

# FROM EXPERIENCE TO INSIGHT REFLECTIONS ABOUT LEARNING ENVIRONMENTS

— BOOKLET FOR TEACHERS AND SCHOOL LEADERS —



Prepared and published in the framework of the project

**LEARNITECT**

**Meeting of innovative learning design and Inclusive learning spaces**



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*Committed to our shared learning journey  
towards educational transformation*

## INVITATION

Dear Teachers and School Leaders,

This booklet was created for you — and, in many ways, by you.

The **LEARNITECT — Meeting of innovative learning design and Inclusive learning spaces — project** started with a simple but powerful question: *what makes a school space truly supportive of teaching and learning today?* We set out to explore this question not only through research, but by listening closely to those who know schools best — the teachers and leaders working in them every day.

We began by listening through an international questionnaire, we asked teachers and school leaders how they use their school spaces, how inclusivity is reflected in everyday practice, and how digital tools and community life are part of learning. Then we visited schools in each partner country — observing, documenting, interviewing — to better understand what works in real environments. These experiences became the foundation of a growing knowledge base: podcasts, articles, studies and interviews that aim to inspire teachers, school leaders and decision-makers to rethink how space can shape learning.

Rather than presenting abstract models or prescriptive blueprints, this publication captures the lived realities of school communities. What does it mean to teach in a space that truly supports learning? How can schools reflect the values of equity, belonging and participation — not just in policy, but in their corridors, classrooms and shared areas? And how might digital tools and local partnerships help foster stronger, more connected school environments?

We believe that the answers to these questions are already present in practice — sometimes in small gestures, sometimes in bold initiatives. With this booklet, we invite educators, school leaders and change-makers to engage with these examples, reflect on their own contexts, and draw inspiration for their next steps.

What you will find in these pages is not a theoretical study, nor a polished showcase of perfect schools. Instead, it is a collection of honest conversations, lived experiences and thoughtful reflections gathered from classrooms and staffrooms across Europe. Some spoke about flexible classrooms and creative reuse of old buildings. Others shared how digital tools or simple furniture changes opened new ways of connecting with students. Many reminded us that the most meaningful innovations are often low-cost — rooted in values like trust, collaboration and care. Through school visits, interviews and podcast discussions, we met teachers who are experimenting with new layouts, who are advocating for more inclusive environments, who are rethinking how space, time and relationships shape the learning process.

This booklet brings together voices, stories and reflections from the LEARNITECT project — a European collaboration aimed at reimagining how schools can become more inclusive, community-oriented and future-ready spaces for learning. Rooted in the everyday experiences of teachers and school leaders, the booklet offers a rich collection of interviews, field insights and photographic impressions gathered during our school visits and podcast conversations. The product that you have in your hands is our way of honouring those voices. It brings together selected excerpts from interviews, photos from real schools, and short insights that can spark dialogue in your own teaching community. Whether you are dreaming of a new classroom layout, rethinking how your school uses its corridors and shared spaces, or just seeking encouragement from fellow educators — we hope this booklet feels like a professional conversation worth joining.

Let it inspire you. Let it challenge you. Let it remind you that every school has the power to change — one space, one idea, one teacher at a time.

**This is not a manual. It is a shared learning journey — from experience to insight.**

*With appreciation,*

*In the name of the wonderful Project Team,*

*Ádám Tihanyi and Bertalan Péter Farkas,*

*designing authors of this Booklet*

*Budapest, June 2025*

## WHAT IS LEARNING ENVIRONMENT

### Introduction from our preliminary architectural studies<sup>1</sup>

Everyone has some kind of image of school, usually linked to the institution where they were educated and raised up.

The vast majority of people have been or are being educated in classrooms with curtained windows on one side and an entrance door on the opposite side. Opposite the door is the teacher's desk, behind it the chalkboard, in front of it the rows of desks, behind them perhaps a cupboard or two or more storages, and then the back wall of the classroom. On the white-painted walls of the room, a few pictures, maps, a noticeboard, perhaps some student products, a tableau or a poster. This is the setting for so-called frontal teaching (where the main actor in the teaching-learning process is the teacher, who presents the learning materials and curriculum elements on the blackboard and the pupils listen and absorb it). After the 1870s, most institutions in the world were already teaching in this arrangement. This was largely adopted in many European countries in the early 1900s, so that our great-grandparents, our parents and the vast majority of today's generations have learnt or are still learning in an environment very close to this. Many well-educated students grew up in this educational environment and later became successful scientists, highly talented doctors, experts with various international awards or excellent professionals and industrialists. This raises the question of why we should challenge this setting, given the well-established and familiar system, structure, methodology and environment.

Some considerations as to why "best practices" need to be reviewed, updated and improved from time to time:

- Most of the schools established at that time aimed at eradicating illiteracy, teaching basic numeracy and literacy skills, possibly preparing students for a profession (of course there were other institutions with other purposes, but they could not be considered general), preferably quickly and on a mass scale, with as many students as possible, in response to the ever-increasing population.
- Today, the educational goals have changed, and the emphasis has shifted. In our world, the focus has become on educating students and adults who can work independently and in teams; who can solve problems with precision, accuracy and creativity; who have more specialised knowledge; who can learn continuously to perform expert tasks; who can live healthily and happily in society; who can actively participate in social processes. This is a huge, overarching change.
- There have been huge technological innovations just in the last 30 years that are now part of our everyday lives, such as: touch screen mobile phones, internet, computers, softwares, etc., and teaching how to use them is now a basic task or duty for educational institutions.
- Learning and teaching within ancient walls have a certain charm, prestige and power, but at the same time the needs of the users have changed considerably, e.g.: high-speed internet everywhere; adjustable temperature (even per room); modern and up-to-date equipment and tools; underground parking for cars, lift, accessible environment and spaces, etc.
- New professions and occupations are constantly being created and discontinued, and most children in secondary school today will be in jobs within 5 years of graduation that do not exist today and are difficult to predict.
- Pedagogical methods and tools are constantly changing and evolving, e.g. the use of digital or interactive whiteboards instead of chalkboards (which seems almost a legacy of a bygone era).
- For school staff (teachers, assistants, administrators, etc.), the school is a workplace: they spend 8 hours or more a day in this built environment, and it is therefore important that the working environment may be modern, liveable, friendly and creative.

*"The class is obsolete."* With these words, architect *Prakash* already in 2011 evoked the need to rethink the teaching space, pointing to the classroom organised in rows of desks aligned in a limited space as a legacy of the industrial revolution.

There are countless other aspects and arguments why continuous development and modernisation is necessary in schools, too. The school as an institution, its operation and management, its premises, are very complex and specific, considering e.g., only the age groups of the current setting.

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<sup>1</sup> Quotes from the edited version of the three preliminary studies that have been produced as a preparation of the project. [The preliminary study is available on the Learnitect Design Ltd. website.](#)

## Researchers are speaking to teachers – let's listen to them

During our common learning journey, we asked several researchers, external partners and architects, what is a learning environment nowadays. In Hungary, we had the chance to sit down with two learning environment experts<sup>2</sup>, Ms. Erika Kopp<sup>3</sup> and Ms. Orsolya Kálmán<sup>4</sup>.

For Erika Kopp, the most important thing in the definition is that when we think about teaching, we have several actors. These actors can be the student, the teacher and many other people and institutions who are part of the process. Today there are several schools of thought that the **learning environment is the third teacher – after the parent and the teacher**. Let's look at it through a well-known example. – In a school, the learning environment can be the classroom, its furnishings, the tools used in the teaching-learning process, including textbooks, notebooks and digital tools. These are all part of the learning environment and are complemented by the building and its wider environment. These factors all make up our learning environment and will all affect how we learn. They provide opportunities and, in many cases, force us to learn in some way, Erika explains.

According to Orsolya, the emergence of the topic was a reaction to the fact that the learning environment (beyond the classroom and beyond the school) was also being examined in a more holistic way. More specifically, this could include corridors, and in the world beyond school, formal and informal spaces are increasingly linked (even online) to the learning process. Almost anything that is not internal to the learner/student can be included. There are also views that the teacher and the community are part of the learning environment. The diversity and scope of these factors makes it very difficult to research the topic comprehensively, as it can encompass almost everything. **The simplest way to identify possible learning environments is to ask the question "can a given environment be made into a learning environment?"**. According to Orsolya, since any environment can be made into a learning environment, the important question is which learning environments the learners and teachers want to use. This question is also very important because it helps teachers to identify which elements of their environment, they want to use to support learning.

The holistic nature of learning environment means that everything is connected to everything else, as Ms. Erika Kopp explains. When we think about what it feels like for us to exist in a space, we do not usually start thinking about the individual elements, but we have an overall picture, a feeling of the whole place, said Ms. Orsolya Kálmán. This experience or perception is always an overall, holistic feeling, where the individual elements can reinforce or refute each other.

An interesting finding from a major recent study is that the learning environments explains 16% in students' school performance. Of this, 48% was explained by "naturalness", i.e. natural light, adequate temperature, quality air, 28% by flexibility, such as the possibility of creating individual spaces, and 24% by other factors. Another exciting finding is that the same learning environments are rated differently by students and teachers, with students typically rating the design of spaces lower. According to Orsolya Kálmán, this also shows that although the teacher and his or her vision is the most important, it is not the only thing that matters. Although it will certainly have an impact on other factors in that it will probably also fundamentally determine what she creates in her learning environment. The same learning environment can be interpreted in very different ways, depending on our vision or even our job role. This research confirms what reform pedagogy has been telling us since the 1920s: learning success starts from the student's need," Erika adds. Schools like Waldorf or Jena Plan and other reform pedagogies have long been designing spaces to support their own educational approach. They are now gaining validation, through this great research.

Additionally, we were very lucky to meet with Ms. Mónika Réti<sup>5</sup>, also a researcher from Hungary and sat down with her during an incredibly exciting podcast recording<sup>6</sup>. Mónika Réti was the editor-in-chief of one of the last publications that have been published in the topic of learning environments in 2011. The book titled *Good School inside* presented the basic premise of this concept is **that spaces teach by the way they look, that is, that the people who maintain them — whether consciously or not — send a message by the environment they provide for us**. These messages can affect the attitudes not only of students and staff, but also of technical staff such as porters, cleaners or kitchen staff, whose connection to the institution and the students is also important in the life of a school. Mónika Réti stresses that before spreading the teaching space approach, it is important to consider why it is

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<sup>2</sup> The podcast episode is available on [YouTube](#), [Spotify](#) and [Apple Podcast](#).

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<sup>6</sup> The podcast episode is available on [YouTube](#), [Spotify](#) and [Apple Podcast](#).



valuable for an institution or a provider to look at its spaces in this way. She invites us to think about this with some trends and examples:

- The Prussian teaching methods still in use in this country are inevitably changing, will change and will be increasingly stretched by new innovations.
- A modern movement, socio-constructivism, argues that we are human because we have a constant need to develop, which requires us to connect with others.
- *A UN summit in New York in 2022 focused on transforming education.* The meeting sought to define the characteristics of a useful citizen in the 21st century and reflected on the role of education in training and education. Mónika believes it is important to include happiness and mental health in this vision, drawing attention to the example of South Korea, a country that leads in *PISA tests but also in burnout and suicide statistics.*
- In the wake of a Canadian longitudinal study, Mónika believes that it is a mistake to choose a path other than inquiry-based learning. Research shows a positive link between the former approach and students' life harmony and coping strategies in crisis situations.

