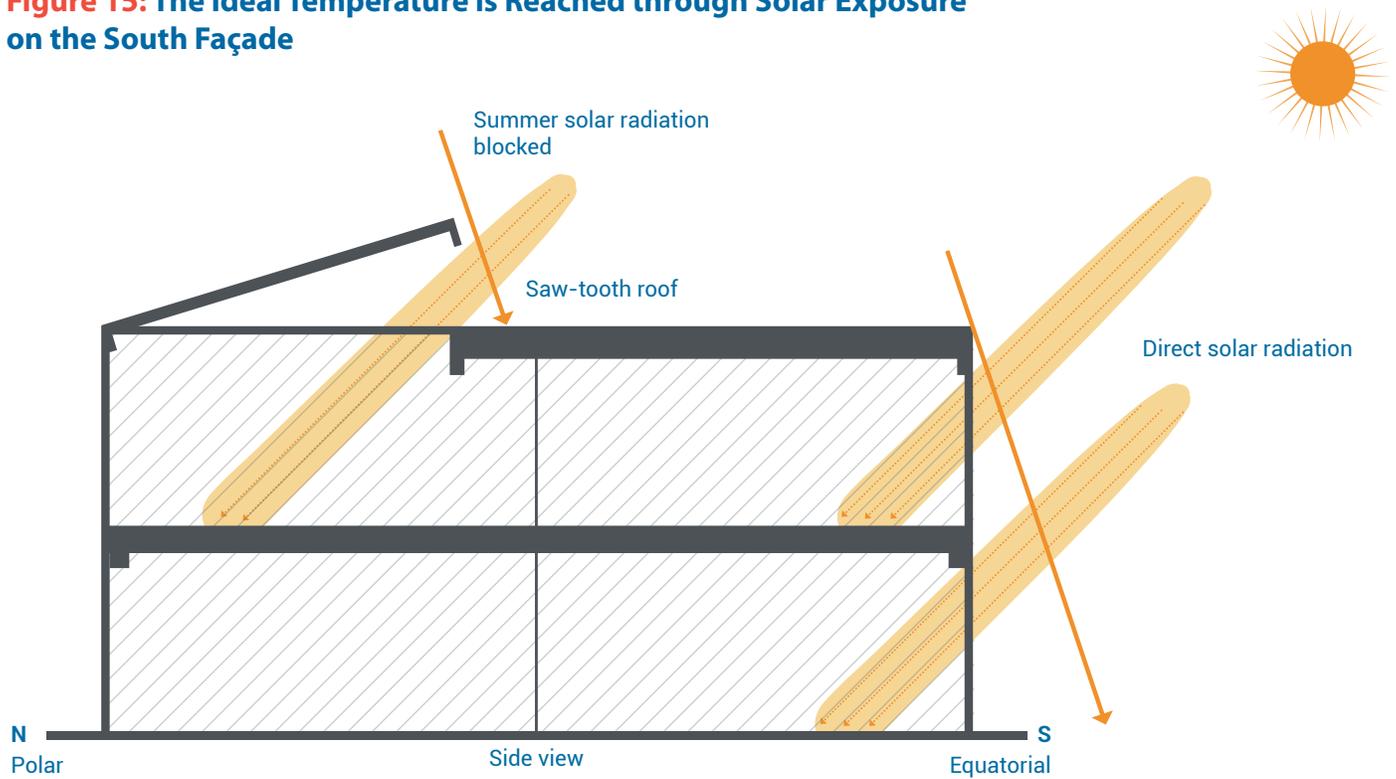


Source: The Alberto Baillères Foundation

- **Solar radiation:** The south (equatorial) façade must receive sunlight for the building to reach an ideal temperature. If a space is too far from the south façade, other design resources can be used, such as a saw-tooth roof (which allows southern exposure and thus controlled and calculated solar radiation access).

The solar incidence angle is calculated to ensure that direct summer rays are blocked and to keep the space from overheating, especially considering the capacity of classrooms and the time that students spend in them.

**Figure 15: The Ideal Temperature is Reached through Solar Exposure on the South Façade**



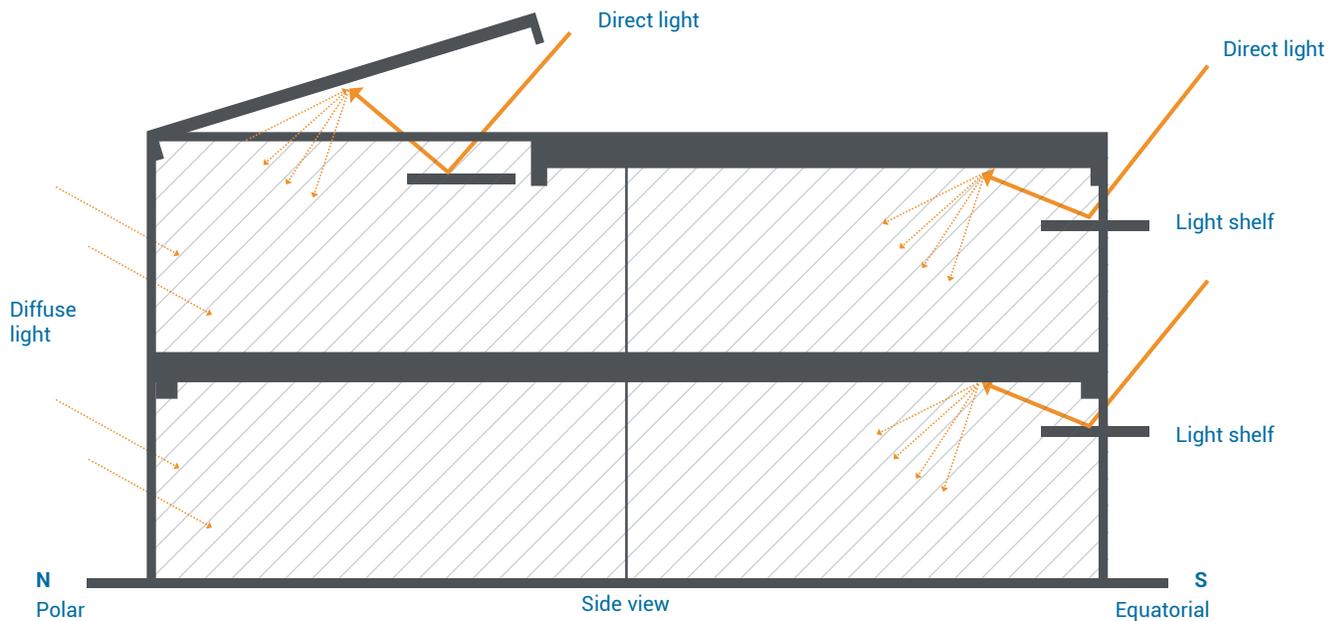
Source: The Alberto Baillères Foundation

- **Natural light:** In this type of design, obtaining the greatest amount of natural light is a priority, above all in the case of school infrastructure.

Two types of natural lighting are taken into account:

- Direct light: Achieved from southern-facing orientation; it is intense, and light shelves are therefore recommended.
- Diffuse light: Achieved from northern-facing orientation; it is softer, less intense light and does not require special treatment to be adequately diffused.

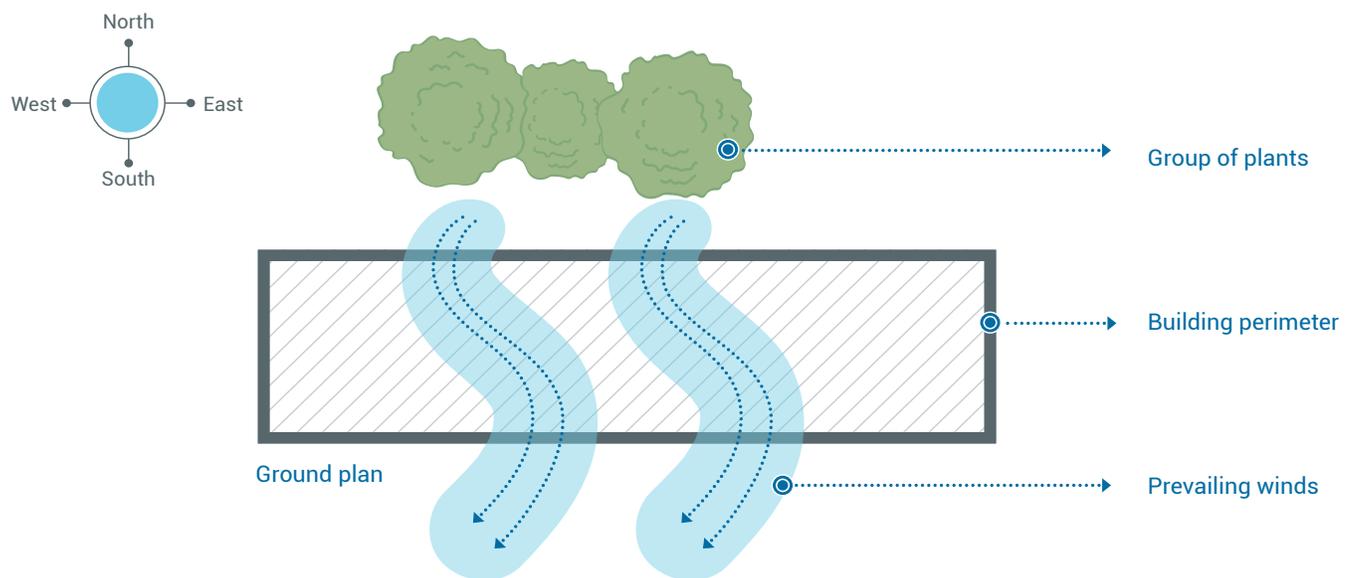
**Figure 16: Achieving the Greatest Natural Lighting is a Priority**



Source: The Alberto Baillères Foundation

- **Evaporative cooling:** In order to avoid using cooling mechanisms (air conditioners) as much as possible, thermal comfort is ensured using passive cooling strategies which are feasible and environmentally-friendly. To this end, prevailing winds in the area are analyzed and vegetation or groups of trees are planted to reduce wind temperatures and allow fresh air into spaces.

**Figure 17: Passive Cooling Improves Temperature in Spaces**



Source: The Alberto Baillères Foundation

All of these bioclimatic design considerations are intended to improve the use of spaces without disregarding efficiency in terms of natural resource consumption and while considering these spaces' effectiveness in achieving well-being and fulfilling the basic needs of education community members.

### ***b. The Use of Ecotechnologies***

Every architectural project that adopts a sustainable approach integrates technologies designed to improve the sustainable use and exploitation of natural resources and to reduce the carbon footprint generated by infrastructures and the people who occupy them. These construction alternatives are known as ecotechnologies. On one hand, ecotechnologies introduce technical innovations that offer advanced applications in energy production and consumption (such as solar panels); on the other, they recuperate traditional knowledge that makes efficient use of resources (such as composting techniques).

The correct use of ecotechnologies in an architectural proposal requires complete knowledge of the physical characteristics of the site where they will be implemented, as well as the habits of the population who will use these technologies. This ensures the selection of the most appropriate technology for a given context or natural environment, as well as its social, technical, and financial feasibility. Likewise, the optimal performance of these technologies and their relevance in given community environments, as well as the project's overall sustainability, largely depend on their correct planning and operation.

A school infrastructure that takes into account the effective use of ecotechnologies contributes to positively modifying the physical environment of pedagogical spaces and encourages an environment of respect, as well as a culture of care for and protection of the educational habitat, since the entire community becomes involved. According to UNESCO (2019a, p. 74), it is ideal that members of the education community engage in the design, installation, operation, and maintenance of ecotechnologies, since they will be the direct users and beneficiaries of these technologies. In regard to school infrastructure, the efficient operation of these technologies, as well as management- and maintenance-related activities that ensure their optimal functioning, may involve training and commitment on the part of community members.

However, given that these technologies may modify the habits of some of their users, potential difficulties or resistance to their installation can be expected. Inviting the community to engage in the management of ecotechnologies also implies inviting them to take on shared responsibility and to move toward a culture of efficient consumption of natural resources and proper waste management and disposal.

When planning the use of ecotechnologies, the infrastructure component of the Alberto Baillères Foundation's project always considers specific features of each location: availability of resources, quality of utilities, and overall conditions of the facilities, among other characteristics. It also considers the size and characteristics of the school population at hand in order to determine priorities and real needs. Among the proposed ecotechnologies planned by the Foundation are the following:

- **Water:** Rainwater harvesting and recycling and the reuse of water for toilets are proposed as a means of passive water supply. The project also proposes water-saving toilets, the operation of water

treatment facilities, and the use of solar water heaters, as well as school drinking fountains for a more rational use of drinking water.

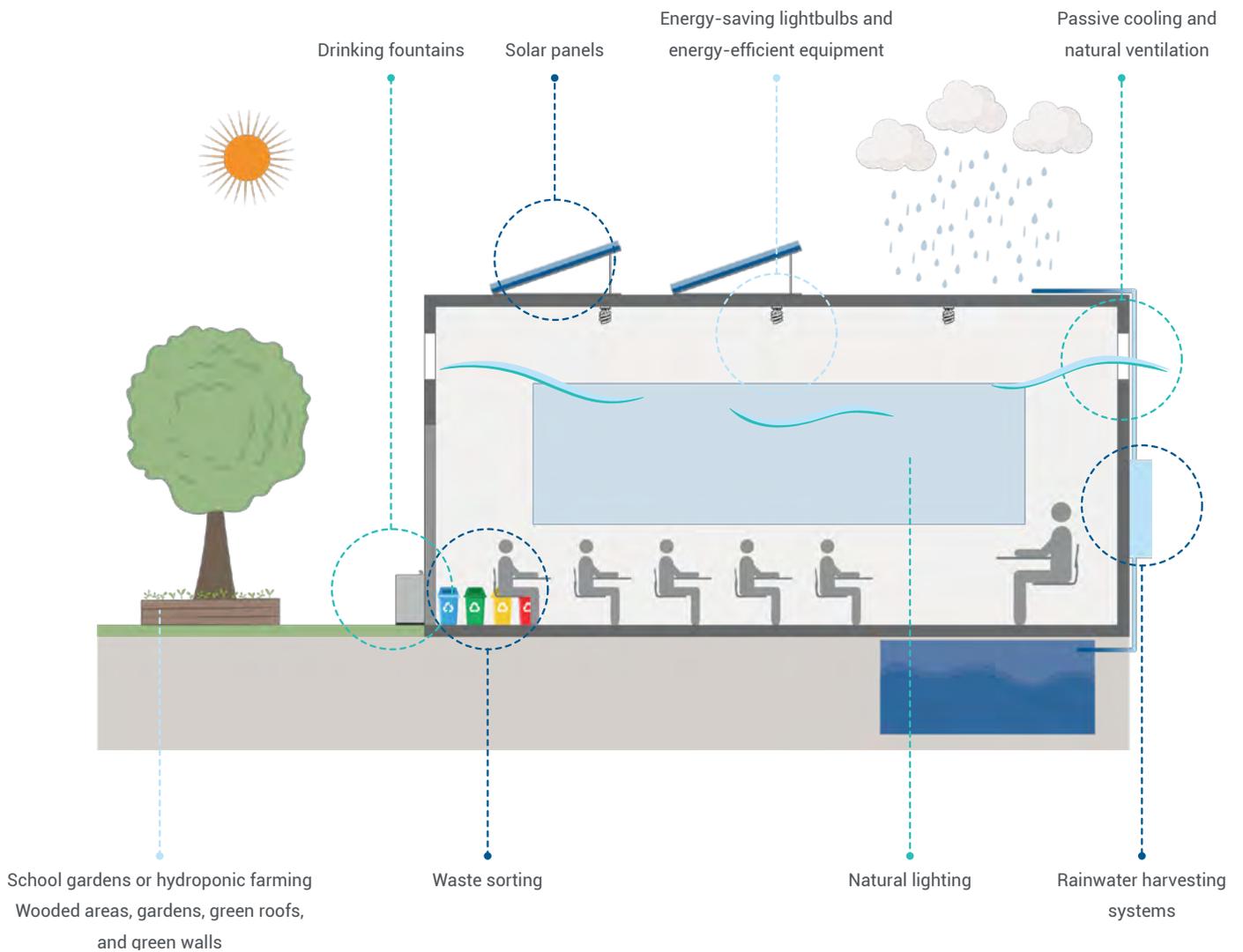
- **Energy:** The installation of energy-supplying solar panels, high-efficiency equipment and electrical systems, and lamps with energy-saving bulbs are proposed as a means of achieving efficient energy use and reducing energy consumption in buildings. Bioclimatic design makes a significant contribution in this regard, as it improves natural lighting (and reduces artificial lighting) as well as passive cooling and suitable ventilation to offer appropriate thermal comfort (and reduce the use of mechanical air conditioners). Likewise, the use of solar water heaters reduces fuel consumption and consequent air pollutant emissions.
- **Waste:** The separation and recycling of inorganic waste and the composting of organic waste are proposed as a means of reducing waste and correctly disposing of solid waste. Likewise, septic tanks and non-flush toilets help reduce the use of drinking water and prevent sewage from flowing into the drainage system.
- **Green areas:** The presence of vegetation (such as wooded areas) and other green areas (including gardens, green roofs, and green walls) in a school environment helps to improve not only the thermal comfort of spaces but the overall quality of the environment, as well as the community's perception of the educational habitat, which leads to its assuming joint responsibility in caring for this habitat. Furthermore, these types of spaces can also play an important pedagogical role and introduce aspects of environmental education through school gardens or hydroponic farming.

**Photo 24:** *Green areas improve thermal comfort and environmental quality.*



No technology is inherently effective or sustainable. Any proposal must be based on a community’s needs and be accompanied by the community’s willingness to integrate technology into its culture, its habits, and the purpose of the educational habitat: “Regardless of the technology in question, if it is not used in a sustained fashion, it will not achieve a positive effect on either the lives of its users or the environment. In other words, if a program of technology implementation cannot guarantee that these technologies will be used appropriately in the long term, then all the work and money invested in designing and disseminating these technologies will have been in vain” (Ortiz, 2014, p. 103).<sup>23</sup>

**Figure 18: The Use of Ecotechnologies**



Source: The Alberto Baillères Foundation

23 This English translation is for reference purposes only. Original in Spanish.

Note: Images and illustrations are for reference purposes only. Space zoning and layout, finishes, furniture, material, and colors may vary according to project-specific solutions.



## 4. A School for All: Inclusion, Accessibility, and Diversity

In international discussions on the right to education, the demand for inclusive education—for an education for all—has taken on increasing strength and has begun to impact the design of public policies aimed at improving the quality of and access to education. In the context of the International Conference on Education ([UNESCO, 2008](#)), an “inclusive school” was defined in these terms:

Social inclusion is necessarily, though not exclusively, linked to more inclusive practices in education; that is, to the development of schools or learning environments that cater for the needs of all the individuals of a community and respond to the diversity of learning needs, regardless of their social origin, culture or individual characteristics. An inclusive school has no selection mechanisms or discrimination of any kind. Instead, it transforms its pedagogical proposal into ways of integrating the diversity of students, thus fostering social cohesion, which is one of the main goals of education.

According to this approach and to the Principles of the Social Model of the Alberto Baillères Foundation, an inclusive, diverse, and accessible educational space must meet requirements of equity and equality, always taking differences into account; all education should aspire to these conditions as an ethical imperative ([UNESCO, 2008](#)). Likewise, Mexican legislation also addresses the creation of inclusive spaces within the school environment: “In terms of inclusion, actions will be gradually taken to improve school infrastructure conditions and to identify, prevent, and reduce barriers that limit student access, continuity, participation, and learning” ([DOF, 2019-09-30](#)).<sup>24</sup>

In this way, through appropriate design of educational spaces, it becomes possible to offer real alternatives for addressing the needs of marginalized and vulnerable groups. In the specific case of schools linked to this project, attention is directed toward racial and ethnic minorities, populations marginalized by poverty, people with disabilities, victims of violence, gender and sexually diverse people, and students with special education needs, among other vulnerable groups.

An inclusive architectural project implies a change in an education community’s vision of shared space and in how the community conceives of itself in terms of its own diversity. On one hand, it is an invitation to collaborate extended to anyone engaged in pedagogical activities; on the other, it contributes to integration between different people in distinct spaces with their various configurations. Likewise, the educational habitat, as previously mentioned, should stimulate and promote a harmonious confluence of all actors of the education community and other members related to the community, based on a common objective and a principle of identity. In this way, the principle of school inclusivity, diversity, and accessibility can have a ripple effect that transcends school boundaries and translates into greater cohesion among the members of a community.

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24 This English translation is for reference purposes only. Original in Spanish.



**Photo 25:** *An inclusive project implies a change in an education community's vision of shared space and in how the community conceives of itself.*

In terms of accessibility, the Social Model has invested significant efforts and resources into adapting the design of its facilities toward a more flexible (therefore more inclusive) proposal. The following is a non-exhaustive list of technical and architectural solutions that can improve the accessibility of spaces:

- **Improvements in personal mobility:** Priority is given to peoples' ability to move freely, without limitations or obstacles —whether in aisles, hallways, stairways, or multi-functional spaces— provided that their safety and that of the facilities is not compromised. Accessible routes or accessibility tunnels are designed to allow ease and freedom of movement, as well as the option of safely remaining in the same spot. Moreover, access tunnels allow any person, regardless of a mobility impairment they may have, to access a space from any entrance point on the street, sidewalks, parking lots and public bus stops. Accessible routes must therefore be free of obstacles and obstructions (e.g., waste containers, furniture, machinery, planters, booths, drinking fountains, or any object that interferes with people's mobility). Pavements must be solid, continuous, leveled, and non-skid; likewise, they must be free of steps, ragged edges, potholes, cracks, imperfections, loose stones, or abrupt changes in height. Sufficient lighting is also required, as are ramps that comply with prevailing specifications.
- **Improvements in materials:** Floor surface finishes must be non-skid and resistant to wear from constant use and outdoor exposure. Finishes must inhibit glare from the sun and artificial lighting. In particular, the materials utilized should allow people to circulate using wheelchairs, crutches, or white

canes, in both wet and dry conditions. In parking spaces reserved for people with disabilities, surfaces must consist of flat materials and avoid the use of hollow pavers such as “Grasscrete.” Metal surfaces must be textured to ensure grip. Likewise, tactile paving is favored along the accessible route.

- **Improvements to signage:** Signage in buildings must be consistent in terms of location, format, and height. Signage should be regarded as a comprehensive system of navigation and orientation and should indicate accessible routes and services. Information should be provided in at least two clear formats for people with sensory disabilities: visual, tactile, or auditory. The use of symbols is favored; international symbols are suggested to permit comprehension by a greater number of people. Excessive use of signage must be avoided, and signs should be placed in areas with good natural or artificial lighting. One of the most important functions of signage is to serve as a continuity element of tactile routes. Any use of the Braille system must comply with international criteria and dimensions.
- **Improvements to restroom spaces and installations:** The recommended location for an accessible toilet stall is as close as possible to a restroom’s entrance. Stall doors should preferably swing outward and self-close when the accessible toilet is not in use to avoid any obstructions to users. Vertical grab bars should be mounted on each side of the toilet (on the wall instead of on partitions). Minimum measurements are established for installing the toilet’s seat and accessories. The recommended number of sinks is at least one for every five people with disabilities. Placing a toilet and a sink for disabled users inside accessible toilet stalls is also an option.
- **Improvements to doors, knobs, and handles:** The minimum doorway width must be 1.20 meters; this is enough distance to allow wheelchair users to maneuver. All classroom spaces are subject to these accessibility measurements. Measurements are established based on international anthropometric standards for architectural design adapted to people with impaired mobility or other types of disabilities.

## 5. A Safe and Resilient School: Buildings and Individuals

Preserving the safety of individuals must be a priority and a fundamental concern that defines the course of any infrastructure project. In terms of schools, in order to design risk-free spaces in which members of an education community can have safe, peaceful, and healthy interactions, it is necessary to ensure that buildings, installations, and the people who use them can all rely upon the necessary conditions for safeguarding their integrity.

In terms of the education communities at whom this project is directed, it is precisely because of their vulnerable nature that security threats are neither minor nor infrequent. In fact, even in cases where safety has been

affected by chance events, such as natural disasters (earthquakes, floods, hurricanes, etc.), some school infrastructures are in much worse conditions than others. For this reason, the Alberto Baillères Foundation has lent all its technical and human expertise to designing safe schools, sparing no expense in achieving this goal.

According to the Global Initiative for Safe Schools promoted by the Global Alliance for Disaster Risk Reduction & Resilience in the Education Sector ([GADRRRES, 2017](#)), school safety is based on three technical pillars: safe learning facilities, an emergency response plan for school disaster management, and risk reduction and resilience education.

- **Structural safety:** From a structural safety approach, the Foundation adheres first to the bases provided in Mexican law: school buildings (together with hospitals, government buildings, and other infrastructure classified as essential or strategic) are among the facilities with the strictest construction codes and which demand the highest factors of safety. As we explained throughout this document, every project has a particular design which stems from the needs of the education community itself and the characteristics of each school, in addition to the technical-structural criteria central to construction: geological analysis, studies of soil mechanics, foundation systems, and,

**Photo 26:** Buildings meet the highest standards of safety.



eventually, additional seismic spectral studies to analyze the behavior of certain types of soils. Likewise, the quality and strength of materials are assessed (e.g., their resistance to winds or extreme weather events), as are the most effective foundation systems, which may vary according to the requirements and characteristics of each project.

- **Civil protection:** In terms of emergency response, according to the General Law for Civil Protection ([DOF, 2018-01-19](#)), internal civil protection programs must be developed for every building. This law is also complemented by local regulations. The Alberto Baillères Foundation works with these programs at the community level to establish actions, responsibilities, and response plans for any emergency or disaster and to guarantee the safety of the community inside facilities or in the event of an evacuation. Infrastructure must therefore offer and clearly signal, for example, emergency exit routes, safety recesses, alarm systems, assembly points, firefighting equipment, etc. Likewise, accessibility and availability of safe spaces (and eventually rescue spaces) for people with disabilities must be considered and integrated in the architectural proposal and in civil protection programs from the outset.
- **Reduction of other risks:** In addition to the above-cited risks, other threats have been identified in terms of the safety of people and infrastructure. In vulnerable urban environments, for example, adjacent properties, perimeter walls, and streetlamps are analyzed which might present dangers to the school environment, such as attempts to trespass onto or vandalize school grounds. Proposals have therefore been presented to improve lighting within installations and their surrounding areas and to improve perimeter walls; even the possibility of installing security cameras has been evaluated. On the other hand, preventative measures have been taken inside school facilities themselves and in terms of members of education communities to deter or avoid situations of harassment or violence. For example, the open architecture proposed for restroom areas maintains individuals' privacy while improving their safety; the same applies for spaces such as storerooms or places that may be out of sight of supervision or surveillance. All of these measures imply the Alberto Baillères Foundation providing training to the committees in which education communities organize to promote a culture of prevention, as well as establishing ties with law enforcement and civil protection authorities on the part of the Foundation.
- **Resilience:** The school space must promote community resilience if safety is threatened. In circumstances where the entire education community is involved —as in the case of an epidemic, earthquake, or social threat— the school must strengthen itself as the foremost place of safety, where solidarity and resilience are driving forces of the common good.