The learning environment model described in *Good School inside out* identifies nine quality criteria. Mónika Réti does not see the need to compare schools even within a country, instead she would assess institutions according to the nine quality criteria, interpreted in the local context, especially in the social and community context. The function of measurement is therefore to provide a basis for institutional reflection rather than comparison. The concept can be implemented both in the small physical details and in the overall operational principles and rules. In the design of spaces for physical well-being, attention should be paid to the movability, adjustability and even drawability of benches. In addition to customisable parameters, cosmetic factors such as the use of colour, light levels and the optimum height of the room, which varies according to age, are also important — the latter includes how a net can be used to expand and contract the space without the need for rebuilding. When designing the height, it is important to ensure that the teacher can move around safely and unhindered, while the students can learn comfortably in a space that is large but not overwhelming. Mónika Réti goes into particular detail on readability. Just as in animals with more complex nervous systems, we humans also develop a kind of mental map of where we live and are thus able to orient ourselves. Everyone's main landmarks in a locality are the places that are most important to them, and they are defined in different ways - some people name streets, some people name landmarks, others give directions by describing routes from particular points. In the same way, it is often useful, for example, to use letters and colours to indicate the wings of buildings and to mark the paths leading to them with coloured lines on the floor. However you increase legibility, you already reduce the stress of orientation and increase attachment to the space. The quality criterion specifically mentioned in the volume is adaptability. In addition to the physical parameters and learning styles of learners and teachers, and the needs of the local society, there are many other determinants that should be taken into account when designing learning spaces.

One of the key points of her value proposition to the teaching profession is that by stepping outside the textbook framework, you will never deliver the same material in the same way, and this variety will give you a flow experience in every lesson. If this is a way of getting pupils to identify with their school and other spaces in their learning environment, they are more likely to follow the rules and apply what they have learned in the absence of the teacher. Mónika Réti also made some initial steps and recommendations for heads of institutions and teachers:

- Thematisé sustainability, talk to your colleagues about aspects of the environment!
- Give more positive feedback to teachers! Beyond the end-of-year flower bouquets, we need feedback that colleagues can learn from.
- Let's see other situations in other institutions and professional circles! Get to know external – even foreign – practices, get benchmarks!
- Let's experience community planning! Instead of a spontaneous two-hour afternoon meeting, the experience of a methodologically sound, expert-led session will inspire you to adopt a new approach.
- Finally, a strategic guideline to keep in mind from the very beginning of the process: align your communication and the physical environment to make your classroom more effective, more cozy and more humanistic.

### **Practical advice for school leaders — a case from Italy**

In recent years, as in many countries with highly developed education systems, Italy has witnessed a transformation in learning environments — a shift driven by the search for new pedagogical and didactic horizons. For this reason, IAL Toscana, together with the other partners of the European project LEARNITECT – Meeting of innovative learning design and inclusive learning spaces, is working

to identify and collect good practices in school building and interior design<sup>7</sup>. The goal of these emerging environments is to move beyond the traditional, transmission-based model of schooling, and instead embrace a more ambitious vision: to co-create spaces that enhance student and teacher well-being and foster the conditions for modern, creative, inclusive and effective learning. This innovation in educational spaces goes far beyond merely replacing outdated classroom furniture. It represents a deeper revolution — one that integrates technology, design and pedagogy into a single, synergistic approach. It concerns the entire school building, including outdoor areas, foyers and transitional spaces, extending even to the surrounding neighbourhood, seen as an integral part of the educational ecosystem. These pioneering spaces serve as both physical and symbolic arenas that express a new vision of school and society — one that responds to the daily needs and aspirations of its community, facilitates collaboration, and supports personalised learning. At the same time, they offer opportunities for aesthetic education, stimulate creativity, and promote a new awareness of social and environmental responsibility.

The Marco Polo Secondary School in Florence and the Ludovico Einaudi School in Bassano del Grappa have each followed unique renewal paths in recent years. Both started with rethinking their learning environments and gradually extended that transformation to include all aspects of school life. This process — and its outcomes — were presented by school leaders Laura Biancato (ITE L. Einaudi) and Ludovico Arte (ITT Marco Polo) during the workshop “Changing the School Starting from the Environment”, organised on 23 March 2024 by Erickson and ITT Marco Polo. As highlighted by Erickson, there are numerous innovative school buildings across Italy that deserve wider attention. Now is the time, they argue, to embrace a kind of “school tourism” — visiting, observing and learning from these examples to spark meaningful inspiration.

Let us ask ourselves: why do we want to improve our schools? — Because we want to see people — both students and staff — feeling well. Learning and working require a sense of comfort and belonging. If we feel unwell, it becomes difficult to engage and thrive. Too often, schools operate under the assumption that students must suffer now in order to be prepared for the hardships of later life. But is this truly the best starting point? Where, in that model, is space for expression and freedom? Might this mindset also be one of the reasons students disengage and drop out? If we can offer beautiful, welcoming spaces, why settle for old, uninspiring ones? — The starting point, therefore, is to clarify what kind of school we want to create. Schools can take many forms — the key is to clearly define a typology that reflects the needs and values of each school community, using participatory design methods. From there, concrete decisions can be made about spaces and furniture. Borrowing and adapting ideas from elsewhere is valuable but always requires careful contextualisation to fit the unique identity and conditions of the local school.

As emphasised in the workshop, any reflection on the school must involve working groups that include not only students and staff, but also parents and external professionals. When we talk about innovation, we often rush toward the latest technological solution. This can create a sense of inadequacy — change moves fast, and we may feel we can't keep up. One moment it's interactive whiteboards, the next it's tablets and Google Classroom. But unless these tools are embedded in a clear vision of what the school stands for, the investment — in money, training and time — risks being wasted. This is why we need to broaden our perspective and rethink innovation from within our own school communities. Only through collaborative, locally grounded reflection can we build meaningful and sustainable change — a message strongly reinforced by the workshop leaders. As a starting point, they suggest mapping well-being across four key themes:

- Sharing
- Hospitality
- Support
- Environment

Even today, defining well-being as a core mission of education may feel radical — yet the school leaders argue it should be our central concern. Supporting the well-being of everyone within the system is a form of learning. And when taken seriously, it can have powerful ripple effects across the community. Sharing, in this context, means that everyone contributes to shaping the environment in which they learn and work. Teachers and students alike are encouraged to reflect on and express their views about the spaces they occupy. At Marco Polo, this process has gone further by involving people from outside the school community — architects, set designers, street artists and psychologists — who contributed their expertise alongside students and teachers. Sharing generates ideas, proposals and dialogue. The learning environment is envisioned as an open, welcoming and supportive ecosystem — one where everyone belongs. To develop a holistic perspective, the school must be seen

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<sup>7</sup> This chapter quotes almost entirely the article which has been published on [the website of IAL Toscana](#). Authors: Gabriella Pusztai, Alice Lepore and Claudia Fabbrini.

as an ecosystem of learning, where space, relationships, teaching and professional development are all interconnected. A key principle is flexibility — the use of spaces that can be reconfigured and adapted. Such environments invite new projects and reframe both learning and teaching. And finally, there is beauty — not as a distraction, but as a source of comfort and inspiration. Beautiful spaces help people feel at ease, valued and motivated.

We speak of ecosystems because every decision reflects and reinforces a school's identity and its sense of belonging. Even small details — such as T-shirts or other objects bearing the school logo — can help strengthen this identity. A clearly articulated school identity, rooted in shared values and lived experiences, can attract both students and teachers who are drawn to the way the school feels from the inside. This means moving beyond the idea of the classroom — both literally and conceptually. Classrooms are no longer the sole arenas of learning. Learning spaces now multiply throughout the school, including informal and teacher-free areas that still play an active role in education.

Laura Biancato's Proposals for a New Learning Environment:

- A cluster of interconnected classrooms
- Dedicated areas for hands-on experimentation and exploration
- Transparent corridors and open communal areas
- A central hub linking these free-flow spaces
- A library that is distributed throughout the building, not limited to one room
- Seamless integration of digital tools as part of everyday life — not as a novelty
- The presence of plants, green spaces and even green walls to promote well-being
- Extended opening hours (e.g., 7:20 AM to 7:30 PM), creating opportunities for informal and independent learning

And what about funding? — How do we pay for all this? A common and understandable question. Both schools carried out their renewal projects using existing public funds allocated to schools. The key, however, is not just accessing money — it's having a clear vision of the school you want to create. That vision must be co-developed in an environment where all participants feel safe, encouraged and curious to take part. From that foundation, step-by-step changes can be made, aligning available resources to the collective purpose. And yes, change will involve discomfort — moments of crisis, disagreement and uncertainty. But it is through these very challenges that transformation becomes possible.

### Dealing with learning environments is a tool for preventing dropout and enhancing inclusion

School is a fundamental institution closely tied to a person's overall well-being. As a key environment beyond the family, it plays a crucial role in a child's development from early childhood through adolescence, placing a strong emphasis on autonomy. Within the school context, children and adolescents benefit from peer relationships, engage in new forms of learning, and explore diverse behavioural models proposed by both teachers and classmates (García Bacete et al., 2014). The most significant school-based risk factors include low academic achievement, school failure, temporary or periodic withdrawal from school, and chronic absenteeism. However, many external factors also strongly influence dropout risk — such as socio-economic deprivation, family stress, migrant background and individual challenges — all of which require timely recognition and intervention (Biagioli, Baldini & Proli, 2022; Pedditzi, Fadda & Lucarelli, 2022).

What role do spaces play? — Reimagining learning environments became a key part of dropout prevention efforts. Changes included:

- Offering alternative, appealing spaces to support a stronger sense of school belonging.
- Making school more inclusive, particularly for students with disabilities.
- Supporting methodological flexibility: spaces that allow for movement, group work, and quick reconfiguration to suit diverse learning sequences.
- Fostering community engagement, particularly to welcome students from economically and socially disadvantaged backgrounds.

These spatial shifts have been linked to measurable improvements over time:

- Increased student attendance.
- Better academic outcomes.
- Lower absenteeism.
- Greater family participation in school activities.
- Stronger school-family partnerships and shared responsibility.

Already in 2016, the Italian public research institute INDIRE<sup>8</sup> outlined in its Manifesto of Educational Avant-Gardes the importance of dedicating spaces to group work — to be understood as multifunctional learning environments for entire classes. The Manifesto also raised awareness of how school architecture affects the broader community and urban ecosystem surrounding the school. A flexible classroom is essential — one that allows for collaboration, creativity, attentive listening and meaningful reflection. In such an environment, the student is placed at the centre, along with the team of educators guiding their learning journey. Every learner should be empowered to progress at their own pace, and to take part in both individual and group learning experiences. As a result, more and more schools are creating informal, comfortable spaces with appropriate furniture — spaces where students can relax, read or listen to music. At the same time, they are establishing shared spaces like Agorà (agora-type of spaces): open meeting areas where students, staff, families and guests can come together to exchange ideas and experiences. This focus is especially important in regions where social challenges are more pronounced.

## Students' wellbeing, inclusion and learning environments

The role of learning environments and the importance of students' well-being have been inevitably highlighted by Rui Vieito and Jorge Dias, through their participation in the podcasts conducted by PREVIFORM, Lda<sup>9</sup>, where the two leaders have presented a vision of the panorama of Education in Portugal from two distinct perspectives, regular education and vocational education. In the last few years, education in Portugal has experienced significant changes, evident in both governmental policies and teaching methods in schools. The focus of these alterations is consistently on enhancing teaching quality and equipping students for 21st-century challenges. Nevertheless, even with remarkable progress, the education field continues to encounter substantial obstacles that must be addressed to attain genuinely inclusive and exceptional education. However, there are difficulties present within the Portuguese education system. Substantial disparities remain, particularly between urban and rural areas. Schools in less privileged regions often encounter extra challenges such as limited resources, impacting the quality of education provided.<sup>10</sup>

In conclusion, education in Portugal has significantly progressed, with enhancements in literacy rates and the incorporation of technology in educational settings. Government programs and educational strategies aim to improve students' preparedness for the demands of the 21st century. However, there are significant obstacles that must be overcome to attain a truly thorough and superior education. Regional disparities, limited resources, and the mental well-being of students need immediate focus. The continuous professional growth of educators and the involvement of the community and families are crucial to establishing an educational environment that promotes the overall development of students. Only through working together to tackle these issues comprehensively and collectively can we guarantee an excellent education for all children and youth, resulting in a more equitable and prosperous future.