## B. Furniture

While, as previously noted, an educational habitat enables specific activities (pedagogical as well as social, cultural, environmental, productive, etc.) to be initiated and established inside and outside of the classroom, importance is also given to school furniture as a fundamental aspect which contributes to creating an active, organized, versatile, and peaceful learning environment; thus promoting better interaction between students and educators, as well as collaboration between students themselves.

According to INIFED (2014a, p. 12), Mexican students are seated during 80% of the time they spend in school; five days a week, nine months a year. This means that the design and availability of a type of furniture that meets students and educators' needs would not only considerably improve the classroom environment and the interactions that take place within it, but would also become an element for promoting attention among students, deterring fatigue, preventing poor posture-related problems during class hours, and even protecting them from accidents. The benefits of suitable classroom furniture are therefore reflected in better performance in and use of all pedagogical activities in general, as well as improved student safety and health.

In 2014, the National Institute for Education Evaluation (Instituto Nacional de Evaluación Educativa, INEE) designed the Basic Teaching and Learning Conditions Evaluation (Evaluación de Condiciones Básicas para la Enseñanza y el Aprendizaje, ECEA) "with the purpose of learning the extent to which the country's compulsory education schools have the basic conditions needed for their operation and functioning, such as infrastructure, furniture, teaching aids, interaction, and organization" (INEE, 2014, p. 1).<sup>25</sup> For the first time, this document gave Mexico a diagnosis of the status of basic education school infrastructures in general and of basic furniture and equipment in particular.<sup>26</sup> This diagnosis focused on identifying the **existence**, **adequacy**, and **quality** of classroom furniture and equipment and helped corroborate that which had been observed in the school context over many years: a clear lack of available, suitable, and well-kept furniture, as well as significant differences between regions and school types in terms of minimum conditions for educational work. Though this first approach represents progress in the discussion and new orientation of institutional decisions on educational policies, investment programs, and even standards and design criteria regarding school equipment and furniture (INIFED, 2014a), the response to such needs is still inadequate.

In discussions at the international level, UNESCO has centered the importance of school equipment as a constituent component of the right to a quality education. It has also accompanied states in their efforts to implement new school

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<sup>25</sup> This English translation is for reference purposes only. Original in Spanish.

<sup>26</sup> According to the study, "ECEA used a representative sample at a national level. Its selection considered all primary schools in the country (936,169) in the 2013-2014 school year. The participating sample consisted of 1,425 schools; 1,222 school administrative staff members; 156 community education leaders; 2,864 educators; and 58,460 fourth-, fifth-, and sixth-grade students; as well as 1,411 family members sitting on the board of directors in parents' associations. The sample excludes schools in Oaxaca, as this state decided not to participate in the evaluation" (INEE, 2014, p. 4). [This English translation is for reference purposes only. Original in Spanish].

environments that are founded not only on transmitting educational content but also on the creation of an entire favorable environment that includes pedagogical aspects as well as materials and that translates into meaningful learning experiences. On this front, UNESCO has indicated that school furniture should be “versatile and adaptable to the various characteristics of students and educators” as well as “comfortable, safe; that foster interaction, movement, and construction, but also concentration, silence, and reflection” (UNESCO, 2019a, p. 27).<sup>27</sup> In words of Jaime Franky of the Universidad Nacional de Colombia (National University of Colombia), “school furniture is the technical answer to a pedagogical and investigative problem” (UNESCO, 2019a, p. 107).<sup>28</sup> In any case, this should be the goal aspired to when emphasizing the relevance of furniture in school spaces and its impact on the quality of learning experiences.

The infrastructure component of the Alberto Baillères Foundation Social Model seeks to offer an answer and become a feasible, efficient, and innovative alternative that sets out a new path in the comprehensive design of furniture and is the product of a process of collaborative creation (co-creation) which is participatory and committed to the needs of each education community. The greatest innovation introduced by this proposal is that school infrastructure (furniture included) can have a broad impact on the education communities involved. In other words, the effects of the participatory project are not limited to a classroom or school environment; they ripple out through the education community and, consequently, through all nodes of the network which is related to and systematically interacts with that community.

## 1. The Design Process

In the framework of the Alberto Baillères Foundation Social Model, a proposal for school furniture that promotes and reinforces the learning process must be based on three core concepts:

- **Technical/functional parameters:** These guidelines determine, for example, the industrial production process of furniture (based on a community’s possibilities and specific needs); the type and quality of materials used; furniture’s durability and useful life; how it meets the purpose for which it will be designed (reading, writing, drawing, seating, storage, etc.); the design of each component (tables, seats, boards, shelves, boxes, racks); and efficiency in terms of costs and materials, among other elements.
- **Usability criteria:** These criteria take into account the various dynamics and relationships between the furniture’s users (students, educators, family members, senior staff, service staff) and how users will work with or use the furniture itself. These criteria also consider how furniture can be adapted to the physical space available, as well as to conditions of transportation and maintenance, among other criteria. Design also takes into account the configuration which is most effective or can best adapt to the characteristics of the educational habitat, and which can enable students

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<sup>27</sup> This English translation is for reference purposes only. Original in Spanish.

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and educators to act (and interact) with greater energy and flexibility. All these criteria must be complemented by the new demands for a high-quality, equitable, collaborative, and multimodal education matching the characterization of 21<sup>st</sup>-century education.

- **Community participation:** This means involving the school community not only in the diagnosis and planning of furniture but also in its design, management, and maintenance (and even in its production, if applicable). Ultimately, the goal is to link the various actors related to the education community in such a way that begins a process of both co-creation and shared responsibility in relation to school furniture. In this way, the education community understands the origin of each piece of furniture and the process its production entails, as well as its functional characteristics, thus creating greater respect, appreciation, and a sense of possession and appropriation of the furniture and its integration into the educational space.

In this same sense, for the Alberto Baillères Foundation the process of designing school furniture includes two key moments that precede production and use: the diagnostic approach and the principle of co-creation.

#### ***a. The Initial Diagnosis: Between Documentation and Community Participation***

Any social project that links research with community action must create a diagnosis of the status of the object of study and the roles played by the actors involved. In each component (socio-community or school infrastructure) of the Alberto Baillères Foundation Social Model, documentary research and ethnographic diagnosis are the first essential tools applied to fulfill the purpose of accompanying the education community in strengthening its capabilities for collectively creating an educational habitat. Ultimately, this has to do with devoting the necessary time for understanding all the elements that relate to the development of furniture in order to offer the best possible solution, which is solid, adequate, and well-supported.

- **Documentary research:** The first step in documentary research is to study and analyze the standards that regulate the design and production of school furniture in Mexico, as well as understanding developments in identifying basic needs in educational spaces. It is particularly important to become deeply familiar with SEP documents and to analyze INIFED and INEE precedents, as well as to delve into other academic research that provides relevant information on the status of school infrastructure in general and on the status of school furniture in particular. Experiences documented in other countries (such as Brazil, Chile, or Spain) are illustrative, especially given that they present realities which are comparable to the Mexican context.

Likewise, it is useful to consider recommendations by international organizations that promote various educational projects, such as UNESCO, the United Nations Children's Fund (UNICEF), the Organization for Economic Cooperation and Development (OECD), the World Bank, the United Nations Development Program (UNDP) and the Inter-American

Development Bank (IADB), among others.

The design for this particular furniture proposal requires establishing parameters of accessibility and inclusion. This is especially relevant, since in contexts of marginalization there is a high degree of exclusion due to lack of accessibility. For this reason, it is a priority to review accessibility and inclusion regulations, understand how they are applied (in some cases) identify gaps in regulations, and set compulsory parameters to guarantee access to any student regardless of their social or physical condition.



**Photo 27:** *The education community is invited to participate in the diagnosis.*

- **Diagnosis:** In ethnographic diagnostic work, which begins at the same time as documentary research work, the education community is invited to participate in identifying the conditions of a school's infrastructure and, in this case, of its furniture. As we have noted, this approach allows us to hear the voices of those who occupy school spaces, use its equipment, and are directly involved in the project. No one knows the needs of their education community or the complexities of their community environment better than they do. Any project seeking to go beyond the material dimension of school infrastructure must take the proposal's main actors into account with profound respect and sincerity. In great part, the feasibility of the proposal depends on the success of this approach to the education community.

In order for the diagnosis to provide the relevant information needed to design the furniture, different ethnographic research techniques are used, including field observations; log and journal entries; in-depth interviews; qualitative and quantitative surveys; collection of narratives; photographic and video recordings; and oral and written material, as are other participatory-design tools, such as attention to desires, co-design workshops to promote creativity, and collaborative activities, among others.

As a result of this first diagnostic exercise, the design team creates an analysis of needs and expectations identified in order to create a formal configuration of furniture. It is important to emphasize that gathering information from various sources (institutional and educational documentation, observations by and experiences of researchers/designers, and testimonies from individuals and education community groups) yields a multidimensional image for understanding the distinct points of view and problems which underlie any project.



### ***Participatory Diagnosis of School Furniture: Escuela Preparatoria 94 in Ecatepec, State of Mexico***

One of the first diagnostic experiences in examining school furniture conditions took place in the State of Mexico, at Escuela Preparatoria 94 (upper secondary school), located in the municipality of Ecatepec. Several members of the education community took part in this process. The findings below are the results of work carried out with parents, educators, and school authorities.

#### ***Parents' Remarks***

Parents are quite familiar with classroom interiors and the challenges their children face every day. In general, parents consider the furniture to be inadequate. Some parents add observations about damaged furniture, its poor conditions, and the deterioration it has undergone due to use and weather. They also comment that clothes can be torn by chipped seats. All parents who participated in the interviews actively take part in maintaining school furniture. They note that maintenance tasks are usually performed once a year, before the school year begins, and that tasks essentially consist of tightening loose screws and lining work surfaces, as well as a general cleaning of the latter. Most parents say their children find the school's furniture to be uncomfortable. They mention problems with posture, cases of students with back pain, and the fact that the furniture is not adapted for left-handed students. In their view, the most important areas for improvement are the comfort level of furniture and the strength of the materials used in the furniture. They also mention that classrooms lack good storage and organization solutions for classroom materials.

#### ***Educators' Remarks***

Educators experience furniture shortages every day and are aware of the most urgent needs. They state that students put their bags on their seats, leaving them little space to sit, and that at times students are unable to lean their backs against their seats. They also mention seat sizes and that the shortest students adopt incorrect postures, "with their feet dangling," which demonstrates ergonomic design flaws in furniture planning. Educators also indicate that tabletops lack space for different types of activities. They comment that classroom space makes furniture difficult to move or arrange to organize group activities, and that the "fluorescent" color of the furniture hurts and tires the eyes. Regarding storing teaching materials in the classroom, educators say that furniture is non-existent or is inadequate where it does exist. In terms of furniture repairs, the most apparent issues are work surfaces or seats unscrewing from a desk's frame. Educators add that work surfaces and seats are chipped or broken and that the most common accidents are trips or bumps against the structure of seats or desks. Other frequent accidents include school uniforms or clothes being torn by nails or chipped surfaces.

#### ***Remarks by School Authorities***

Authorities state that the most basic furniture needs are currently covered. However, they indicate that deterioration is evident and sometimes interferes with daily activities. They note that the quality of the furniture is not ideal and that it is difficult to organize educators' and students' belongings due to the lack of classroom space. Authorities say they would like furniture to be more flexible to enable different activities. They add that the quality of materials is inadequate, and that deterioration is considerable. They observe that students tend to be uncomfortable due to the lack of space and poor ergonomic seating design and emphasize that seats must be stackable to facilitate certain daily activities.

### **b. The Co-Design Principle**

Integration of furniture to the characteristics of a space is one of the central elements of the proposal led by the Alberto Baillères Foundation in partnership with the Tecnológico de Monterrey team. Although the information gathered in the diagnostic phase is enough to begin a formal design process and offer a technical solution to observed and documented problems, the Principles of the Social Model hold that the community's participation in the creative process is essential. In terms of furniture, it is the **co-design principle** that develops and realizes the spirit of collaborative creation and reinforces the innovative nature of the proposal. Any proposal for improvement has multiple solutions: it is open-ended, and the convergence of the actors involved therefore allows a consensual response to be reached, "a more sensitive result that suits users' needs" ([Buvinic, 2014, p. 11](#)).<sup>29</sup>

The greatest challenge in the co-design and participatory creation of school furniture is transferring and harmonizing the technical demands of industrial design, including the specific needs of education community members, in addition to facilitating and providing users with the tools necessary for them to contribute in an organized manner: "In the traditional design process, the researcher serves as a mediator between the users and designer. In co-design, the researcher takes on the role of facilitator. The researcher must ensure equal participation of all involved" ([Gros Salvat, 2019, p. 11](#)).<sup>30</sup> This implies not only adapting technical language and explaining theories and methodologies, but also a process of persuasion and convincing actors of the importance of collaboration, of the benefits of improving the community's environment, and of appropriation of the project by the community.

As with any participatory process, co-design develops through a sequence of actions that behave cyclically; i.e., making and delegating decisions or seeking an ideal solution to meet needs based on fundamental requirements. If this is a complex task for a team of experts, carrying it out collaboratively is an even greater challenge; at the same time, this collaborative work is enriching not only for the project, but also for the people involved in it, and for the design team in general. Likewise, a middle ground must be found between users' expectations and creativity on one hand and the real possibilities of the project on the other: ideas must be allowed to be freely expressed, but must also be properly channeled in order to be viable. For a vulnerable community, the possibility of expressing ideas also means breaking individual barriers and limitations.