In another brilliant podcast discussion, Ana Lúcia Sequeiros and Celeste Silva<sup>11</sup> propose a reflection on Inclusive Education in schools, thus, this article aims to present some considerations about this reality. In recent decades, inclusive education has been a focal point in conversations about Portugal's educational system. Inclusion is not just a fad, it's a pressing requirement to guarantee that every child and adolescent, regardless of their traits, can obtain a high-quality education on fair terms. Portugal has shown considerable advancements in inclusive education. The international commitment was reflected in national legislation, establishing school inclusion principles and norms that aim to ensure equal opportunities and the elimination of barriers to access, participation, and learning. Inclusive education in Portugal is guided by fundamental principles such as equality, diversity, and personalization, each student is seen as unique, in their abilities and needs. The goal is simple, the schools should be spaces where everyone can learn and develop, respecting their differences.<sup>12</sup>

Despite legal advances, the implementation of inclusive education faces significant challenges. The lack of adequate resources, such as specialized support and continuous teacher training, is a frequent obstacle. Additionally, school infrastructures are not always adapted to accommodate students with special needs, limiting full inclusion. **Another challenge is the need for a change in mindsets, inclusion is not just a result of policies and guidelines, but also a product of a school environment that embraces diversity and encourages mutual respect.** It is essential for inclusive policies to succeed that awareness

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<sup>8</sup> Available here: <https://innovazione.indire.it/avanguardieeducative/il-manifesto>

<sup>9</sup> The podcast episode is [available on YouTube](#).

<sup>10</sup> This text quotes almost entirely the article that has been published on Previform LDA website: <https://www.previform.pt//podcast-o-panorama-da-educacao-em-portugal-the-overview-of-education-in-portugal/>

<sup>11</sup> The podcast episode is [available on YouTube](#).

<sup>12</sup> This text quotes almost entirely the article that has been published on Previform LDA website: <https://www.previform.pt//podcast-educacao-inclusiva-inclusive-education/>

is raised among all members of the school community, such as students, parents, and education professionals.

Regardless of the challenges, there are multiple efforts and positive methods that warrant acknowledgment. Many schools have developed innovative projects that promote inclusion through the use of new technologies, differentiated pedagogical methodologies, and partnerships with specialized institutions. Continuous teacher training is another essential aspect with the existence of training initiatives in inclusive education to provide educators with resources and techniques that allows them to turn their classroom into an inclusive space.

Despite making significant progress, inclusive education in Portugal still faces persistent challenges, indicating that a truly inclusive educational system will only be achieved through an ongoing commitment from all educational stakeholders and society at large. **Only in this way will it be possible to guarantee equal learning opportunities and full development for all students, regardless of their characteristics, through collaborative efforts.**

### **The Architecture of Portuguese schools: spaces that inspire and educate<sup>13</sup>**

The structure of Portuguese schools has changed greatly in recent decades, adapting to new teaching methods and the educational requirements of students – said Jorge Teixeira and Alexandre Arieira Silva, through their participation in a podcast recording<sup>14</sup> in Ponte de Lima, Portugal. As attention shifts towards creating inclusive and innovative learning spaces, designing school buildings is now essential for educational achievements. In the past, schools in Portugal followed standardized models that were inflexible and did not cater to the varied needs of students. These structures frequently emphasized practicality over comfort and beauty, leading to spaces that, though functional, did not foster creativity or student welfare. Nevertheless, the approach has started to shift in recent years.

The LEARNITECT project emphasizes the significance of creating environments that fulfil practical requirements and also encourage and inspire students. Contemporary Portuguese school architecture is typically designed with greater flexibility and adaptability in mind, integrating principles of sustainability, accessibility, and innovative teaching methods. This fresh approach encourages the establishment of settings that foster collaboration, creativity, and the overall growth of students. A demonstration of this innovative method is the incorporation of spacious areas that are both open and multifunctional. Many schools have moved away from traditional classrooms in favour of flexible spaces that can be easily changed to suit various activities. This enables teachers to customize the environment to meet the specific needs of their classes, encouraging more student interaction and a dynamic teaching style.

**Sustainability is now a key element in modern school architecture.** Numerous newly constructed and upgraded schools incorporate eco-friendly materials and energy-efficient technologies like solar panels and water reuse systems. These efforts not only lower school's environmental footprint but also function as educational aids, educating students on the significance of sustainability and preserving natural resources.

**Another crucial aspect is accessibility.** Portuguese schools are implementing inclusive designs that make it easier for all students to access and use, regardless of their physical abilities. In new school projects, ramps, elevators, adapted classrooms, and accessible restrooms have become common features to guarantee that all students can take part in educational activities to the fullest. Despite these improvements, obstacles still exist. Numerous schools in Portugal, particularly in rural and underdeveloped regions, continue to function in outdated structures that do not comply with current comfort and efficiency standards. Revamping these buildings necessitates substantial funding and successful collaboration among various government levels and the community. Moreover, introducing new educational technologies in older schools may pose challenges and require significant financial investment. Using digital tools like interactive whiteboards and mobile devices successfully necessitates the right physical infrastructure as well as ongoing teacher training.

Portuguese schools are in the process of changing their architecture to embody a broader and more comprehensive approach to education. Adaptable, long-lasting, and reachable educational environments are becoming standard, fostering spaces that fulfil academic requirements while also sparking students' inspiration and drive. **Despite ongoing challenges, the dedication to innovation and inclusivity remains at the forefront of shaping school architecture in Portugal, ensuring a future where every child can thrive and learn in environments that nurture their overall growth.**

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<sup>13</sup> This chapter quotes entirely the article has been published on Previform LDA website: Teixeira, J., & Silva, A. A. (2024, March 23). Architecture of Portuguese schools [Audio podcast]. In PREVIFORM Podcasts. PREVIFORM, Lda.

<https://www.previform.pt/l/podcast-arquitetura-das-escolas-portuguesas-architecture-of-portuguese-schools/>

<sup>14</sup> The podcast episode is [available on YouTube](#).



## Mutual findings and key messages for teachers and school leaders

### Why This Matters to You

- The physical environment of your school plays a direct role in supporting student well-being, engagement and autonomy.
- Early school leaving continues to affect a significant number of students in Italy — particularly boys and students from disadvantaged backgrounds.
- Rethinking your school's learning spaces can have a tangible impact: improving attendance, academic success and family involvement.
- Spaces that are flexible, inclusive and welcoming help students feel safe, seen, and more likely to remain in education.

### What You Can Do

- Consider the school as a whole ecosystem — not just individual classrooms.
- Create flexible spaces that allow for group work, movement, creativity and peer interaction.
- Involve students, families and community members in co-designing these environments.
- Prioritise areas where students can feel at ease — quiet corners, reading zones, open communal areas.
- Make sure that digital tools and technologies are integrated into the learning culture, not simply added on.

### A Final Reminder

- A beautiful space isn't a luxury — it's an essential part of how we care for our students and help them learn. As educators, we have the power to shape these spaces, so they reflect the values we teach: inclusion, collaboration, creativity, and dignity.

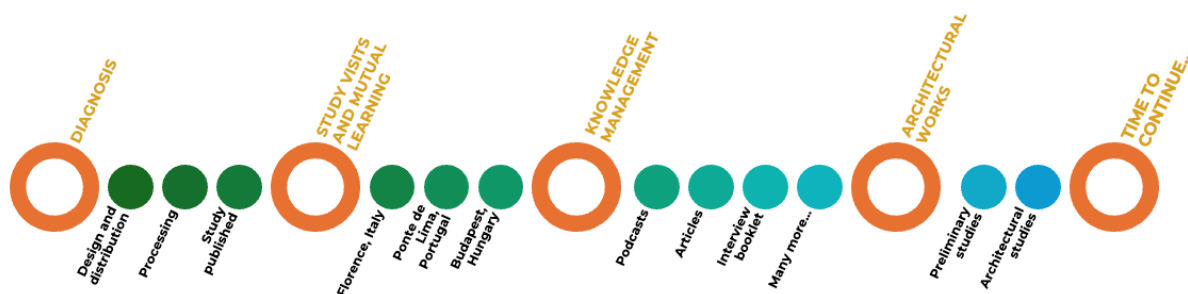
## OUR LEARNING JOURNEY — FROM EXPERIENCE TO INSIGHT

We four partners together decided to embark on a journey and collect as many experiences, insights and thoughts worth sharing as we can. Bringing together organizations from Hungary, Italy and Portugal, the project team combined expertise in education, school leadership, architecture, and community development. From the very beginning, we adopted a horizontal working structure: all partners were involved in both strategic planning and hands-on implementation. We applied a participatory, practice-oriented methodology to explore how learning spaces impact student well-being, inclusion, and educational performance. Rather than relying solely on theoretical frameworks, we chose to learn from practice — from schools themselves.

### Our partnership consists of 4 full partners:

- Association for Hungarian Digital Education (Hungary – co-ordinator)
- Learnitect Design Ltd. (Hungary)
- IAL Toscana Innovazione Appendimento Lavoro srl. Italy Impresa Sociale (Italy)
- Previform – Laboratório, Formação, Higiene e Segurança Portugal do Trabalho, Lda. (Portugal)

### 1. Project timeline



## Tools and methods used to explore schools

To discover and understand innovative school spaces across Europe, we implemented a multi-phase, mixed-method approach that included:

### An international diagnostic questionnaire<sup>15</sup>

Developed jointly by all partners, this tool gathered insights from over 300 teachers and school leaders about the use of school space, inclusivity, digital tools, and the presence of community learning, conducted between November 2023 and February 2024.

The project completed a data collection in the three participating countries: Hungary, Italy and Portugal, with the participation of 283 teachers and 26 school leaders. The voluntary, anonymous, online questionnaire contained 95 items of closed and open-ended questions regarding the specific schools' infrastructure, the educators' views on the school's purpose and mission, the teaching practice and teachers' habits, intentions and experiences about their school's infrastructure. There were also open-ended questions about desired improvements to the responders' specific school infrastructure. The questionnaire primarily focused on learning as envisioned in the aforementioned policy recommendations on 21<sup>st</sup> century education, not on other functions such as safety, health, well-being, legibility, place attachment or the representation of the local context.

The questionnaire was based on Manninen's model on learning environments (Manninen, 2007), which contains five main aspects: (1) the didactical aspect embraces all others and serves as a basis for contextualisation as well as for designing choices for the others; (2) the physical aspect satisfies the basic needs for physical well-being and motivation; (3) the technical aspect supports learning by equipping teachers and students with appropriate technology (therefore, together with the physical aspect of the learning environment, forms the classical infrastructure); (4) the social aspect provides meaning and motivation as well as possibilities for community engagement and inclusion; and (5) the local aspect enforces place attachment and realises connection to the local community. The

<sup>15</sup> This chapter quotes almost completely the article which has been published in the framework of the project. Réti, Mónika – Dóri, Tibor – Farkas, Bertalan Péter – Kulman, Katalin (2025): 21st century learning: what about "normal schools"? Messages from primary school teachers in Hungary. HU ISSN 2063-9945. In: Journal of Early Years Education (Gyermeknevelés Tudományos Folyóirat), 2025, 13(2), 115–133. <https://doi.org/10.31074/gyntf.2025.2.115.133>. [Online availability of the article.](#)

questionnaire thus contained items that refer to the physical and technical, but also the didactical, social and local aspects of learning environments.

The questionnaire was distributed to schools that the project partners had already had some experience with involving school infrastructure and innovation projects. These schools were considered as ones with future-leading, innovative practice, that had already shown interest in or taken steps to collaboration to improve education. This way the sampling cannot be considered as research, rather a structured data collection. However, responses sufficiently oriented project work and provide basis for further inquiry about connections between teaching-learning methods and school infrastructure. They also represent important messages from teachers in “normal” schools (state schools that do not follow specific, alternative curricula).

Overall, 63 different schools were invited to take part in the project’s inquiry into teachers’ voices about school practice and infrastructure. The responders came from a diversity of school types: secondary schools (ISCED 3), middle schools (ISCED 2), primary schools (ISCED 1) and mixed schools (serving an age range of students from 6 up to 18). Table 1 summarizes the distribution of respondents across participating countries.

## 2. Responders taking part in the data collection

country	number of		
	schools	responding school leaders	responding teachers
	11	12	104 (ISCED 1: 16, ISCED 2: 32, ISCED 3: 56)
Italy	18	9	76 (ISCED 1: 17, ISCED 2: 29, ISCED 3: 30)
	24	5	103 (ISCED 1: 34, ISCED 2: 28, ISCED 3: 41)
Overall	63	26	283 (67 ISCED 1 89 ISCED 2, 127 ISCED 3)

The self-reported survey data implies certain limitations and potential biases in our case as well. Many schools and teachers in our sample took part in past research and development activities, where they had a chance to get informed about some desired aspects of 21<sup>st</sup> century teaching and learning, hence a desirability bias may occur, although with specific items after general questions can be suitable to filter some of these (e.g.: general use of active learning, use of specific teaching methods, views on infrastructural needs of specific methods). In some cases, such biases could be considered. On the other hand, self-administered questionnaires are appropriate tools to collect data on infrastructure use and needs, as well as individual opinions on facilities. The open-ended questions in the survey also served as filters for potential biases. A special challenge in the international context was to formulate questions on school infrastructure and learning that are understood by responders in the same way. Alternative representations (as well as translation issues) were thoroughly assessed by experts involved in the project in the frame of which the survey took place. These measures improved data validity.

The aim of the questionnaire was to get a holistic view on learning environments in the facilities involved and examine teachers’ messages about them. Being aware of the limitations of our data collection, we considered that some assumptions – taking it into special consideration that using school infrastructure is still not widely researched – might inspire the research community to engage in specific further inquiries in the future.

## Conclusions from the diagnosis: paradoxes and implications<sup>16</sup>

The survey disproved the notion that “normal” schools have a limited pedagogical toolkit and are not suitable for engaging in transformative learning. Responding teachers use a wide range of active

<sup>16</sup> This chapter quotes completely the article which has been published in the framework of the project. Réti, Mónika – Dőri, Tibor – Farkas, Bertalan Péter – Kulman, Katalin (2025): 21st century learning: what about “normal schools”? Messages from primary school teachers in Hungary. HU ISSN 2063-9945. In: Journal of Early Years Education (Gyermeknevelés Tudományos Folyóirat), 2025, 13(2), 115–133. <https://doi.org/10.31074/gyntf.2025.2.115.133>. [Online availability of the article](#).

learning techniques. However, opening towards using other areas of the school building as a whole could enhance the learning experience, increasing the efficiency of the technique used. A school building may serve as a learning tool in itself (OECD, 2006) – once the users are ready to discover and utilise its potential. Responding teachers seemed to design the teaching-learning process in a way that they mainly try to tailor the didactical aspects of the learning environment to the physical and technical ones. Manninen (2007) however suggests for the inverse: to find appropriate physical, technical (and social and local) aspects based on the desired didactics. It is certainly not possible to find all these in all cases merely in the classroom – therefore, if teachers were empowered to design educational processes using the learning environment model, it is possible that they would be more motivated to move out of the classroom when relevant. Action research into using learning environment models to design teaching and learning could highlight whether this is a possible way to expand school learning from the classrooms towards the real-life settings. Also, future research could better reflect on space use in educational facilities, possibly with the involvement of students and other staff members – especially if extended to more schools, conceivably with representative sampling.

From the improvement suggestions it also emerges that responding teachers reflect on education or the school's mission in general, whereas to a considerably lesser extent on connections between the 21st century world challenges and the school itself. Although many of them make efforts to shape their environment (by regular rearrangements or decoration), this focuses solely on the classroom and the pedagogical thinking is also limited to the actual classroom they spend most of their time in. More direct communication to teachers on future-oriented policy recommendations concerning schools' mission could create more ownership to these targets as well as stronger pedagogical awareness to the relevance of their practice. This could also trigger collaboration with local communities.

Responses to infrastructure improvement questions also suggest that a better involvement and empowerment of teachers may also initiate discourse about adapting or creating school infrastructure that serves 21st century needs. Teachers are able to provide the user's insight to educational facilities: but rarely without empowerment to see the facility as a holistic unit and without the knowledge and experience of technological and technical possibilities.

Although there was a consensus across schools and teachers involved in the survey about envisioning the school as a learning hub, this rarely corresponded with openness towards the local community of experts – these schools still envision themselves as lonely islands treasuring values and knowledge that has little link to the outside world. Experts and other stakeholders have a responsibility in initiating dialogues and establishing collaboration with schools, taking them closer to communities so that the mutual learning journey towards school types that may serve reschooling or transforming education may start. Without this, “normal schools” might stay isolated from the community as well as from the realm of the 21st century, with teachers closed up in classrooms, limiting their otherwise colourful toolbox to prepare future generations to fight crucial challenges.

### **School study visits in each partner country**

As a central pillar of the LEARNITECT project, the international study visits offered a unique opportunity to observe, document, and reflect on how different school environments support learning, inclusion, and well-being in practice. Rather than simply visiting schools, we designed these visits as structured, dialogic learning experiences — for both the project team and the host institutions.

In each partner country — Hungary, Italy, and Portugal — **we identified four schools to visit**. These schools were selected based on a combination of criteria:

- Willingness to participate in the project
- Representation of different educational levels and contexts
- Presence of spatial or pedagogical innovation (inclusion, flexibility, community use, etc.)
- Openness to dialogue and shared learning

**Each visit involved systematic observation of various spaces in action**, including:

- Classrooms in different configurations
- Informal areas such as corridors, common rooms, and outdoor courtyards
- Specialised rooms: music, science, maker spaces, libraries, sensory rooms
- Reception areas and entrances (how the school welcomes people in)
- Student relaxation zones or quiet corners

We paid attention not only to what the spaces looked like, but also to how they were used: how flexible they were, how students moved through them, and whether the spaces encouraged autonomy, interaction, or calm.

A key component of each visit was the semi-structured interviews with school leaders, teachers and, in some cases, students. These interviews explored:

- The school's vision for learning and space
- The motivations behind recent changes in their physical environment
- Challenges faced in creating more inclusive or flexible spaces
- Reflections on what has worked well — and what still needs improvement

These conversations helped us connect what we saw to the deeper pedagogical and cultural values of the schools.

Each partner filled out a study visit diary, too, a reflective tool that allowed us to:

- Record spatial observations and usage patterns
- Reflect on alignment between environment and educational aims
- Identify good practices and context-specific challenges
- Collect visual documentation (photographs, sketches, layout notes)

These diaries supported both individual reflection and cross-country comparison, forming the basis of the comparative analysis conducted later in the project.

At the end of each visit, we held debriefing sessions either on-site or online, where we shared initial impressions and posed questions among each other. This was not an evaluation, but a shared dialogue designed to offer constructive feedback and celebrate the school's efforts toward innovation and inclusion. In many cases, the schools themselves reported that the visit helped them see their environment with fresh eyes — and inspired further ideas for improvement.

#### Timeline

- Hungarian school visits have been conducted: March–May 2024
- Italian school visits have been conducted: May–July 2024
- Portuguese school visits have been conducted: August–October 2024

#### Interviews and podcasts

Several interviews were recorded during or after the visits. These became the basis for podcast episodes and written reflections, capturing authentic voices from the field. In Hungary, one of the co-author (Bertalan P Farkas) started a podcast in 2023 that has also been allocated to fulfil the project requirement: The Csomópont (in ENG: Knowledge Hub)<sup>17</sup> podcast is Hungary's first knowledge management podcast, which is a place about knowledge and knowledge management, where original people, inspiring ideas, engaging community and company stories, carefully crafted lines and a dash of public thinking come together. In Portugal, Previform conducted three podcast recordings in carefully prepared topics which are available on their website<sup>18</sup>. The following podcasts have been recorded for the purposes of the collaboration, especially focusing on the learning environments and the educational contexts.

#### PORTUGAL

- Overview of Education in Portugal: Advances and Challenges, guest speakers: Rui Vieito and Jorge Dias.
- The Architecture of Portuguese Schools: Spaces that Inspire and Educate, guest speakers: Jorge Teixeira and Alexandre Arieira Silva.
- Challenges and Advances in Inclusive Education in Portugal: Reflections and Perspectives, guest speakers: Ana Lúcia Sequeiros and Celeste Silva

#### HUNGARY

- What on earth the educational knowledge management? – guest speakers: Szilvia Tóth-Mózer, Éva Tóth and Tibor Dóri.
- Travel with us to the Italian school system, guest speaker: Gabriella Pusztai.
- Discussions about learning environments, guest speakers: dr. Erika Kopp and Orsolya Kálmán.
- Environmental education – Methodology of outdoor learning, guest speakers: Erika Saly and András Victor.
- Teaching spaces, good schools inside out, guest speaker: Mónika Réti.
- World-class school building and methodology in Batorbágy, guest speaker: Attila Frész.
- They design the future of schools, guest speakers: Marina Annus, Gábor Vörös.

<sup>17</sup> Listen and follow, and don't forget to subscribe to the [YouTube](#) and [Spotify channels](#) of Knowledge Hub podcast (Csomópont podcast in Hungarian) and like the [podcast's Facebook page](#)

<sup>18</sup> Listen and follow, and don't forget to subscribe to the [YouTube channel of Previform Lda](#) (Portugal).



### 3. Comparative matrix of the visited schools

School name	Country	Constructed before 1950	Constructed between 1950-2000	Constructed after the year of 2000	Metropolitan school	Rural / small town school	State run / maintenance	Local gov. run / maintenance	Private run / maintenance	Church run / maintenance	Nationality run / maintenance	primary school	secondary school
Tiszatenyő Szent István Primary School	Hungary			✓		✓	✓					✓	
Szentpéterfa Croatian-Hungarian Bilingual Primary School	Hungary		✓ old building	✓ new building		✓	✓ partly				✓ partly	✓	
Deák Diák Primary and Secondary School of Music	Hungary	✓			✓		✓					✓	✓
Biatorbágy Innovative Vocational and Secondary School	Hungary			✓		✓	✓ partly		✓ partly	✓ partly			✓
Agrupamento de Escolas de Ponte de Lima	Portugal			✓		✓	✓						✓
Agrupamento de Escolas de Freixo	Portugal		✓			✓	✓					✓* básico	
EPRALIMA – Escola Profissional do Alto Lima (Delegação de Arcos de Valdevez)	Portugal		✓			✓		✓					✓
EPRALIMA – Escola Profissional do Alto Lima (Delegação de Ponte da Braca)	Portugal			✓		✓		✓					✓
Istituto Industriale Superiore Leonardo Da Vinci	Italy	✓ main building		✓ later extensions	✓		✓						✓
Istituto Tecnico Economico e Tecnologico Ludovico Enaudi – Bassano del Grappa	Italy		✓			✓	✓						✓
ITT Marco Polo – Florence	Italy		✓		✓		✓						✓
I. C. Don Milani – Viareggio	Italy		✓			✓	✓					✓	

## Comprehensive experiences regarding the learning environments

### HUNGARY

Flexible learning environments:

- Physical learning spaces play a critical role in shaping educational experiences. Biatorbágy was designed with flexibility in mind, featuring modular furniture and multi-use classrooms. Szentpéterfa follows a similar model, using clusters of classrooms to foster small learning communities. Deák Diák has repurposed common areas, such as hallways and stairwells, into interactive spaces, making use of every available area for educational engagement. Tiszatenyő, despite its more traditional infrastructure, has adapted classroom layouts to allow for collaborative learning and group projects.