Co-design sessions are organized through creativity workshops which are led by the design team and in which students, educators, parents, and senior and administrative staff participate simultaneously. There are several activities carried out in these workshops that encourage participation such as discussions, brainstorming of questions, roleplay activities, etc. In this way, participants are guided so that they can find solutions that might be difficult for them to reach without this support. Likewise, quick drawings or sketches are proposed in these sessions to help solidify ideas and put them on paper to eventually be discussed as a group. These workshops open the possibility of exploring the creative capacity of those involved, understanding their desires and needs, and listening to their voices.

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29 This English translation is for reference purposes only. Original in Spanish.

30 This English translation is for reference purposes only. Original in Spanish.



**Photo 28:** *For a community, expressing its ideas also means breaking individual barriers and limitations.*

Without a doubt, in addition to harnessing individual and community experiences expressed as ideas, involving the education community in the co-design process allows community members to create stronger ties between them and a richer result in terms of furthering collective creativity (Sanders & Strappers, 2008). Members of the education community become involved in the process, not only in the result, because they realize that although they are not experts, their ideas are important and are integrated into the development of the project. Beyond a doubt, this is one of the ingredients that sows the first seeds of social activation, community empowerment, and the possibilities of strengthening collective capacities for autonomy and self-management.

## 2. Concept Development

The diagnosis and co-design process establishes the characteristics that furniture should have, based both on prevailing standards as well as the furniture's objectives and pedagogical functions, its relationship to both the educational habitat and classroom space, and how it adapts to the community's environment over the course of its useful life.

### a. Pedagogical Criteria

As outlined earlier, furniture design must align with the regulatory standards established by education authorities. According to INIFED (2014a), in addition to meeting minimum “quality, safety, and functionality”<sup>31</sup> requirements, school furniture must consider the age groups of its users, the types of activities for which it will be used, and its relation to curricula and courses of study.

In terms of classroom furniture and in line with international trends, school equipment must be a component that facilitates learning and offers the minimum conditions of well-being and interaction in the classroom. To achieve this, the furniture proposed should lend itself to different arrangements and spatial layouts in such a way that different types of activities with different learning objectives can be offered in the same space simply by moving the furniture around: in pairs, small groups, u-shapes, and circles, among others. Sufficient evidence exists to assert that this type of learning environment promotes information retention and the exchange of knowledge, in addition to stimulating participation.

Additionally, furniture must support the correct posture both for improving attention in class and for avoiding possible injuries owing to the amount of time which students spend seated in class. According to Mexican regulations, the recommended posture is “that in which the user rests both soles on the ground without exerting pressure on the knees and can place the forearm on the table without lifting the elbow or turning the body” (INIFED, 2014a).<sup>32</sup> A correct relationship between ergonomics and anthropometry is reflected in better use of educational spaces on the part of students and educators.

**Photo 29:** *Involving the education community in the co-design process develops and realizes the spirit of collaborative creation.*



<sup>31</sup> This English translation is for reference purposes only. Original in Spanish.

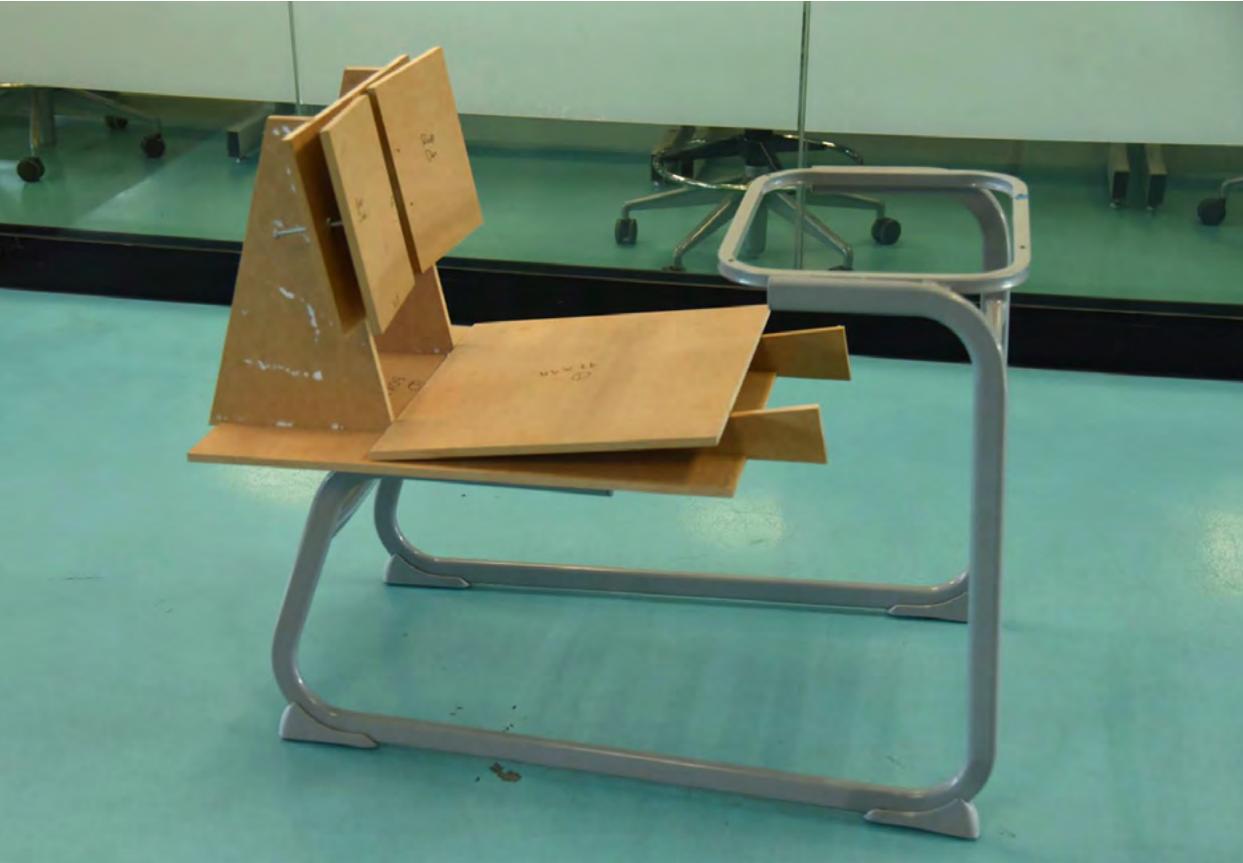
<sup>32</sup> This English translation is for reference purposes only. Original in Spanish.

All these pedagogical variables must be considered before and during the technical development of the proposal, given that, to a great extent, they determine the decisions of a final design.

### ***b. Technical Criteria***

Part of the co-design process includes proposing a methodology for evaluating and ranking design criteria as a means for the education community to prioritize solutions and rank them within the final design. To this end, a list of categorized design requirements is submitted for evaluation by community members on a scale of importance from 1 to 10. The categories that will be prioritized and ranked collaboratively are:

- **Performance:** This category refers to the durability of furniture components, their resistance to rough and vigorous handling (typical in a classroom), and their stability even when supporting peripheral loads.
- **Useful life:** Education community members evaluate the useful life of both hardware and surfaces (tables and chairs).
- **Maintenance:** Members evaluate whether parts of the furniture can be easily disassembled and replaced, whether materials and hardware are available on the market, and whether furniture is waterproof and resistant to cleaning products.
- **Manufacturing facilities and processes:** Members evaluate surface cutting and grooving processes, welding types, and tube bending, among other aspects of manufacturing parts.
- **Size:** Members consider the volume of space occupied by the furniture with respect to the space available and activities which must be carried out.
- **Aesthetics:** Members evaluate aesthetic criteria (e.g., color and form) which contribute to improving environments, especially from the point of view of visual comfort.
- **Materials:** Different material options are submitted for both hardware and surfaces based on ease of replacement, but not on handling in relation to everyday use.
- **Ergonomics:** Members evaluate options for anthropometric measures based on users' ages; appropriate measurements for tables and seats are established; finishes that produce uncomfortable support points, such as acute edges, are avoided; and opaque surfaces that prevent reflection of light are proposed.
- **Relevance:** Relevance and priority are evaluated based on the space where the furniture will be installed and on users' own features.
- **Warranty:** Members evaluate the terms and conditions of the warranty offered by manufacturers.
- **Quality and reliability:** This category includes quality control and durability testing carried out by the manufacturer on the furniture before its installation.



**Photo 30:** Prototypes are designed and tested by users.



This evaluation of the education community's priorities serves as the basis for developing the concept that translates first into a series of technical choices for the design of chair and table prototypes tested by users of different ages and sizes. Any design error or issue identified during prototype testing (in terms of angle, height, posture, etc.) is corrected accordingly.

Although there exists industrial design-based literature that guides the ergonomic and anthropometric design of school furniture, it is only by using prototypes for each specific case that each education community's specifications, needs, objectives, and priorities can be thoroughly met.

The following are the main technical criteria that define the development model of this proposal for classroom furniture—including chairs, tables, and shelves—for primary and upper secondary school students:

#### **• Selection of Materials**

Classroom furniture design in Mexican schools regularly makes use of the same materials, which vary only in their configuration: metal frames (either tubular or rod-shaped); surfaces made of wood, composite wood products, or plastic; and mechanical assemblies using different types of hardware. This is a consequence of the need to comply with standards established by educational authorities on one hand and the weighing of quality criteria in material selection on the other.

In this proposal, one priority criteria for selecting materials is their durability. Furniture must be highly resistant to impacts and rough handling (especially given students' ages), and materials must therefore be able to effectively withstand the mechanical stresses they may be subject to and last for a considerable period of time.

Likewise, frames are built using a particular type of metal tubing: 14-gauge oval tubing. In contrast to widely used round tubing, oval-shaped tubing provides better load distribution and its bends have a higher yield strength. Although this type of frame is rarely used in the furniture industry, it is commonly used when increased tensile strength is required.

In terms of covers, the materials selected exclude both wood and wood derivatives such as plastic composites. On one hand, fieldwork has shown that wood tends to weaken in strength over time. For instance, it is common to find chipped or broken furniture with worn-out material and surfaces that create unwanted roughness and can even compromise students' safety and comfort.

The outlook improves when the use of plastic surfaces is considered as a solution. However, plastic is less resistant to

rough handling and aging (especially among upper secondary school students). Additionally, plastic surfaces which are damaged from daily wear must be replaced altogether. It has also been observed that education communities seek to repair wooden furniture when it becomes damaged, in contrast to furniture with plastic surfaces, which is usually discarded as it cannot be repaired— likewise, the frames of plastic-surface furniture are also frequently discarded.

Though unusual, the solution that has been considered offers extreme resistance to impact in addition to being adaptable and replaceable by means of processes like those for wood laminates or derivatives: this solution is phenolic laminates or phenolic compact laminate. This material is manufactured by compressing multiple layers of cellulose sheets imbued with phenolic resins and subjected to high temperatures and pressure to guarantee hardness and strength. Boards or panels are built with this material, whose exterior surfaces may be given decorative finishes incorporating patterns or colors. In other contexts, phenolic laminates are highly valued due to their hardness and resistance to wear, in addition to their ability to be aesthetically configured.

In Mexico, however, the primary drawback of this material is that it is not produced domestically; Colombia and China are among the countries which produce phenolics at the most affordable prices. Despite this hindrance, phenolic laminates may still be a feasible option: through proper management with producers and requests for cost-effective importation, accessing this material is relatively easy.

In the world of public schools in Mexico, this is the first time that these types of materials have been used for building educational furniture, making the use of phenolic laminates one of the innovations introduced by this proposal. This material's strength means that it can withstand all sorts of impacts throughout its useful life.

Regional or local variations should also be considered in terms of the availability and characteristics of materials, as these variations largely determine the choice of materials. For example, it is likely that the needs, availability, and use of furniture in urban areas will differ from these criteria in rural areas. For this reason, it is important to begin based on a community diagnosis to tailor each proposal to the requirements and priorities of each community.

For all other materials, such as metal fittings and ferrules, commercially available materials are used so that the education community can find them easily at any hardware store near the school in case they need to be replaced or repaired.

### **• Fundamentals of Ergonomics**

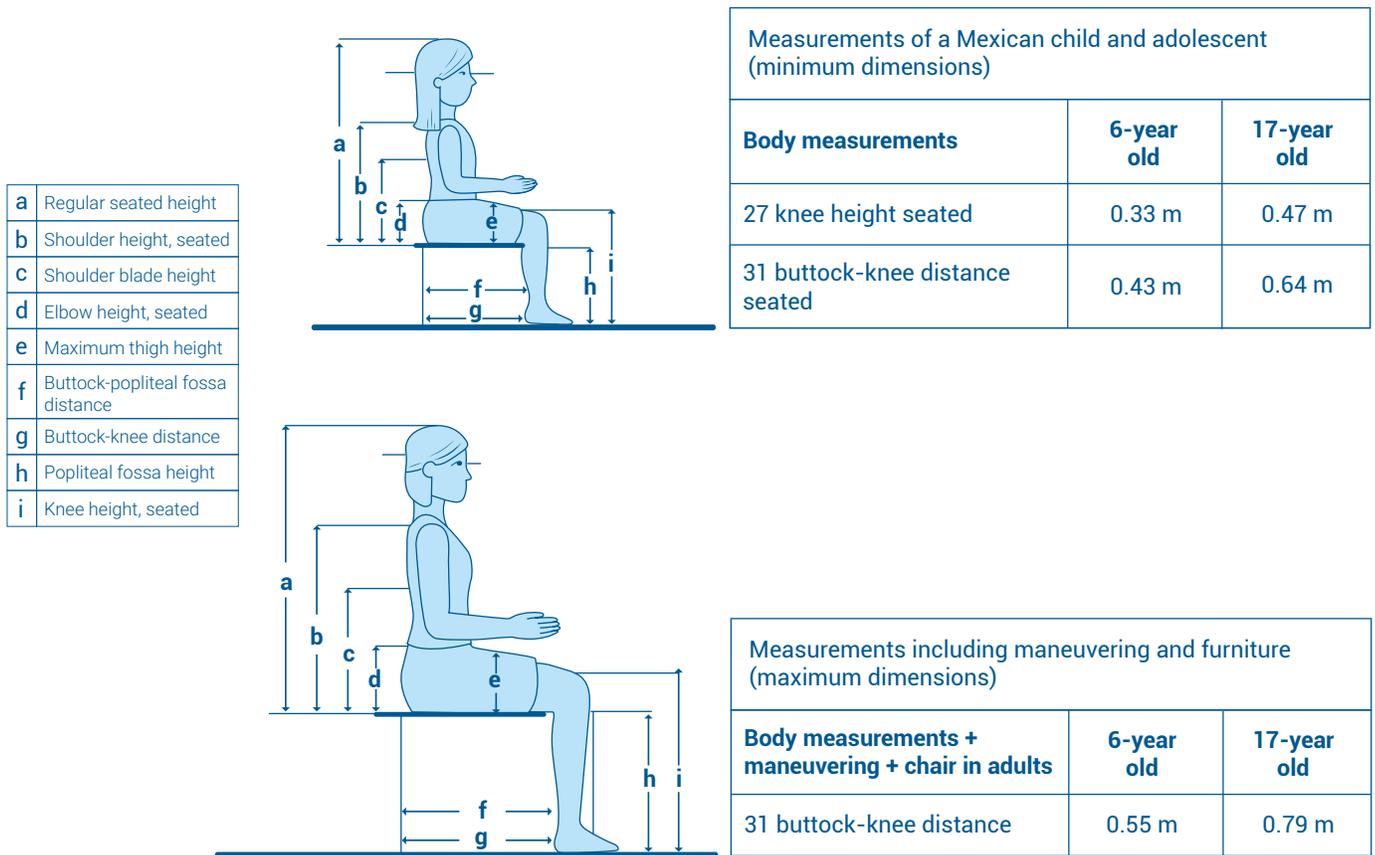
As previously explained, ergonomics is an indispensable element for establishing guidelines in the design of school furniture. Ergonomic fundamentals not only define the shape and configuration of furniture, but also its (use-based) application, components, and requirements in terms of strength. Ergonomics has played a highly significant role in designing human spaces as well as the devices that are incorporated into these spaces. Ergonomic criteria largely determine the relationship between furniture and people in a given space.

According to the United Kingdom-based Chartered Institute of Ergonomics & Human Factors (CIEHF), “ergonomics is a science-based discipline that brings together knowledge from other subjects such as anatomy and physiology, psychology, engineering, and statistics to ensure that designs complement the strengths and abilities of people and minimize the effects of their limitations. Rather than expecting people to adapt to a design that forces them to work in an uncomfortable, stressful, or dangerous way, ergonomists and human factors specialists seek to understand how a product, workplace or system can be designed to suit the people who need to use it” ([Chartered Institute of Ergonomics & Human Factors, n.d.](#)). Any design begins with shapes and materials, which adapt to peoples’ anatomical specifications and cognitive needs; this facilitates the use of objects and the carrying out of the tasks for which the objects have been designed.

In the case of school furniture, criteria of inclusion and equity must also be considered in order to benefit all students equally. This presents an enormous challenge, as it implies taking into consideration the great diversity of variations in the morphological conditions of students, given the changes they undergo at different ages. In upper secondary schools, where students are on the cusp of completing their physical growth, it is easier to establish criteria based on anthropometric data. However, in primary and lower secondary schools, where students are growing, developing, and experiencing significant anatomical changes, different furniture sizes must be set out for different age groups.

For these reasons, the project presents designs for two differently sized sets of furniture for primary school students (from first through third grade and from fourth through sixth grade; these are stages when students go through significant physiological changes, primarily due to their incipient adolescence), as well as a single model for upper secondary school students, as these students experience fewer anatomical changes, although there are also differences between men and women.

**Figure 19: Anthropometric Measurements of Mexican Students**



Source: Adapted from Ávila et al. (2007)

**• Anthropometry**

Anthropometric guidelines are established based on a comparative analysis between the criteria stipulated by INIFED standards and criteria in anthropometric data charts according to the measurements of different age cohorts of the Mexican population. Anthropometric data help establish measurements and limitations according to potential users’ body frames and relationship with the furniture.

Beyond a doubt, furniture’s appropriateness to and usefulness for its end users depends on the anthropomorphic criteria considered in its design. It has been noted that anthropometric needs can vary according to the characteristics of the population of each place, making it impractical to offer a single, standard measurement for all of Mexico. On the contrary, as part of fieldwork and an initial diagnosis, these measurements should be adapted to the requirements of each community, considering local and regional differences.

### • *Aesthetics and Psychology*

Psychological and aesthetic aspects of classroom furniture design are frequently considered to be secondary or nonessential, even trivial, especially in vulnerable communities where other needs are critical. However, from the standpoint of the collaborative creation of new educational habitats in which the quality of surroundings entails better learning environments, both aesthetic and psychological aspects also take on a dimension of reinforcing pedagogical processes and healthy coexistence. Likewise, these aspects are fundamental elements that help actors in the education community to appropriate, feel ownership over, and become responsible for spaces and equipment, as well as reinforce their sense of belonging and community solidarity.

**Color** is among the aesthetic criteria considered in the design of classroom spaces and equipment. Mexican standards provide criteria for selecting the most appropriate chromatic parameters for rooms in schools based on how these rooms will be used (as classrooms, laboratories, libraries, auditoriums, etc.), how they relate to furniture (table, chairs, desks, shelves, auditorium seats, bookcases), and how they relate to their users.

The use of color in educational facilities should lend spaces warmth and comfort, as well as a feeling of freshness and restfulness. Color should promote concentration and work, as well as peaceful classroom time during school hours. It should be appropriate for the type of activity carried out and time spent by users in each space; hence, different colors are used for indoor and outdoor spaces. Specifications set out in regulations ([INIFED, 2014a](#)) for classrooms and equipment suggest using semi-matte or satin finishes for materials used for surfaces and covers, with a medium range of saturation given that the lighter the color, the greater its reflectiveness, and the more saturated the color, the more likely it is to overstimulate users. The shades for this project have been selected from a range of blues, greens, yellows, and beiges. Colors for walls, ceilings, and floors should also be considered so that equipment can match its surrounding physical spaces.

In terms of furniture's **shape**, somber-looking forms or forms which obstruct mobility and limit spaces should be avoided. Likewise, criteria should meet the flexibility and versatility needs which are central to new classroom environments; in other words, furniture should lend itself to various layout styles in order to organize different pedagogical activities in the same space. As seen further on, the school furniture designed for this proposal facilitates both individual and work in small or large teams, as well as different layouts for presentations or demonstrations, for example.

In terms of **finishes**, phenolic materials with rounded edges (which reduce the likelihood of chipping and improve durability) are used for covers and the surfaces of seats and tables to create a friendlier and safer environment that minimizes accidents and bumps.

### • **Safety and Strength**

Calculation of the load and stress to which furniture will be subjected is based on the relation between the anthropometric variables of weight and height of the Mexican population at different ages, as well as on national standards that specify all the activities for which the furniture will be used. This factor cannot be overlooked, as furniture must prove to be resistant in each of its components, its joints, and its assemblies.

Ethnographic research carried out for this project has identified some of students' most common habits in terms of their use of currently existing furniture. The stress to which furniture is subjected exceeds "normal" use in its intensity. For example, students often rock in their seats, stand on top of tables, stack and carelessly move furniture around, and otherwise use furniture for purposes other than those for which it was designed.

On the other hand, taking into account the conditions and capacity which schools or the community have to maintain or repair equipment presents a durable and robust solution to extend the useful life cycle of furniture.

### • **Cleaning and Maintenance**

For health and safety reasons and to create an environment conducive to learning, school furniture should be easy to clean and maintain. Coarse or porous materials that accumulate dirt or absorb moisture should be avoided.

Particle board was ruled out when selecting materials precisely because this material does not offer optimum conditions for cleaning and maintenance. It has been noted that students often mishandle, mistreat, and even intentionally damage furniture. They frequently carve names or drawings into tabletops or seats, and on occasion these "customizations" cannot be removed because the material would become damaged.

To avoid this type of situation, materials used to produce furniture must be able to be thoroughly cleaned and rehabilitated before the beginning of every school year. School authorities promote campaigns in which students clean and take care of furniture. This also forms part of the purpose of the project: for students to appreciate and respect the school infrastructure, since they have been considered in the selection of the furniture's characteristics, design, and use.

### 3. The Final Design<sup>33</sup>

Using all technical and human considerations for furniture design, two final proposals were developed: a chair-desk for use by lower and upper secondary school students, and a table and chair set for primary school students. The table and chair sets are manufactured in two sizes in order to better adjust to the anthropometric changes students undergo as they age. A metal modular shelving unit, also meant for use in classrooms, was designed as complementary piece of furniture.

#### a. Vespa: Chair-Desk for Secondary School Students

- Composed of a single structure, with a flat tubing frame that withstands stress more effectively.
- Tabletop and seating surfaces are made of flat phenolic resins which, if necessary, allow for easy replacement with widely available and easy-to-cut wooden boards.
- Tabletop and seating units are joined to the tubular frame with flat Allen head screws that are widely commercially available in case repairs become necessary; furthermore, flat head screws create uninterrupted surfaces that are not uncomfortable to sit or write on.
- The chair's angles create a comfortable position that allows students to remain seated for long stretches of time.
- The "sled"-shaped design enables the furniture to slide easily on the floor when pushed. Plastic ferrules in the base that make contact with the floor reduce friction when the furniture is pushed in the direction of the tabletop and provide stability when pushed in other directions.
- The tabletop shape enables different configurations for collaborative work: teams of two to six students can be effectively grouped in the classroom space.
- A storage rack is located underneath the seat.
- The integration of all components into a single structure (table and seat) allows students to interact without compromising their own laterality.
- The dimensions of the tabletop allow students to organize their school supplies during classroom activities.
- The distance between the tabletop and the body is appropriate and includes any size in the age range of upper secondary school students.
- Matte finishes prevent glare; colors prevent eye strain and promote concentration.

#### Illustration 1: Vespa Chair-Desk



<sup>33</sup> The images and illustrations which appear in this section are for reference purposes only. Furniture, materials, and colors may vary according to project-specific solutions.

Source: The Alberto Baillères Foundation

## Illustration 2: Spatial Layout of Vespa Chair-Desks



Source: The Alberto Baillères Foundation

### **b. Apis: Table and Chair Set for Primary School Students**

- The chair and table are separate components in this furniture set, since class activities demand a wide variety of layout and versatility in classroom space.
- The set is comprised of a highly resistant flat tubular frame, a phenolic tabletop, and a plastic seat. The plastic seat was chosen because, according to research, plastic components rarely break. Because of their age, students do not weigh enough to compromise the strength of this type of seat.
- The shape of the tabletop enables students to organize in different group configurations, from pairs to groups of up to six students.
- The “sled” solution in the components allows the furniture to be pulled in the direction of its axes and grants it greater stability.
- The chair can either be placed under the table or on top of it, depending on the classroom’s spatial and organizational needs.
- A storage rack is located underneath the tabletop.
- Two designs are proposed in different sizes, according to schools’ age groups and height ranges. This proposal prevents the exclusion that inadequate furniture size can cause, as well as other adverse effects caused by ergonomic inconsistencies. The smaller size is meant for first- through third-grade students, while the larger table is intended for use by fourth-, fifth-, and sixth-grade students.

### **Illustration 3: Apis Table and Chair Set**



Source: The Alberto Baillères Foundation

**Illustration 4: Apis Table and Chair Set**



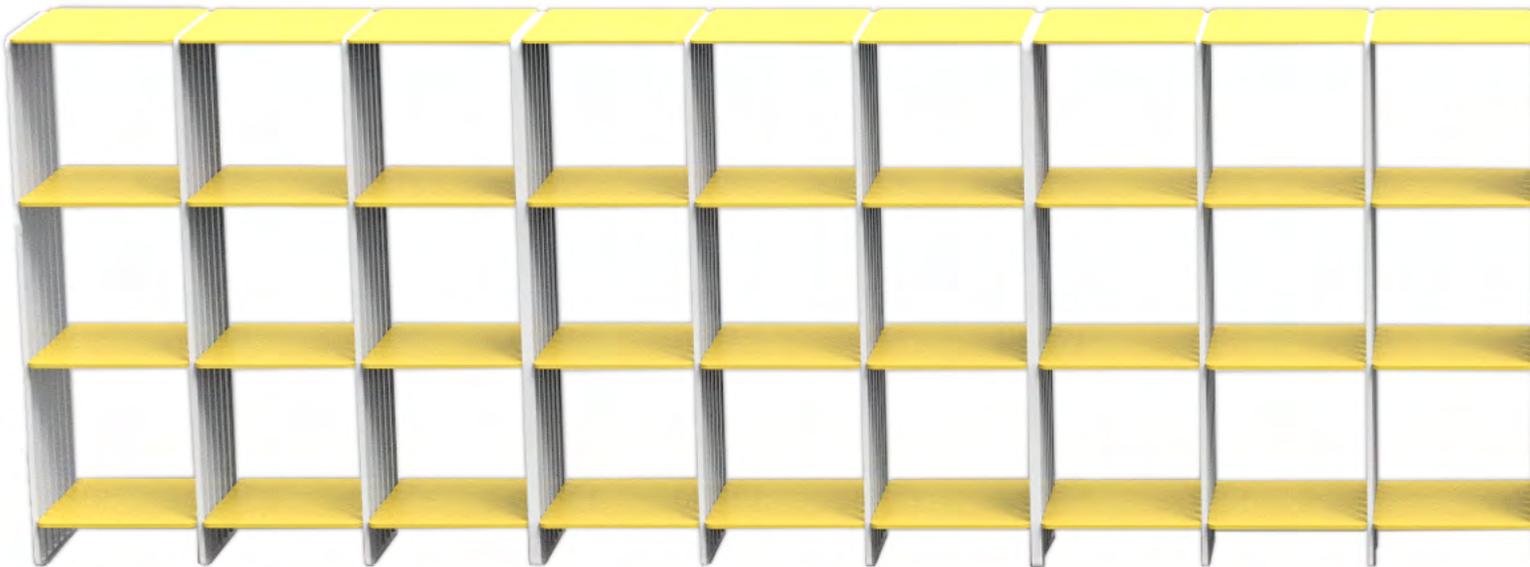
**Illustration 5: Group Layout with Apis Table and Chair Sets**