Outdoor learning

- Outdoor learning is an integral component of school life in some institutions. Szentpéterfa, situated in a rural setting, emphasizes outdoor classrooms and nature-based education. Tiszatenyő also utilizes its central courtyard and atrium for school-wide activities, reinforcing a sense of community. Biatorbágy integrates recreational zones within the school, ensuring that both physical activity and informal learning opportunities are available. Deák Diák, while primarily urban, has transformed waiting areas into communal interaction zones, promoting social engagement outside traditional classrooms.

Architectural adaptations and innovations

- Among the schools, Biatorbágy stands out for its modern, purpose-built infrastructure that aligns with 21st-century learning models. Szentpéterfa, while housed in a new facility, has adapted its structure to balance historical continuity with innovative educational needs. Deák Diák and Tiszatenyő, operating in older buildings, have focused on incremental changes, such as reconfiguring classrooms and incorporating digital tools to modernize their spaces.

### PORTUGAL

Innovative Pedagogical Approaches

- Shared leadership in decision-making: schools such as Escola Básica de Freixo implement a shared management model where teachers and students influence changes in the learning environment. The weekly Friday afternoon meetings at Escola Básica de Freixo allow teachers to collectively plan initiatives and propose spatial modifications.
- Student-centered design: Escola Secundária de Ponte de Lima involves students in surveys and participatory budgeting to adapt spaces to their needs. The participatory budgeting project at this school funds annual student-led improvements, fostering a democratic school culture.
- Flexible classroom design: schools are investing in adjustable furniture, such as mobile desks and ergonomic chairs, to support various learning styles. At Escola Básica de Freixo, the introduction of swivel chairs and standing desks enhances adaptability for hyperactive students.

Differences in spatial utilization

- Escola Básica de Freixo has a dedicated meteorology club and a digital school newspaper, fostering interdisciplinary learning. The Meteorology Club's integration with STEM curricula and its daily weather reports on YouTube exemplify an innovative cross-disciplinary approach.
- EPRALIMA – Escola Profissional do Alto Lima maintains specialized workshops for vocational training, ensuring students gain hands-on experience with industry-standard tools. The dedicated robotics construction room allows students to build and test small-scale robotic prototypes, providing a bridge between education and industry.

Tackling Changes in Learning Environments

Each school approached change differently, adjusting to new teaching methodologies and student needs:

- Escola Básica de Freixo: Teachers and students actively participate in modifying classroom setups to best suit their learning needs. The school's Friday meetings allow for real-time feedback on what's working and what needs adjustment.

- Escola Secundária de Ponte de Lima: Change management was driven by participatory budgeting and surveys, ensuring student and teacher voices influenced how spaces evolved.
- EPRALIMA: The vocational school tackled change by aligning curriculum with industry trends, ensuring that newly introduced spaces, such as the Specialized Technological Center, met the evolving demands of the labor market.

## ITALY

### Flexible learning spaces

The concept of adaptive classrooms was observed in many schools. Marco Polo has embraced modular furniture, allowing teachers and students to reconfigure their learning environments based on different activities. Similarly, ITIT Einaudi has implemented a system of flexible learning spaces, including clusters of specialized laboratories to facilitate interdisciplinary learning.

### Outdoor and nature-based learning

Several schools leverage outdoor environments to enhance learning experiences. Speaking Peace School places strong emphasis on nature-based learning, incorporating a vegetable garden, small farm animals, and outdoor activity spaces. Don Milani has similarly transformed its outdoor areas into greenhouses, relaxation zones, and interactive spaces for student engagement.

### Psychological and aesthetic influence of space

The use of colour, art, and aesthetic design was notable in multiple schools. Marco Polo partnered with street artists to transform its walls and corridors into vibrant learning spaces. Centro San Salvatore carefully selected colour schemes and motivational phrases on walls to enhance student well-being. These elements demonstrate how visual and sensory design can significantly impact student motivation and engagement.

### Major architectural changes in schools

Over the past five to twelve years, several schools have undergone major transformations in their architectural design to enhance learning and social interaction.

- Marco Polo systematically modified both indoor and outdoor spaces, prioritizing community-driven renovation. Aesthetically unpleasing buildings were reimagined through artistic interventions, such as murals painted by street artists, which transformed corridors and classrooms into more inviting spaces. The use of movable and modular furniture increased classroom flexibility, allowing teachers to adapt learning environments to different teaching methods and group work requirements.
- ISIS Da Vinci focused primarily on enhancing its vocational training spaces, investing in state-of-the-art laboratories for electronics, media production, and mechatronics.
- ITIT Einaudi developed a “biblioteca diffusa”, meaning books are no longer confined to a single library space but are integrated throughout corridors and open areas.
- Don Milani prioritized privacy-conscious and well-being-oriented designs, creating small breakout areas (“confessionals”) where students can have a moment of quiet reflection or small group discussions.
- Centro San Salvatore focused on renovating five key learning spaces through the combined expertise of psychologists, pedagogists, and architects, ensuring that each space was designed with a clear pedagogical purpose in mind.

### Tackling changes in learning environments

- Marco Polo's transformation took place over twelve years, with changes implemented gradually. The principal played a crucial role in shaping the school's vision, but teachers and students were deeply involved in discussions about spatial changes.
- Don Milani involved the entire community, working with external organizations, parents, and even local businesses to ensure changes benefited all stakeholders.
- Centro San Salvatore placed significant emphasis on psychological research, considering how space influences behaviour and learning.
- ITIT Einaudi promoted sustainability and student ownership, having students participate in the greening of the school, where they take care of plants and maintain natural learning environments

### Outdoor learning and community integration

- Parlare Pace School integrates nature into daily activities, emphasizing a farm-based outdoor learning model where students care for animals and grow plants.

- Don Milani's greenhouses and open-air learning areas support experiential education and offer relaxation zones for students.
- Marco Polo turned its courtyard into a multi-functional space, allowing students to engage in both structured and unstructured activities.
- Centro San Salvatore introduced outdoor seating and greenery, promoting interaction between students and staff.

As a summary and reflection about the study visits, we applied AI<sup>19</sup> to create three pictures about the study visit experiences. We have taught the application with all the interviews and study visit diaries that have been conducted during the visits. The prompt was the following: "Create a comprehensive picture using the experiences of the uploaded study visit interviews and diaries for each partner country: Hungary, Portugal and Italy."

Here are the results:

Design of a typical Hungarian classroom, according to the interviews and diaries, created with AI



Design of a typical Portuguese classroom, according to the interviews and diaries, created with AI.



Design of a typical Italian classroom, according to the interviews and diaries, created with AI.



<sup>19</sup> We used ChatGPT 4o LLM on the day of 22nd June 2025.



## EXPERIENCES FROM THE STUDY VISITS IN HUNGARY





## Deák Diák Primary and Secondary School of Music

Housed in a historically significant and architecturally elegant building dating back to 1912, the **Deák Diák Primary and Secondary School of Music in Budapest**<sup>20</sup> harmoniously combines tradition with contemporary educational innovation. The building's distinguished architectural character provides an inspiring backdrop for a learning environment that is at once inclusive, creative, and internationally connected.

The **school's spatial organization reflects its pedagogical ethos**: each class has its own dedicated home classroom, creating a sense of ownership and belonging for students. Classrooms are fully equipped with state-of-the-art IT infrastructure, including interactive whiteboards (both fixed and mobile), a fleet of 125 student laptops, and digital teaching tools, enabling any space to be transformed into a modern, technology-rich learning environment. In addition to the standard classrooms, the school features a computer room, an art room, a library, a club room with free internet access, two gymnasiums, a canteen, and a cafeteria — all designed to support diverse educational and social needs. The architectural layout supports differentiated and project-based learning, with spaces that foster cooperative work and creative exploration. A strong emphasis is placed on the development of key 21st-century skills, including literacy, mathematical reasoning, problem-solving, independent learning, teamwork, and foreign language proficiency. Support services such as speech and language therapy, psychological counselling, and special education ensure that individual learning needs are met. The school actively participates in international educational networks and collaborations, further embedding a global dimension into its learning culture. As a training centre for several higher education institutions, it also plays a significant role in teacher education and pedagogical innovation.



SCHOOL BUILDING.

Source: Photograph taken by Ádám Tihanyi

The current building was constructed between 1911 and 1912, stands as a continuation of the former Girls' School. The school, originally named "Deák Téri Általános Iskola" (Deák Square Primary School), was founded in 1952 near Deák Ferenc Square. In 1993, the institution was relocated to the building at Orczy Street 3-5 in District VIII, at which time its name was changed to Deák Diák Általános Iskola (Deák Diák Primary School), a name suggested by the students themselves. In August 2008, the Józsefváros Municipality (District VIII) moved the school into its present home — the historic former Girls' School building on II. János Pál pápa Square (Pope John Paul II Square). In 2023, the school launched its first secondary-level (gymnasium) class, thus adopting its current name. During the visit, the team was introduced to the school's music and dance education, as well as its approach to

<sup>20</sup> The website of the school: <https://deakdiak.hu/>

inclusion. Several classrooms were equipped with musical instruments and materials for music education — such as pianos and sheet music — and in one room, students welcomed the visitors with a song accompanied by piano. Dance instruction took place in a small gymnasium, where students demonstrated several dance moves. The school also maintains a dedicated room for students with special educational needs, providing an opportunity for exhausted students to retreat, as well as for other developmental and supportive activities. **Beyond its educational mission, the school is actively involved in the local community:** students regularly give concerts to mark various celebrations.

At the school, a **remarkably high level of inclusion** was observed, which the institution places great emphasis on. This is due to the fact that Budapest's District VIII (Józsefváros) is one of the least privileged areas of the Hungarian capital. The district is home to a highly diverse population, encompassing many nationalities, types of children and families, and a significant Roma community. The school can hardly address these realities in any other way than by fostering an inclusive, welcoming, and understanding environment. For this reason, the school has become unique and exemplary in the national context. The teachers work with dedication to ensure that students receive appropriate care and the best possible education and raising, tailored to their individual abilities. For example, several specialized development rooms have been created within the school, and a variety of special programs are available to children both during and after school hours. The school's music and arts programs are also designed to support students' smooth integration.

During the visit, the development rooms were actively in use by children and special education teachers, so no photographs could be taken. Nevertheless, the team greatly appreciated the opportunity to observe lessons dedicated to student development and remediation, facilitated by committed professionals and teachers, simultaneously taking place in several rooms. A similar approach was noted at *I.C. Don Milani – Viareggio*. It is believed that through purposeful procurement and renovations, regular training for teachers and support staff, and fostering a culture of knowledge-sharing, the two institutions could relate to each other very seamlessly.

### **Observations during the visit:**

#### **(1) Making the school homely:**

- Numerous child-oriented drawings, graphics, and cartoon characters painted on the walls.
- Flowers and indoor plants.
- Children's corners with games in classrooms, e.g., teddy bear, city-themed carpet.
- Armchairs, chairs, and sofas in corridors and communal spaces.