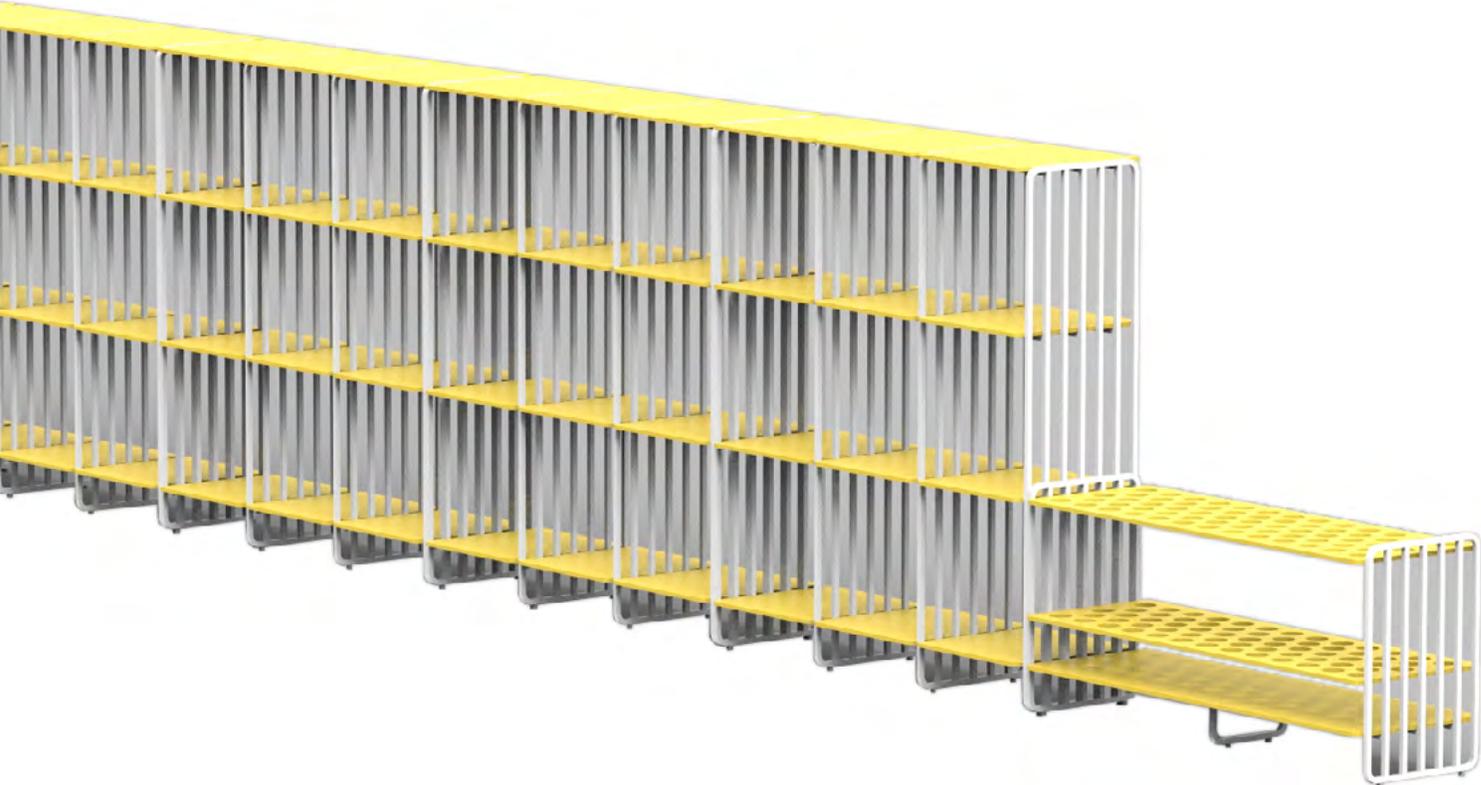
Source: The Alberto Baillères Foundation

### ***c. Panal: Classroom Shelving Unit***

- Modular shelving system allows students to store their belongings securely and neatly.
- Each module is comprised of nine storage spaces (3x3) capable of storing school bags, books, and supplies, among other belongings.
- Dimensions are arranged in such a way that modules are reachable by any student, whether in a primary or a secondary school.
- Built using aluminum profiles and steel sheets, the unit is electrostatically painted and joined by welding and hardware.



**Illustration 6: Panal Shelving Unit**



Source: The Alberto Baillères Foundation

#### 4. Production

Given the formal characteristics of the furniture and the expectations created in terms of their functionality and strength, their production is highly complicated, since maximum efficiency must be sought in the use and utilization of materials; likewise, a low-cost and simple production process must also be found.

The production of furniture consists primarily of two processes:

- **Material availability planning:** This implies an entire chain of actions that initially includes selecting suppliers and purchasing supplies based on production needs and volume. In regard to the materials that will be imported, this process implies foreseeing and managing the availability of materials and delivery times so that furniture manufacturing can be accurately planned.
- **Transformation of materials:** Classroom furniture (tables, seats, and shelving units) essentially uses three materials: tubular metal frames, phenolic or particle board surfaces, and plastic. For tubular profiles, the main processes involved are cutting, rolling, bending, and welding, as well as electrostatic painting. When cutting phenolic boards or particle board, CNC router cutting machines are used to achieve accurate dimensions and to conserve materials. The last step in this transformation is the assembly of components using commercially and easily available hardware.

The project's greatest challenge therefore lies specifically in finding a balance between furniture quality (in terms of materials, design, strength, use, maintenance, etc.) and the complexity of a production process that fully meets local needs (in terms of the manufacturing process itself, the availability of materials and technology, and production and maintenance costs).

#### Illustration 7: Overhead View of Vespa Chair-Desks



Source: The Alberto Baillères Foundation



In brief, in order for this proposal to serve as a starting point and an example for other school spaces, the feasibility of its production (in addition to technical, design, and co-design characteristics) must be considered in other urban and rural social contexts, as must the financial capacity of the education community that will benefit from this type of infrastructure. Likewise, the availability of technology and its attendant costs should be considered. Furthermore, furniture must be easy to manufacture, and materials must be available and affordable. These requisites enable the education community to be self-managing and autonomous not only in terms of furniture repair and maintenance, but in terms of its own eventual capacity for producing and manufacturing school furniture.

**Photo 31:** *The combination of spaces and furniture establishes a balanced and functional proportion between both elements.*

## 5. The Combination of Furniture and Architectural Space

Permanent dialogue between architects and industrial designers, as well as work carried out with education communities, have allowed this project to offer complete integration in terms of infrastructure in both the spaces and furniture of classrooms. Bringing all infrastructure elements together creates a new, flexible educational habitat that facilitates better interaction between students and educators and greater enthusiasm during classroom activities. This is one of the project's main contributions: a combination of spaces and furniture that establishes a balanced, functional, and efficient proportion between both elements. This combination not only guarantees the optimization of school infrastructure, but also reinforces its characteristics of habitability, quality, dignity, and safety.

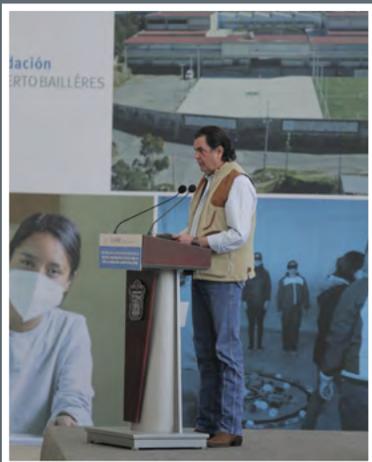
# Primaria Amado Nervo

(Primary school)



# Preparatoria 94

(Upper secondary school)



# Appropriation of Preparatoria 94 School Space

## Perimeter wall on Escritores Street

### 1 Listening and Dialogue

Meetings are held with the education community to learn about their proposals. A Cultural Commission is created to coordinate the Space Appropriation process.



### 2 Pre-Selection of Artwork

The Cultural Commission pre-selects several works of art by Mexican artists from the catalogue of the Black Collection.



## Perimeter wall on Gabilondo Soler Street

### 1 Listening and Dialogue

Meetings are held with the education community to learn about their proposals.



### 2 Presentation of Proposals



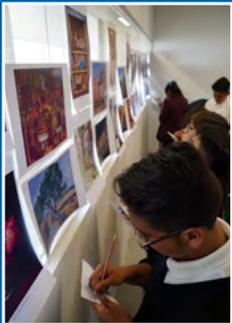
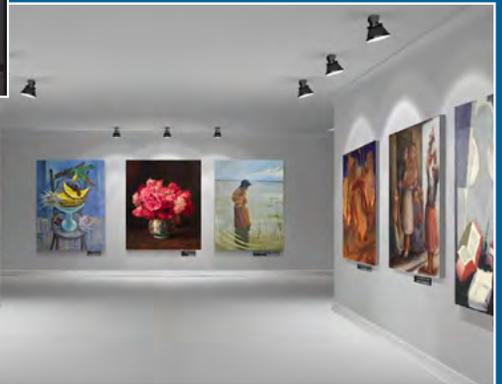
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## 3 Virtual Gallery

Due to the COVID-19 pandemic, an online gallery is created to exhibit the pre-selected artwork to the education community.



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Two proposals are presented:

- a) creation of a mural using fragments of photographic portraits of members of the EPO-94 community;
- b) design of a timeline beginning from the time when the Foundation and EPO-94 began to collaborate.

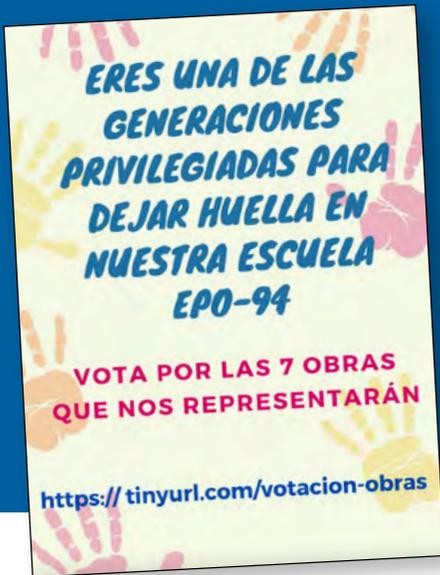
## 3 Voting and Selection

426 education community members participate in the voting and selection process: 94% of participants are students; 4% are educators; 1.5% are senior and administrative staff; and 0.5% are counselors. The community selects the photo fragment proposal.



# 4 Voting and Selection

280 education community members participate in the voting and selection process of the 7 pictorial artworks that will become part of Escritores Street: 94% of participants are students; 4% are educators and senior staff; and the remaining 1% is comprised by a counselor and a parents.



# 5

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# 4 Virtual Photoshoots

Due to the COVID-19 pandemic, 17 virtual photoshoots are organized to photograph community participants. 340 people are photographed.



# Production and Appropriation

Using mosaic techniques, a mural is installed based on the artwork selected by the community. The education community will be responsible for protecting and maintaining the mural.



## 5 Production and Appropriation

The mural is assembled using fragments of photo portraits of education community members' faces and installed using printed vinyl with a UV coating. The education community is responsible for protecting and maintaining the mural.





**V. Monitoring**

**and Evaluation**

# V. Monitoring and Evaluation

The Social Model’s system of monitoring and evaluation produces and provides solid and reliable quantitative and qualitative information on the processes carried out at each phase of the operational chain, as well as on the attainment of expected results and the way that these elements contribute to fulfilling the Objective of the Social Model. This information allows us to assess and identify improvement areas, demonstrate the Social Model’s impact on education communities, and gather input for decision-making and accountability.

To function, the monitoring and evaluation system is guided by a set of indicators that describe the expected outcomes of each strategic guideline. In this sense, through **monitoring**, all activities are documented based on each indicator in a timely and methodical way in order to identify achievements, learning experiences, and obstacles, among other elements; likewise, the attainment of objectives and milestones is assessed through **evaluation**.

**Photo 32:** *The monitoring and evaluation system allows the specific progression of each education community to be observed.*

**Table 4** shows the general monitoring and evaluation indicators of each strategic guideline.



**Table 4: Strategic Guidelines and General Monitoring and Evaluation Indicators**

	Strategic Guideline (SG)	Indicator
<b>SG1</b>	Agency capacity for linking efforts	<ul style="list-style-type: none"> <li>• Management of agreements between all Social Model actors.</li> <li>• Implementation and fulfillment of agreements that benefit education communities.</li> </ul>
<b>SG2</b>	Quality improvement of school infrastructure	<ul style="list-style-type: none"> <li>• Collaborative design and evaluation of educational habitats according to criteria of sustainability, innovation, sustainable development, inclusion, diversity, and safety.</li> <li>• Effective and appropriate actions to improve, care for, and maintain school infrastructure according to the needs of education communities and the collaborative design criteria of the Social Model.</li> <li>• Evidence of appropriation and resignification of spaces.</li> </ul>
<b>SG3</b>	Accompaniment for the transformation of education communities	<ul style="list-style-type: none"> <li>• Educational actions and evidence of the gradual development of education communities' capabilities for autonomy, self-management, and cohesion: <ul style="list-style-type: none"> <li>◦ autonomy in making decisions on educational actions and individual and collective learning;</li> <li>◦ self-management in order to appropriately use tools and resources to achieve common objectives and develop transformational projects based on community participation and organization; and</li> <li>◦ cohesion in order to build healthy and peaceful coexistence and for jointly-responsible citizen action.</li> </ul> </li> <li>• Capability-building actions by the operational personnel, partners, and facilitators of the Social Model.</li> <li>• Achievement of the capability development levels of the <b>Social Transformation Maturity Matrix</b>: initial, in progress, advanced, developed, and sustainable.</li> </ul>
<b>SG4</b>	Assimilation of learning experiences	<ul style="list-style-type: none"> <li>• Joint processes of reflection and analysis (communities of learning and practice) to improve and monitor the Social Model's components, based on the records and logs of work done with education communities.</li> <li>• <b>Systematization of experience</b>, as a tool for the qualitative evaluation of learning experiences.</li> </ul>
<b>SG5</b>	Transfer and exchange of knowledge	<ul style="list-style-type: none"> <li>• Creation of spaces and partnerships with multiple institutional actors (academic, international, public and private organizations, and civil associations) to enable the exchange of experiences, communication of lessons learned, and transfer of the Social Model.</li> <li>• Production of scientific-academic knowledge and its dissemination through publications in different media and formats.</li> </ul>

Two monitoring and evaluation tools stand out in this Model: the **Social Transformation Maturity Matrix**, which evaluates the progress made by education communities in developing their capabilities and contributions to social transformation; and **systematization of experience**, which documents, organizes, and analyzes the learning experiences which result from accompanying education communities and as part of an exercise of meta-observation on the Social Model as a whole.

- **Social Transformation Maturity Matrix:** In order to assess the advance of education communities in the transformation process promoted by the Social Model, a rubric (or matrix) was created to identify their progression in developing capabilities and to guide accompaniment (SG3) through the *Descubrimiento y movimiento*<sup>®</sup> [Discovery and Movement] methodology. This matrix allows the education community to be situated in a particular moment in time in order to offer specific learning tools and accompany it in the collaborative creation of its educational habitat. The Social Transformation Maturity Matrix is an important source of input for the monitoring and evaluation system, since it includes indicators that account for the achievements of the education community in each of the five capabilities addressed by the Social Model.

Based on the evaluation of social transformation which the Social Transformation Maturity Matrix offers, as an education community moves through the Matrix's stages of maturity it is expected to demonstrate increased autonomy, self-management, and community cohesion, both in terms of observable behaviors and of other qualitative elements that translate into attitudes, values, and behaviors. Likewise, increased participation on the part of the education community is understood as being indicative of the process of social transformation.

Five maturity levels have been established which are progressively evaluated using this matrix:

- **Initial:** First awareness of the dynamics of coexistence which prevail in the education community, how the community interrelates and becomes involved, and the way in which decisions are made. This does not deal with how others see the community, but how the community understands itself.
- **In progress:** Transition from awareness to the activation of willpower for collective action. In this way, the education community examines the possibility of collaboratively creating an educational habitat that promotes the development and well-being of all of its members.
- **Advanced:** Action takes on greater relevance. Specifically, this is a form of intentional action based on the needs and expectations of the education community itself and in which all members become involved given the collective and transformative nature of the project. External support is still required in order to drive actions, but processes of autonomy and self-management are underway.

- **Developed:** The education community proposes, organizes, carries out, and evaluates actions that produce well-being and development for everyone in the educational habitat, with minimum external accompaniment.
- **Sustainable:** The capabilities that form part of and are integrated into the institutional and community culture of the school are exercised daily.

This tool also constitutes a support for working jointly with other civil society organizations, as it helps identify each education community's educational needs or critical aspects that require the involvement of a partner. Likewise, it contributes to the assimilation of learning experiences and knowledge creation (SG4 and SG5), since it evaluates, for instance, consciousness-raising about action itself, ongoing reflection during practice, and taking action based on lessons derived from experience. All of these elements also constitute a condition for sharing experiences with others and exchanging knowledge.

- **Systematization of experience:** Systematization is a fundamental tool of the Social Model. As part of the system of monitoring and evaluation, it serves to document learning experiences which result from the operation of the Social Model and to provide information on the conditions specific to each experience. Systematization is significant given that it helps those involved identify their progression, evaluate their achievements, and plan for the future. At the same time, it can orient others on the challenges entailed by a project of this type. In this sense, using this perspective in documenting what has been done has a two-fold purpose: internal strengthening and guidance, and the promotion of similar experiences in other contexts.

Based on the above, the following are objectives of the systematization of experiences:

- direct documentation, using the testimony of the parties involved, of the meanings that the Social Model's practices and processes have acquired, of the challenges identified, and of the main lessons learned from the experience;
- identification of strengths and opportunity areas in the operation of the Social Model that orient decision-making during improvement processes; and
- encouragement of the critical appraisal of the Model's fields of application in order to contribute to continuous reflection and review.

These goals require a highly qualitative approach, as they focus on the processes, actors, relationships, and experiences —as well as social, institutional, and human factors— that have shaped the accomplishment of the objective. Answers are sought to questions on the how and why of the experience.

The Social Model integrates systematization from two approaches:

- the integral systematization of the Social Model, derived from accompaniment; and
- the systematization of the experiences of education communities themselves, on the basis of meta-observation by external actors.

Both are regarded as comprehensive and complementary exercises. They are **comprehensive** in that they seek to understand what happened and why things happened in the way they did: rather than qualifying or quantifying, results give meaning to the experience and contextualize it. They are complementary because they enrich each other, in the sense that they integrate the points of view of both the education communities and the operation of the Model as a whole. Likewise, both are **complementary** exercises because they foster the actions of other strategic guidelines from a human and process-oriented perspective.

Throughout the monitoring and evaluation process, the system integrates different actors, both from within and outside of the Alberto Baillères Foundation. These actors carry out complementary evaluations that include attention to specific needs (to be remedied through a study or the application of a qualitative and quantitative instrument), assessment from an external point of view (which helps identify strengths and weaknesses through the perspective of outsiders) or internal evaluation in order to improve day-to-day activities and accountability. **Table 5** presents the role each actor plays in the evaluation process.

The processes described comprise a system in which all elements are interrelated from a holistic perspective. This interrelation allows for the articulation of internal and external perspectives of meta-observation that permanently fuel reflection, the assimilation of learning experiences, and improvement of processes.

With the sum of these elements, the monitoring and evaluation system enables each education community's specific progression to be observed. Furthermore, it contributes to a better (and reciprocal) understanding of all actors involved and, because of its high flexibility, it allows the transfer of the Social Model to different contexts where willingness exists to collectively improve communities' educational environments and quality of life.

The monitoring and evaluation system is one of the main strengths of the Social Model, as it establishes permanent processes for reflection, critical analysis, decision-making, and knowledge creation. This system is still in development, and its consolidation can be achieved based on the assimilation of learning experiences and through the analysis of action and dialogue in the framework of the management of the Social Model.

**Table 5: Monitoring and Evaluation Processes**

<b>Who evaluates?</b>	<b>The Alberto Baillères Foundation Evaluation Department</b>	<b>Operations Department and education community members</b>	<b>External advisors</b>	<b>External researchers</b>
<b>What is the evaluation objective?</b>	<ul style="list-style-type: none"> <li>To pinpoint the relationship between goals and results obtained by the operations team, external researchers, and external advisors.</li> <li>To establish the level of contribution of the actions carried out by different departments in the Foundation in accordance with set objectives.</li> <li>To create new knowledge which can be transferred to other organizations and promote the replicability of the Social Model in new contexts.</li> <li>To generate evidence-based information for decision-making and accountability.</li> </ul>	<ul style="list-style-type: none"> <li>To conduct a critical analysis of the accompaniment process in order to learn from the experience.</li> </ul>	<ul style="list-style-type: none"> <li>To perform a meta-analysis that allows identification of strengths, weaknesses, and improvement needs of processes, and provides input for decision-making in internal departments.</li> <li>To support the Evaluation Department in strengthening the monitoring and evaluation system.</li> </ul>	<ul style="list-style-type: none"> <li>To contribute to the knowledge and understanding of the processes related to the Social Model through specific research projects.</li> </ul>
<b>What is evaluated?</b>	<ul style="list-style-type: none"> <li>The processes, results, and impact of the Social Model in order to identify gaps between what was planned and what was achieved (e.g., level of autonomy, self-management and cohesion, dropout rates, increase in enrollment).</li> </ul>	<ul style="list-style-type: none"> <li>Lessons learned during the implementation of the Social Model in terms of individual and collective capabilities, as well as in terms of transformations achieved.</li> </ul>	<ul style="list-style-type: none"> <li>Congruence and articulation between the Social Model's components: the socio-community and infrastructure components.</li> <li>Elements that affected the quality and relevance of the processes.</li> </ul>	<ul style="list-style-type: none"> <li>Specific Social Model-related problems and information required to support the evaluation processes, based on their own referents.</li> </ul>
<b>How is evaluation carried out?</b>	<ul style="list-style-type: none"> <li>A plan is established to monitor activities and evaluate indicators through IT platforms for quantitative and qualitative data analysis (systematization).</li> </ul>	<ul style="list-style-type: none"> <li>Through use of participatory action-research techniques: systematization of experience,, reflection on practice, learning systematization of experience, reconsideration of actions.</li> <li>Through use of the Matrix that evaluates the maturity of social transformation within education communities.</li> </ul>	<ul style="list-style-type: none"> <li>Through application of the social project evaluation protocol with quantitative and/or qualitative methodologies.</li> </ul>	<ul style="list-style-type: none"> <li>Through application of quantitative and/or qualitative methodologies by area of expertise: systematization of experience.</li> </ul>
<b>Whom is the evaluation for?</b>	<ul style="list-style-type: none"> <li>Board of the Alberto Baillères Foundation</li> <li>Directorate of the Foundation</li> <li>Other departments of the Foundation</li> </ul>	<ul style="list-style-type: none"> <li>Members of the education community and the Operations Department</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation Department, which shapes decision-making by the Foundation's operational team and the Operations Department</li> </ul>	<ul style="list-style-type: none"> <li>Evaluation Department</li> </ul>



# Epilogue

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## Innovations of the Alberto Baillères Foundation Social Model That Promote the Right to Education and the 2030 Agenda

Throughout this document, the central elements of the Social Model that the Alberto Baillères Foundation has put into practice with education communities in Mexico have been outlined. The principles that sustain its approach —aimed at promoting human development and the right to education from a systemic point of view— have been introduced. Also highlighted has been the articulation of school infrastructure with capabilities building among those who inhabit and share educational space, which is particular to the Social Model. Synthesized in the concept of the *educational habitat*, both dimensions represent an effort to build environments in which education is facilitated by the existence of dignified and inclusive spaces, as well as of education communities capable of organizing themselves, learning together, and participating in the constant improvement of their shared life.

This approach, which focuses on the creation of quality education environments, is a feature of the innovative experiences that UNESCO seeks to document and encourage. As noted in the [Introduction](#), the Organization has set itself the short-term task of promoting these transformation-oriented innovations, given their impact on a fuller exercise of the right to education and the achievement of the Sustainable Development Goals of the 2030 Agenda.

With this in mind, UNESCO has contributed for the last two years to the strengthening and systematization of the Social Model. Although this project is still in the midst of consolidation and has a long road ahead of it in terms of development, several processes of interest have been identified through the accompaniment work carried out so far. These processes relate to at least three perspectives that will be revisited in the following pages.

The first perspective is related to understanding the implications of “a safe and quality learning context.” This idea —associated with one of the 2030 Agenda’s education goals— synthesizes the objective of providing spaces in which children and young people learn what they need to learn in the best way possible and within environments of care. However, as a guiding principle, it must also be materialized: it must be translated into concrete realities in order to define that which is implied by

building these contexts in a specific space. The Social Model offers information in this regard, mainly based on the idea of an *educational habitat* for all and of joint work between governments and society.

A second perspective which bears observing is the operation of the Model which includes (among other elements) establishing partnerships with government agencies and various societal actors as well as defining a methodology for the operation of the Model. Both elements are essential conditions for the development of the Social Model and of similar experiences.

The third perspective is related to the development of an educational project with education communities. As expanded upon below, the approach selected and accompaniment work carried out within the framework of the Social Model foster a proposal that builds capabilities linked to sustainability, citizenship, and the culture of peace.

To conclude this document which presents the Alberto Baillères Foundation Social Model, some reflections on the points cited above should be noted.

## The Educational Habitat as an Integrating Horizon

One of the defining characteristics of the Social Model is its interest in innovation in the development of quality educational spaces. As discussed, the existence of environments that fulfill students' needs is a requirement of the right to education, as these environments clearly influence learning and student retention.

All nations must make commitments in this area, especially those with historical and unresolved gaps in terms of inclusion and equity. The development of innovation processes presents a path to overcoming existing limitations.

From this perspective, the Alberto Baillères Foundation Social Model has served as an opportunity for timely reflection: what does it mean to have spaces and contexts for an inclusive and quality education? How are these spaces and contexts built? Who should build them?

The answers to the questions explored until now and presented in this document point in more than one direction.