#### **(2) Making the school experiential:**

- Child-oriented drawings, graphics, and cartoon characters displayed on the walls.
- Motivational texts and illustrations.
- Children's games in community spaces, e.g., football table.
- Classrooms decorated with students' work. Student work displayed in communal spaces.

#### **(3) Educational technology tools:**

- Well-equipped IT classroom, desktop computers in classrooms.
- Media equipment in classrooms, e.g., speakers, projector, etc.
- Playful skill-development tools.

#### **(4) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes:**

- Musical education tools in classrooms, e.g., piano, sheet music, etc.
- Tables of various shapes and sizes arranged in diverse configurations, e.g., grouped for teamwork, semi-circular, U-shaped, pushed together, etc.
- Educational and instructional posters and inscriptions in corridors.
- Specially dedicated development rooms for students with special needs.

#### **(5) Multifunctional spaces:**

- The music room, with easily movable tables and chairs, can function as an educational space, event venue, conference room, or auditorium.
- Circulation spaces also serve as communal areas, suitable for reading and retreat, and as presentation areas for students' creative work.
- Use of textile curtains for increasing the efficiency of the acoustic solutions.



**(1) Making the school homely and (2) experiential**



Numerous child-oriented drawings, graphics, and cartoon characters painted on the walls.



Children's toys in classrooms, e.g., teddy bear, city-themed carpet, etc.



Armchairs, chairs, and sofas in corridors and communal spaces.



Classrooms decorated with students' work.



Motivational texts and illustrations.



Children's creations displayed in communal spaces.



## (5) Multifunctional spaces

The circulation spaces also function as communal areas, suitable for reading and retreat, and also serve as presentation spaces for students' creative work.



The music room, with its easily movable tables and chairs, can function as an educational space, event venue, conference room, or auditorium.

This is also where we were welcomed for the partner meeting (see image below), and where we organized a [community design workshop](#) (see picture on the right), during which we engaged teachers in a collaborative discussion about the school spaces and their potential development.



## Special collaboration with Deák Diák Primary and Secondary School of Music

As part of the project, we had a unique opportunity to get to know the everyday life of an inner-city school: Deák Diák School warmly hosted us for a transnational project meeting and allowed us to hold a memorable community co-design workshop on their premises in October 2024. Based on the completed questionnaires and the school's outstanding enthusiasm and engagement, the national jury unanimously recommended Deák Diák as our partner for the final architectural studies and the upcoming classroom transformation developments.

Below, we share some glimpses from these inspiring moments.

### Community design workshop<sup>21</sup>

The aim of community design is to involve all members of a community in the planning and creation of spaces that are healthy, inclusive, and responsive to their needs. Understanding what community design is — and how it works — helps us better grasp the impact of space on well-being and social inclusion. The places where we live, work, and learn have a direct influence on our quality of life and well-being. When these spaces are thoughtfully designed, they can significantly enhance the physical, emotional, and social health of those who use them. So what exactly is community design? It is a process that ensures everyone — regardless of background, ability, or status — can access the resources they need to live a meaningful, dignified life. It is rooted in equity, participation, and the belief that environments should be shaped with and for the people who inhabit them.

The leaders of Learnitect Design Ltd. – Bertalan Péter Farkas, knowledge manager and Ádám Tihanyi, architect – together designed, planned and then delivered a community design workshop to the teachers of Deák Diák school. The event offered a unique opportunity for teachers and school staff to explore how their learning environments influence well-being, inclusion, and pedagogy — and how they could be improved through collaborative design thinking.

The facilitators combined interactive exercises, image-based reflection, school space exploration, and practical guidance. Participants first shared their views on what makes a classroom “beautiful, modern, or effective,” then worked in pairs to select photos representing spatial values they found inspiring. These images served as tools for discussing atmosphere, usability, and alignment with school values. In a hands-on session, participants observed and mapped strengths and weaknesses of nearby school spaces. This field-based activity prompted rich discussions about daily spatial experiences. Later, the group reviewed low-cost classroom transformation concepts, then practical advice has been offered on implementation without the need for external funding. The workshop closed with personal reflection and peer sharing. Teachers articulated concrete next steps they plan to take to improve their classrooms. Participants were highly satisfied with the workshop, citing its relevance, creativity and practicality. Several expressed a desire for follow-up sessions and deeper engagement in future community-driven design processes. The event proved that meaningful school improvement can start with shared ideas, accessible tools — and a willingness to rethink familiar spaces together.



<sup>21</sup> More community design workshop ideas are available on the [website of Learnitect Design Ltd.](https://www.learnitect.com/)



## Architectural study<sup>22</sup>

The Architectural study constitutes one of the most tangible outputs of the project's third pillar. It presents both visual and textual proposals for the spatial renewal of learning and community environments in one selected school – the Deák Diák school.

These proposals are grounded in the specific pedagogical vision, infrastructural context, and community needs of each school, while being firmly anchored in the shared European values articulated throughout the project: inclusivity, sustainability, digital innovation, and the inherent joy of learning. The dual aim of the architectural pre-studies and the final designs is not merely to provide interventions that are aesthetically and technically appropriate, but to articulate complex and replicable spatial models in which space, pedagogy, and community life interact in mutually reinforcing ways. Accordingly, the study is not only a forward-looking architectural vision for the selected school—it serves as a source of inspiration and a practical point of reference for any educational institution committed to renewing the learning process not only in content, but also in spatial form.

This architectural study showcases models of educational space transformation that are not only functionally effective but also pedagogically inspiring, inclusive in spirit, and socially generative. Here, space is not a neutral backdrop — it becomes an active agent in the learning process. We offer that publication to all those — educators, school leaders, designers, and decision-makers — who are committed to shaping more liveable, inclusive, and future-resilient educational environments.

Looking for more? — Visit the [website of Learnitect Design Ltd.](#) for more community design ideas and potential collaborations.



<sup>22</sup> The Architectural study for Deák Diák school is available on the [website of Learnitect Design Ltd.](#)



## Biatorbágy Innovative Vocational and Secondary School

The Biatorbágy Innovative Vocational and Secondary School (BIT)<sup>23</sup> stands as a flagship example of forward-looking educational and architectural design, providing approximately 600 students with market-relevant skills through a progressive and future-oriented pedagogical system. Launched in its new building for the 2023/24 academic year, the school offers both general secondary and technical school programs, with technical pathways in finance and accounting, logistics, and information technology — all aligned with the demands of a dynamic labour market.

BIT draws on cutting-edge international and national expertise in both the conceptualization of its educational environment and its teaching methodology. Its mission is to equip students with highly marketable, future-proof competencies, while also fostering their readiness for higher education, through the support of a highly qualified teaching staff and state-of-the-art instructional tools. The architectural project of the school began in autumn 2021, following a comprehensive and collaborative planning process. Leading experts in architecture, pedagogy, digitalization, and sustainability contributed to the development of a visionary concept that integrates spatial innovation with pedagogical excellence. The result is an 11,000 square meter greenfield educational campus, designed and built as a partnership between the Government of Hungary, the Ministry of Innovation and Technology, and the Danish Velux Foundation.

The building itself exemplifies sustainable and human-centered design. Open, light-filled interiors, flexible learning environments, and thoughtfully zoned spaces create an atmosphere conducive to creativity, collaboration, and well-being. Classrooms are equipped with advanced digital infrastructure and modular furnishings, allowing teachers to adapt layouts to a variety of instructional methods — from traditional lectures to collaborative, project-based learning. The architectural composition includes dedicated zones for vocational training in finance, logistics, and IT, complemented by shared communal areas, multipurpose halls, and informal learning and social spaces. Attention to environmental responsibility is evident throughout the design, with energy-efficient systems, abundant natural light, and the integration of green elements both indoors and outdoors. As a model institution, BIT embodies the principles of contemporary education: preparing students not only for immediate employment but also for lifelong learning and active citizenship in a rapidly changing world. Its innovative spaces and pedagogical vision make it a reference point for 21<sup>st</sup>-century school design in Hungary and beyond.



SCHOOL BUILDING.

Source: Photograph taken by Ádám Tihanyi

<sup>23</sup> The website of the school: <https://www.bit-edu.hu/>

So, the newly constructed school opened its first class in September 2022. Our visiting team was welcomed by the school leader, who gave a presentation, followed by the chief architect of the school<sup>24</sup> building, who illustrated the key principles and focal points of the architectural concept. Afterwards, the group toured the building together.

**The building is organized into major functional units:** educational spaces; laboratories; offices (including teachers' room, school leader's office, and meeting room); gym; library; atrium; and communal areas. The atrium and communal spaces serve as the connective tissue between these units. The educational zones themselves are subdivided into clusters of spaces, each accessed from a shared communal area and comprising three classrooms, complemented by storage lockers and service rooms. This basic spatial configuration is repeated throughout the building. A core tenet of the school's concept is its digital-first philosophy: all spaces are equipped for digital work, with appropriate and high-capacity network infrastructure installed everywhere, and a comprehensive set of digital devices deployed — such as interactive whiteboards, displays, PCs, and more. This is further supported by robust software infrastructure. Notably, the school has developed its own proprietary digital system, which goes beyond supporting student assessment and feedback by also promoting mental health and safeguarding. The system allows students and teachers to submit various alerts, enabling the school psychologist to intervene promptly and take appropriate action when needed.

### **Observations during the visit:**

#### **(1) Making the school homely:**

- Armchairs, chairs, tables, benches, beanbags, etc. in corridors, the atrium, and communal spaces.
- Various colourful surfaces and graphics on walls and doors.
- Ping-pong tables, billiard tables, foosball, etc., in communal areas.
- Students' creations displayed in communal spaces.
- Nooks designed to support focus and quiet reflection.

#### **(2) Making the school experiential:**

- Different functions marked with different colours.
- Educational inscriptions and graphics in communal spaces.
- Student work displayed in communal areas.

#### **(3) Educational technology tools:**

- Smart TVs and displays, interactive panels, full use of Microsoft Office 365.
- Full Wi-Fi access for teachers and students.
- A scoring-based, standardized assessment and evaluation system.
- The Wellbeing system, which performs standardized measurements, facilitates counselling, and supports the maintenance of student well-being.

#### **(4) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes:**

- Sports courts.
- Tables of various shapes and sizes arranged in diverse configurations, e.g., grouped for teamwork, semi-circular, etc.
- Posters, inscriptions, and texts with educational and instructional intent, e.g., inscriptions and images placed at staircases.

#### **(5) Multifunctional spaces with improved acoustics:**

- The atrium serves not only as a circulation space but also as a communal and educational area; equipped with a mobile stage, it can easily function as a venue for events.
- Corridors double as communal spaces, suitable for reading and retreat, and serve as presentation areas for students' creative work.
- The library, in addition to book lending and reading opportunities, functions as an educational and presentation space, with numerous instructional inscriptions displayed.
- Use of wooden and padded surfaces and carpeting. Use of heraklith wood wool panels.

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<sup>24</sup> The chief architect of the school was Ms. Marina Annus from CÉH Planning, Developing and Consulting Inc. Portrait of Ms. Marina Annus: [https://ceh.hu/en/munkatarsainkrol/Annus\\_Marina](https://ceh.hu/en/munkatarsainkrol/Annus_Marina). We also had the chance to sit down with her in the (Csomópont) Knowledge Hub podcast, see the channel on [YouTube](#), [Spotify](#) or [Apple Podcasts](#).

## (I) Making the school homely

Multifunctional space in the school library which also brings the home feeling with cozy corners, carpeted floor, various colourful surfaces and graphics on walls and doors. But still it is a school space with a demonstration and presentation area with full WIFI access, movable interactive screen and places to sit down for an entire class or group of students.



Ping-pong tables, billiard tables, foosball, etc., in community areas (here especially in the big atrium hall).



Colourful nooks designed to support focus and quiet reflection in the school library. The school library occupies a special place within the building, located at its very core, adjacent to the chapel. This setting evokes a sense of immersion, tranquillity, and a touch of the sacred.



Armchairs, chairs, tables, benches, beanbags, etc., in corridors, the atrium, and communal spaces. The building is surrounded by terraces, outdoor learning spaces and strong connection with the surrounding. Every classroom has a small terrace, opportunity to breathe fresh air and embrace nature.





#### (4) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes

Sports courts for handball, volleyball, teqball, table tennis, fitness, badminton, and floorball. There is also a 90 m<sup>2</sup> gym inside and a fully equipped 1,000 m<sup>2</sup> sports hall.



Tables of various shapes and sizes arranged in different configurations, e.g., grouped for teamwork, semi-circular, etc.



Posters, inscriptions, and texts with educational and instructional purposes, e.g., inscriptions and images placed at staircases. The circulation spaces also function as communal areas, suitable for reading and retreat, and also serve as presentation spaces for students' creative work.

(Here: The Stairsteps of History installation shows the highlighted points of the history of Hungary.)



This atrium section is the dedicated atrium of one learning block (each block has a similar foyer). This foyer serves as a circulation area for students, houses the lockers, and provides access to the classrooms, group rooms, and the local teachers' rooms. Naturally, the foyer is not just a communal space: it is equipped with tables, chairs, and various types of boards, enabling students to engage in research or other learning activities in groups of different sizes.



### (5) Multifunctional spaces with improved acoustics

The library, in addition to offering book lending and reading opportunities, also functions as an educational and presentation space, featuring numerous instructional inscriptions as well.



The main atrium serves not only as a circulation space but also as a communal and educational area, and with a mobile stage that can be set up here, it can easily be used as a venue for performances and events. This huge space provides the opportunity for indoor activities, celebrations as well as circulation area for students and teachers. Every learning block (where the classrooms, group rooms and special STEAM rooms are located) is available from the main atrium which gives transparency, partnership and democracy to the lives of the school citizens.



All the school's ground-floor blocks are connected to nature and the inner garden. Some parts of the inner gardens are paved, but there are extensive green areas, and the shading devices are particularly useful during the summer. The maintenance of the inner gardens is primarily the responsibility of the school, but the school also has an educational garden where children plant and tend to trees and other plants.



Use of heraklith wood wool panels to block and decrease the noise in the main atrium (acoustic function).





## Tiszatenyő Szent István Primary School

Tiszatenyő Szent István Primary School <sup>25</sup>represents a harmonious interplay between tradition and contemporary educational needs, with its architectural spaces designed to foster inclusivity, well-being, and active learning. Located in the heart of Tiszatenyő, a small village near the city of Szolnok, cca. 120 km from the capital city Budapest, the school building reflects both its local cultural heritage and the **pedagogical vision of a child-centered, community-oriented learning environment**. The school is organized around clearly articulated zones that support differentiated educational activities and age-specific needs. Classrooms are generously proportioned and benefit from abundant natural light and ventilation, which contribute to a healthy indoor climate and optimal learning conditions. The spatial layout promotes flexibility: furniture arrangements can be easily reconfigured to accommodate frontal teaching, collaborative group work, or individual study.

Circulation areas are conceived as more than transitional corridors; they serve as extended learning and social spaces. Alcoves and seating niches integrated into these zones offer students places for informal interaction, reflection, or peer-to-peer collaboration. The interiors are animated by the display of students' creative work and thematic decorations, reinforcing a sense of ownership and belonging. The school also features dedicated specialist spaces — such as a multi-functional hall, a library, and rooms for arts, music, and ICT — supporting a holistic curriculum and extracurricular activities. These are complemented by outdoor facilities, including a sports field, playgrounds, and green spaces, which serve both physical education and experiential, nature-based learning. The exterior spaces are seamlessly integrated into the pedagogical program, encouraging movement, exploration, and social engagement. Material choices and colour schemes within the school create a calm and welcoming atmosphere. Thoughtful acoustics, ergonomic furniture, and biophilic design elements enhance comfort and well-being for all users.



SCHOOL BUILDING.

Source: Photograph taken by Bertalan Péter Farkas

The school building was **inaugurated in 2001 as a completely new construction designed for the village**. The 13-member teaching staff makes almost all decisions collectively. Beyond addressing key professional and organizational challenges, the small teaching community maintains excellent professional and personal relationships. There is an ongoing dialogue about how the school should look and feel, including the choice of decorations for the atrium, corridors, and classrooms. Each classroom is assigned to a specific class, and both the classroom and its adjoining corridor space (e.g., entrance door and adjacent bulletin board) are decorated and arranged by the respective class. The arrangement of desks within the classrooms is left entirely to the discretion of the teacher and students, with no interference from the principal or other staff. The atrium functions as a central communal space and also serves as a venue for ceremonies and events. The building's wings, which radiate from the atrium, house the library, gymnasium, administrative offices, teachers' room, and

<sup>25</sup> The website of the school: <https://szisuli.hu/>



classrooms. The architecture ensures excellent natural lighting, thanks to expansive glass walls and skylights. According to the school's internal regulations, students are required to use the atrium during every break. This policy is intended to encourage interaction, socialization, shared meals, peer learning, and the strengthening of inter-class relationships. To support this aim, ample seating options have been integrated into the communal spaces.

During a renovation several years ago, the functions of several classrooms were successfully adapted to meet contemporary educational needs. For example, the former science laboratory — which was hindered by fixed, immovable furniture that impeded collaboration — was transformed into a flexible computer and robotics laboratory. Likewise, by merging the former school and municipal libraries, the school was able to create a unified library zone that now serves as a versatile space for study, community activities, and diverse programs.

### **Observations during the visit**

#### **(1) Making the school homely:**

- Children's creative work displayed in classrooms, corridors, and the atrium.
- Play corners.
- Numerous child-oriented drawings, graphics, and cartoon characters on the walls.
- Armchairs, chairs, benches, and cushions placed in corridors and communal spaces.

#### **(2) Making the school experiential:**

- Child-oriented drawings, graphics, and cartoon characters on the walls.
- Classrooms decorated with students' work.
- Play corner.
- Decorations reflecting current events and seasonal celebrations.
- Classrooms arranged in diverse ways.
- Tables configured in various formations within classrooms and rearranged according to pedagogical methodology.
- Student work exhibited in communal spaces.

#### **(3) Educational technology tools:**

- Desktop mini robot.
- Kits demonstrating various types of movement.
- Digital devices.

#### **(4) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes:**

- Project work exhibited in communal spaces.
- Numerous subtle, refined pedagogical techniques and methods, e.g.: highlighting high-performing students' names on wall-mounted kites; timetables designed with pictograms and images; measuring performance through a series of labeled folders.
- Numbers and letters displayed on walls.
- Tables configured in various formations within classrooms and rearranged depending on the teaching methodology — for example, reoriented toward the board, a projector, or according to lesson content.
- Furniture arranged and selected to support teamwork.
- Students are required to leave classrooms during breaks (though they may return at any time for their belongings) to encourage movement, foster peer interaction, and promote mutual learning between younger and older students.
- Posters, inscriptions, and texts with instructional or educational intent placed throughout the school.

#### **(5) Multifunctional spaces:**

- The atrium functions not only as a circulation area but also as a community and educational space, and it can be easily arranged as a venue for performances and events.

## (1) (2) Making the school homely and experimental



Light fixtures playfully concealed with a row of pine branches, and playful numbers placed above the board, among other decorative elements.



Decorations reflecting current holidays and events. The hall functions not only as a circulation space but also as a community and educational area, and it can easily be arranged as a venue for events.



Current drawings by the children displayed on wall boards.



Classroom decorated with students' creative work.



Events and the class's creative work given greater visibility by being displayed on the bulletin board in the corridor.



Play corner created within the classroom.



**(3) (4) Examples of elements, furniture, and pedagogical methods implemented for educational and instructional purposes**



A large keyboard mounted on the wall to demonstrate different combinations.



Various skill development tools. Use of digital devices, LEGO robots.



Classroom combined with a library, arranged for group work.



Timetable illustrated with animals, pictures, and pictograms.



Wall decoration displaying commendations, e.g., who reads or counts the best.



Visual representation of commendations about diligence and behaviour to teachers and students.

## Szentpéterfa Croatian-Hungarian Bilingual Primary School

The **Szentpéterfa Croatian-Hungarian Bilingual Nationality Primary School** exemplifies a carefully designed educational environment that supports its dual-language, multicultural pedagogical mission through inclusive, well-conceived spaces. Situated in a village with deep-rooted Croatian and Hungarian traditions, the school building reflects its role as both a centre of learning and a cultural meeting point for the community.

Architecturally, the school is organized around a clear and functional spatial hierarchy that facilitates bilingual education, differentiated instruction, and the celebration of cultural identity. Classrooms are assigned to specific classes and designed as homely, personalized spaces decorated with students' own work, fostering ownership and a sense of belonging. Each classroom seamlessly integrates with adjacent corridor spaces, which serve as extensions of the learning environment — featuring bulletin boards and displays curated by each class. The central atrium serves as the heart of the building, functioning as a true multi-purpose space: a circulation hub, a communal meeting area, an educational forum, and a venue for performances and cultural events. Its open, flexible layout, abundant natural light, and thoughtful seating arrangements encourage social interaction, peer learning, and cross-grade connections during breaks. The atrium's aesthetic — decorated with seasonal motifs, children's artwork, and playful elements — reinforces a sense of community and cultural continuity. The building's wings house the library, administrative offices, and specialist rooms, with each zone designed to support specific pedagogical and extracurricular functions. The library has been conceived as a versatile, welcoming space, combining the former school and village library into a vibrant hub for study, creativity, and social activity. The science and technology areas have been modernized to include flexible, collaboration-friendly furniture and contemporary equipment such as computer and robotics labs. Throughout the school, furniture and spatial configurations are intentionally adaptable, enabling teachers and students to arrange classrooms according to lesson objectives and instructional methods. Communal spaces feature ample seating and play corners, while corridors double as exhibition areas for student projects, visually celebrating achievement and fostering pride.



SCHOOL BUILDING.

Source: Photograph taken by Ádám Tihanyi

The **renovated and expanded school building** was inaugurated in September 2023. Previously, the school operated on two separate sites: an outdated 1960s building on the current plot, used by upper-grade students, and a more than 100-year-old church-owned building one street away, where lower-grade students attended classes. Teachers had to commute between the two locations several times a day, and both facilities were in need of significant refurbishment.

The **modernization aimed to consolidate the functions of the two distant buildings into a single, unified campus**. Sufficient land behind the 1960s structure was available for the planned extension. During construction of the new building, the existing house underwent a thorough renovation. The



two structures are connected by an open-sided red roof supported on columns. The refurbished building now accommodates the lower grades, while the newly constructed wing serves the upper grades. In the course of modernization, the design firm — CAN Architects<sup>26</sup> — sought to create age-appropriate and pedagogically responsive spaces. As part of this effort, they introduced the concepts of the “*classroom with a nook*” and the “*rotating classroom*.” In the *nook* configuration, a storage room was created in the corner at the rear of the classroom, next to which a raised platform covered in soft materials and bathed in natural light was installed (see images below). This intimate, play-friendly area is often incorporated into classroom practice — for example, students may sit in a circle there to discuss a given topic. The *rotating classrooms*, designed for the upper grades, are irregular quadrilateral-shaped spaces that can be flexibly furnished and configured to align with the chosen pedagogical method or instructional activity.

### Observations during the visit:

#### (1) Making the school homely:

- Use of plants and flowers.
- “Nook” area lined with soft materials, allowing natural light, featuring curtains and cushions.
- Students’ artwork displayed in classrooms and communal spaces.
- Seasonal decorations.
- Communal spaces with playful furniture and cheerful colors.
- Chalkboard wall for drawing.
- Ping-pong tables in communal areas.
- Benches and seating areas in the schoolyard.