One such answer, which is particularly relevant in light of its integrating dimension, is the adoption of the concept of educational habitats. This concept takes up the conceptual development and experiences generated in recent years around the construction of *school habitats* in different countries ([UNESCO, 2019a](#)). These reflections and practices have made it possible to move from a purely architectural conception of school infrastructure to an understanding that is closely linked to students' needs and the creation of spaces that are conducive to learning. In itself, this approach represents a step forward from more traditional and predominant perspectives, given that it focuses on how individuals appropriate, re-signify, and participate in the creation and improvement of spaces.

The Alberto Baillères Foundation Social Model recovers this approach but takes it even further through incorporating new elements. Specifically, the articulation of the two major components described in this document stands out: the infrastructure and socio-community components. This alignment allows

the Foundation to discuss educational habitats and define them as “sustainable spaces of well-being and human development for all community members” (see [“Objective of the Social Model”](#)).

In this way, from its infrastructure component, the Model develops an architectural proposal with elements that explicitly address inclusion and participation. An example of this is mentioned in the preceding paragraphs on the characteristics of spaces for study and interaction within schools, as well as the design of furniture that accounts for diversity and facilitates collaborative work. The inclusion of community spaces, such as school gardens, offers physical opportunities for the development of participatory and collaborative learning experiences.

At the same time, this is a dimension committed to promoting schools as a common good, to be cared for and co-responsibly inhabited in a way that supports collective well-being and educational tasks. Part of this can be seen in activities that enable students, educators, and families to care for and maintain school facilities as well as to develop participatory experiences which appropriate spaces through art.

Additionally, the socio-community component of the Model enhances the concept of the habitat through a particularly relevant educational perspective. The cited definition itself emphasizes that building an *educational habitat* entails the presence of opportunities for well-being and development for all actors involved in school life: students, educators, and families. A *habitat* is therefore constituted as such in view of the infrastructure conditions, relevance, and educational use of its areas, but also because it is a space in which the education community can engage in continuous learning, collaborative work, and create projects for the improvement of community life that goes beyond school maintenance. The Social Model’s socio-community dimension contributes to this through explicit and systematic action conducive to a shared vision (within diversity), collaborative work, and autonomous and self-managing action on the part of its members.

In this way, infrastructure and socio-community development offer elements which are closely linked to educational targets for sustainable development. On one hand, the architectural proposal is intended to fulfill the needs of students and education communities by *acknowledging diversity and building inclusive and safe spaces* (Target 4a). On the other hand, tools are introduced for a civic education in which people and groups learn to appreciate that which belongs to everyone (the school as a common good) and commit to its present and future care.

A hypothesis that emerges in the background of this context is that this integrating idea of the educational habitat can impact key indicators in education, such as student retention and the achievement of key learnings. While the experience gained through the Social Model in recent years provides data in this regard, it is established as a hypothesis worth tracking and documenting, particularly in the context of the COVID-19 pandemic, which has aggravated inequalities and the risk of school dropout.

## **The Creation of Partnerships and Joint Responsibility**

One particularly relevant element for the Social Model and for other similar experiences is related to Strategic Guideline 1, “Agency Capacity for Linking Efforts.”

The section in which this guideline appears (see [“Strategic Guidelines of the Social Model”](#)) explains how it integrates different processes to build management capacity and institutional and regulatory conditions that make it possible to achieve the Objective. It also synthesizes one of the central points of the proposal: the creation of partnerships and the possibility of aligning social and institutional actors from different organizations to the benefit of education.

From the approach presented in previous chapters, this integrates at least three types of actors:

- authorities from different sectors and levels of the government, whose responsibilities include guaranteeing the conditions for a quality education, which includes building and maintaining schools and developing environments conducive to learning;
- local and education communities themselves, whose involvement is engaged in order to achieve co-responsible participation; and
- civil society organizations that provide the Social Model with knowledge and experiences that strengthen education communities.

This link-building (and the strategies that make it possible) is an element of the Model which, for several reasons, should not only be emphasized but also documented and analyzed. One of these is its relationship with one of the Sustainable Development Goals discussed in this document’s introduction, which can be considered transversal or integrating: the role of the partnerships in achieving the 2030 Agenda Goals (SDG 17).

This goal emphasizes two targets clearly related to the work of management set out in the Social Model ([UN, 2015, p. 27](#)):

**17.16** Enhance the Global Partnership for Sustainable Development, complemented by multi-stakeholder partnerships that mobilize and share knowledge, expertise, technology, and financial resources, to support the achievement of the Sustainable Development Goals in all countries, particularly in developing countries.

**17.17** Encourage and promote effective public, public-private and civil society partnerships, building on the experience and resourcing strategies of partnerships.

In this case, the partnerships which are promoted reveal several aspects of interest. On one hand, they allow for possibilities of collaboration between the public sector and an organization from the private sector and civil society —like the Alberto Baillères Foundation— to be explored. This can shed light on areas of responsibility, the scope of each party’s actions, and the limitations and even risks involved in a collaboration of this kind. On the other hand, experience can provide information about strategies that promote social participation in education. The acknowledgment of education as a common good necessarily implies shared responsibility; only in this way is it possible to achieve goals and improve conditions of equity. However, obtaining organized, systematic, and appropriate action from family members, educators, students, and other social actors presents major challenges that must be acknowledged.

The Social Model’s approach lays the foundations for the above and provides a scenario in which to explore, from practical experience, topics such as negotiating interests, creating agreements, collaborative work between actors, and ways of facing possible tensions and conflicts that arise out of partnership.

## An Operational Strategy That Offers Sustainability

Another aspect that bears highlighting is the operational strategy which supports the Social Model. This strategy is comprised of a set of elements that provide stability through both the strength of each element and the way these elements interrelate to form a tool that energizes the process as a whole.

Part of this is the *operational chain* noted earlier in this document (see [“The Operational Chain”](#)). In addition to managing resources and organizing activities, this operational chain is aimed at shaping a management method that is currently in development and is gradually refined through practice.

How this method is configured is relevant given the ambitious and complex nature of the Objective. Promoting *educational habitats* in the terms established requires a broad set of conditions in order to make promotion possible, and creating these conditions requires clear procedures, e.g., solidifying commitments, managing resources, providing legal certainty, creating meaningful experiences for those involved, or evaluating what is being done. Defining these types of procedures is a necessarily incomplete and open-ended task given the challenges posed by each new context. Making progress in this task, however, is highly relevant for at least two reasons.

On one hand, progress increases the possibility that innovative action will become sustainable over time. It is important to remember that the principle of sustainability is a commitment to safeguarding, in the present and the future, that which provides development for all, taking into account the well-being of people and caring for the environment. For this to be the case, efforts must be accompanied by documentable, systematic work in which participants are able to identify and appreciate the lessons they have learned in order to preserve these lessons and extend them into the future.

On the other hand, the clarification of strategies and procedures represents valuable knowledge for communicating and transferring experience to different contexts. As explained in this document’s introduction, the design and implementation of innovative ideas, as well as documentation and dissemination, are fundamental tasks for the immediate future and for confronting the consequences of the COVID-19 pandemic. Among other things, this implies clarifying the paths taken by each innovative experience and sharing lessons learned so that one experience can guide others and generate new knowledge.

In the case of the Social Model, the operational chain and strategic guidelines—particularly those related to the assimilation of learning experiences and the transfer and exchange of knowledge—contribute to the above. Both are based on the idea that actions should be recovered, analyzed, and shared as an individual and collective good. This interest in systematizing practice contributes to the sustainability of the Model itself and to the possibility of its application in different contexts, where it can be adjusted or reinterpreted.

## Capability Building for Sustainability, Citizenship, and a Culture of Peace

A final element worth highlighting in this summary is the educational content of the Social Model. While the detailed development of the accompaniment methodology will be addressed elsewhere, the subject matter addressed in this document’s section on the socio-community component outlines some relevant aspects (see [“The Socio-Community Component”](#)).

One of these aspects relates to the orientation of the right to education in the

framework of the 2030 Agenda. It has already been stated that sustainability-based education, human rights, a culture of peace, global citizenship, and coexistence within diversity, among others, are central issues because of their impact on building sustainable futures (Target 4.7). In this sense, consistently integrating these issues into policies, programs, and actions, and forming pedagogical proposals to this end are therefore imperative tasks.

The educational content of the Social Model, based on five capabilities, as well as its accompaniment methodology, offer an opportunity to document what these tasks imply.

An example of this is the assertion that education communities must be educated and trained to care for facilities; in this way, they are not simply recipients but also become co-responsible for the use and improvement of these facilities. Training activities include practical knowledge for performing maintenance on furniture, classrooms, and playing fields, as well as a sense that these spaces are community assets for the well-being of all. Their explicit ties to the capability of “personal, collective, and environmental care” offer a space for the development of sustainable lifestyles oriented toward caring for the school environment and those who inhabit it.

Likewise, the incorporation of participatory processes with families, educators, and students presents an opportunity to develop learning experiences in the context of human rights, citizenship, and peaceful coexistence. An example in this sense is the participation of the education community in management activities, negotiation with a variety of actors, the organization of committees, and the development of smaller projects. Although the Foundation is a support figure, its approach is based on education communities diagnosing their own realities and deciding what resources they need and how they want to manage them: the Foundation proposes that communities organize, make decisions, and face their conflicts. All of this provides an environment in which to learn key capabilities for social life and aims at several objectives that relate to creating learning experiences for global citizenship, among which the following objectives stand out ([UNESCO, 2015a, p. 16](#)):

- Develop and apply critical skills for civic knowledge, e.g., critical inquiry, information technology, media literacy, critical thinking, decision-making, problem-solving, negotiation, building peace, and personal and social responsibility.
- Develop attitudes of care and empathy for others and the environment, and respect for diversity.

In general terms, the five capabilities which have been selected (care, empathetic communication, collaborative work, project management, and learning to learn) promote the construction of environments conducive to development and lifelong learning.

Although education that incorporates these capabilities is relevant in any context, it takes on particular relevance in the case of education communities in conditions of social vulnerability because of its possible impact on overcoming social and educational exclusion. Developing learning experiences for critically interpreting one’s environment, for a commitment to a dignified life, for negotiating and defending one’s rights, and for solidarity become tools for inclusion, if inclusion is understood as the overcoming of structural inequalities and as opportunities for full participation ([UNESCO, 2020e, p. 3](#)).

A further contribution of the Social Model is its assertion that learning experiences are for everyone: students, educators, and family members. In this way, the school is understood as an educational space for the education community in which relevant capabilities for use throughout a lifetime are built. This happens not only through programmatic content but also through the creation of learning environments, capability building for social transformation, and individual empowerment.

## **Perspectives for the UNESCO-Alberto Baillères Foundation Collaboration: The Systematization of Experience**

The ideas expressed up until this point are presented as an initial approach to the Social Model and demonstrate some points of convergence with challenges related to sustainability-focused education.

These are also the first conclusions resulting from the collaboration between the UNESCO Office in Mexico and the Alberto Baillères Foundation, one of the results of which has been the publication of this document. In its initial phase, this collaboration included the joint organization of spaces for reflecting upon, analyzing, and recovering practice. Based on this and on the commitment of the senior and operating teams of the Foundation to examine themselves critically, we currently possess an enhanced and strengthened version of the Social Model. Furthermore, on the basis of this work, UNESCO has acknowledged some of the contributions that this experience can offer to transformation-oriented education.

As elaborated in this document's introduction, the Social Model's contributions take on relevance when they are conceived of as part of a laboratory experiment in which proposals for innovation are created and subjected to experience in order to yield valid and reliable knowledge. Achieving this implies diligent monitoring in the short, medium, and long term in an effort to have a set of solid proposals by 2030 that are capable of being adapted to diverse contexts. UNESCO has set this as a goal in its collaboration with the Alberto Baillères Foundation, and the outlook therefore points in two directions.

The first direction corresponds to the [systematization of experience](#), which represents a step beyond this first text in which design is consolidated. This exercise began in 2020 and continued through 2021. Its purpose is to document processes from the perspectives of the actors involved in them (the Foundation team, education community members, and authorities at various levels) in order to methodically and systematically track the progression of these processes and the learning experiences created within them. This includes accounting for good practices and accomplishments, as well as challenges, obstacles, and failures. All of this represents an essential part of the experience, as well as raw material to draw knowledge from. Additionally, systematizing the Social Model is an indispensable resource for developing improvement processes, sharing knowledge with others, and implementing new experiences. The results of this exercise will be the subject of a future document.

The second significance of this collaboration is the permanent strengthening of the Social Model. While the experiences generated thus far have helped the proposal to mature, its definition is not yet a completed process. In particular, the methodology of community accompaniment has significant challenges ahead of it which, when addressed, will allow for the consolidation of the socio-community component.

In this sense, the opening of spaces for reflection on practice, the incorporation of new theoretical and methodological elements, and the joint development of learning experiences are part of the horizon of collaboration.

This permanent cycle (systematize, strengthen, improve, and systematize again) lays the foundation for making the Alberto Baillères Foundation Social Model a valuable learning experience, both for the purposes of the Model itself and for others. One particularly valuable aspect of this cycle is its documentation of a mostly-uncharted dimension: that which relates to the risks implied by any educational innovation of this kind and which is characterized in part by the following elements:

- The complexity implied by creating truly participatory intra-school processes which goes beyond the realization of context-related projects and installs democratic forms of organization, decision-making, and exercising authority.
- The necessary balance between strengthening the capabilities of education communities to take charge of their community lives and monitoring the State's fulfillment of its obligations as guarantor of the right to education. Under no circumstances does the existence of a community with high agency capacity relieve the State of its responsibilities.
- The (at times thin) boundary between actions of assistance (which make aid available) and the promotion of socio-community processes (which promote human development and the exercise of rights).

The Alberto Baillères Foundation Social Model has assumed these risks as an integral part of its proposal. Monitoring them therefore represents an opportunity to learn and to explore strategies.



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