#### (2) Making the school experiential:

- Creation of openable spaces adapted to current educational objectives through the use of a movable wall.
- Playground in the yard.
- School staircase with bleacher seating.
- Communal spaces furnished with tables and chairs.

#### (3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes:

- Educational wall paintings related to the school’s theme, e.g., maps of Croatia and Hungary.
- A didactic school garden to develop students’ plant-care skills and strengthen their connection to nature.
- Rules, educational messages, and content displayed on the walls.
- Colourful, playful methods to illustrate the current curriculum.

#### (4) Educational technology tools:

- Use of both traditional and digital boards.
- Pedagogical tools displayed in the classroom, e.g., a human skeleton.
- Incorporation of the sut area into classroom activities in the lower grades.
- In lower grades, a sink in the classroom to enable activities requiring water/washing, e.g., painting during art lessons.

#### (5) Improving acoustics:

- White-painted heraklith panels covering the ceiling.
- Use of curtains and textiles.

#### (6) Multifunctional spaces:

- The atrium functions not only as a circulation area but also as a communal and educational space, featuring bleacher seating at the end and easily adapted for performances and events; it also serves as a presentation space for student work.
- The atrium can be opened up through a movable wall to the adjacent classroom, creating an even larger multifunctional space that combines the benefits of both the classroom and the atrium.
- (1) Making the school homely:

<sup>26</sup> The website of the architect firm: <https://canarchitects.hu/en/>

**(1) Making the school homely:**



Communal space with playful furniture and cheerful colours.



Chalkboard wall for drawing.



Use of plants and flowers.



Students' artwork displayed in classrooms and communal spaces.



Benches and seating areas in the schoolyard.



“Nook” area lined with soft materials, allowing natural light, with curtains and cushions.



### (3) Examples of elements, furniture, and pedagogical methods implemented for educational and instructional purposes



Educational wall paintings related to the school's theme, e.g., maps of Croatia and Hungary.



Colourful, playful methods to illustrate the current curriculum.



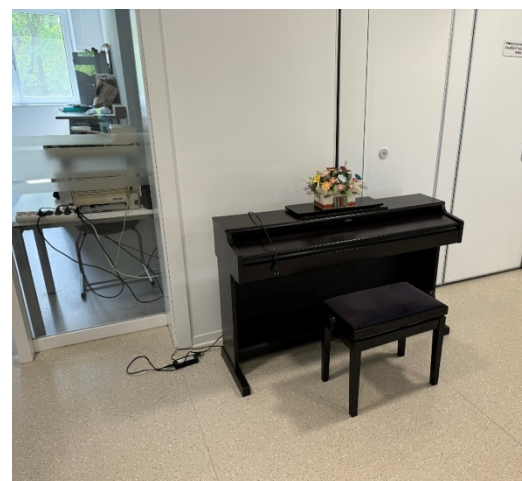
A didactic garden operated for educational purposes helps students develop plant-care skills and strengthens their connection to nature.



The atrium functions not only as a circulation space but also as a community and educational area.



Various pedagogical and demonstration tools displayed in the classroom, e.g., a human skeleton. Every classroom has a connection to nature.



Free standing instrument just next to a classroom entrance.



## EXPERIENCES FROM THE STUDY VISITS IN PORTUGAL



## Agrupamento de Escolas de Ponte de Lima

The Agrupamento de Escolas de Ponte de Lima<sup>27</sup>, located in the historic town of Ponte de Lima, exemplifies a contemporary educational complex that skilfully integrates functionality, inclusivity, and cultural identity within its spatial and architectural design. As a central educational hub serving multiple levels of education, the school's built environment reflects its mission to foster holistic development and community engagement.

The architectural concept of the school prioritizes openness, adaptability, and the creation of spaces that support diverse pedagogical practices. The campus is composed of a series of interconnected volumes organized around spacious courtyards and circulation axes, which function as both transitional and social spaces. The design ensures seamless connectivity while maintaining distinct zones for different age groups and activities. Classrooms are bright, airy, and designed to encourage flexible layouts, enabling a variety of teaching methodologies — from traditional frontal instruction to collaborative and project-based learning. Natural light, acoustic treatment, and ergonomic furniture contribute to an optimal learning environment, while walls adorned with students' work and thematic displays reinforce a sense of ownership and belonging. The central atrium serves as a multifunctional heart of the school, accommodating large gatherings, exhibitions, and cultural events. Its open-plan design, punctuated by tiered seating and mobile partitions, allows for dynamic reconfiguration, making it equally suited for performances, assemblies, and informal interaction. Specialized spaces such as science laboratories, art studios, and a library media center are designed to support experiential learning and interdisciplinary exploration. The integration of digital technologies and hands-on educational tools throughout the school reflects a commitment to innovation and preparing students for the demands of the 21st century. Outdoor areas play a vital role in the educational program, with landscaped gardens, recreational fields, and shaded seating areas



SCHOOL BUILDING.  
Source: Google Maps (street view)

encouraging physical activity, socialization, and a connection to nature. These spaces function as extensions of the classroom, supporting both formal and informal learning opportunities.

The school was built between 2015 and 2020; thus we encountered contemporary materials, finishes, and architectural approaches. The building's layout is highly rational: from the entrance hall one can access the connecting corridor, the administrative part, the library, and the cafeteria. The staircase to the upper floor also departs from here, and there is direct access to the courtyard as well. All other functions are arranged along the connecting corridor. On the ground floor, the corridor is completely open on one side, while on the upper floor it is enclosed. The corridor is wide enough to serve as a

<sup>27</sup> The website of the school: <https://www.aeplima.pt/aeplima/escolas/espl/>

communal space; on the ground floor it is primarily used for circulation, while the upper floor accommodates more community functions — e.g., seating areas and tables where students can gather during breaks or free periods. The connecting corridor provides access to the classroom blocks, service areas (e.g., a stationery shop, teachers' lounge), and at the far end, the gymnasium and vocational workshops. The classroom blocks are organized by age group and contain traditional classrooms. (With this fundamental layout, the school building moves beyond the outdated concept of "classic" dark central or side corridors flanked by rows of classrooms.)

The school is so newly constructed that neither students nor teachers have fully made it their own yet, which is why several forums and gatherings have already been held to discuss how to make the school feel more homely and comfortable for both students and staff – they call this process as **"humanising the school"**. The school leadership currently considers this one of its key tasks, and parents have been and continue to be actively involved in shaping school life.

### **Observations during the visit:**

#### **(1) Making the school homely:**

- Cheerful decorations in the entrance hall, cafeteria, and corridors.
- An aquarium at the entrance.
- Small, well-maintained courtyards and green areas visible from the interior.
- Indoor plants and flowers.

#### **(2) Making the school experiential:**

- Posters and banners in the hall and corridors showcasing school life, competitions, opportunities, programs, and activities.
- Objects and installations created during practical lessons displayed throughout the school and courtyard.
- Photographs of school events displayed, e.g., on the floor.

#### **(3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes:**

- Encouragement of proper waste management and selective waste collection within the school.
- Posters explaining the use of practical tools and equipment.
- Display of tools, equipment, and instructions in the workshops.
- A mannequin displaying full work attire including safety equipment.

#### **(4) Multifunctional spaces:**

- The atrium functions not only as a circulation area but also as a communal space.
- Corridors also serve as communal spaces, usable for reading, retreat, and as presentation areas for students' creative work.



**(2) Making the school experiential + (3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes**



School stories and events displayed on the floor.



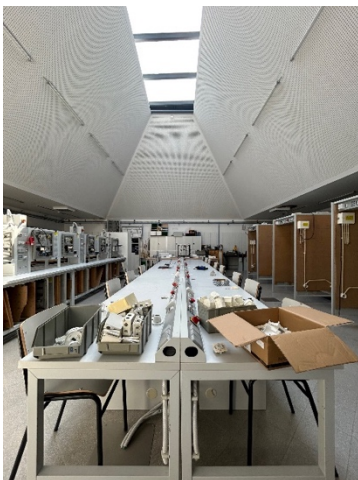
Posters displayed about programs, events, and school life.



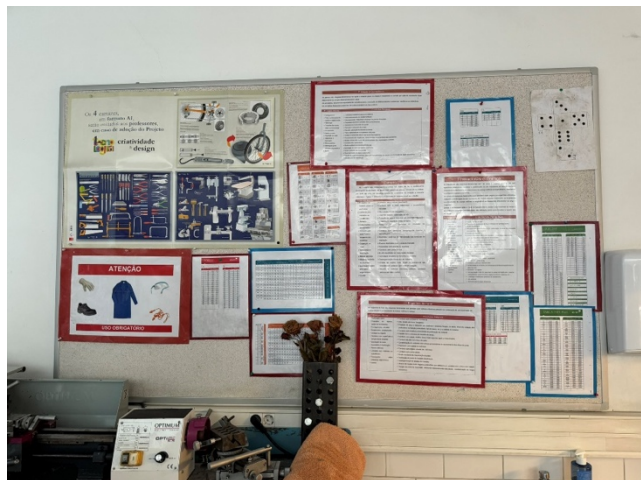
An object created during a practical lesson for a school celebration.



The circulation space also functions as a community area and serves as a presentation space for students' work.



Numerous specialized tools are showcased in the workshops, e.g., on the correct use of equipment and machines.

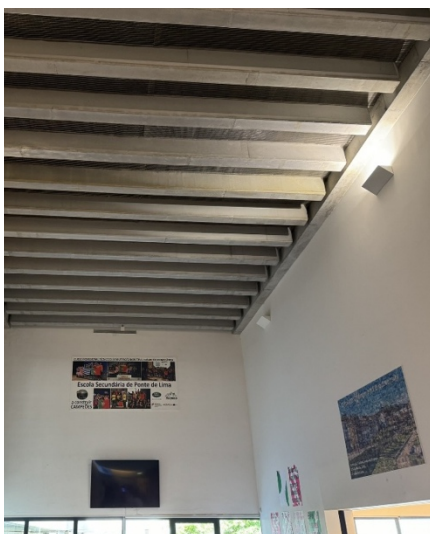


Poster on the proper use of practical tools.



#### (4) Multifunctional spaces

The halls and corridors function not only as a circulation space but also as a communal area. The circulation space likewise serves as a community zone, suitable for reading and retreat, and also acts as a presentation space for students' creative work.





## Agrupamento de Escolas de Freixo

The **Agrupamento de Escolas de Freixo**<sup>28</sup>, located in the heart of Freixo, exemplifies an educational institution that harmoniously combines contemporary spatial design with a strong commitment to international collaboration and innovative pedagogical practices. Its architecture and learning environments are thoughtfully conceived to foster creativity, inclusivity, and global mindedness among students.

The campus is organized around a series of interconnected volumes and open courtyards, with a clear spatial hierarchy that promotes intuitive circulation and meaningful social interaction. The entrance hall serves as a welcoming threshold, seamlessly connecting to multifunctional corridors that double as communal spaces for informal learning, exhibitions, and socialization. Large, glazed surfaces and carefully curated materials create a bright, transparent atmosphere, symbolizing openness and dialogue with the surrounding community and the wider world. A hallmark of the school's design is its emphasis on adaptability. Classrooms are configured with flexible layouts, movable furniture, and abundant daylight, enabling diverse teaching methodologies — from collaborative group projects to individualized learning. Corridors and shared spaces are enlivened by student work and thematic installations, reinforcing the institution's ethos of student agency and creativity. The school's **makerspace (creative workshop)** stands out as a flagship feature, embodying its pedagogical vision of hands-on, inquiry-based learning and maker pedagogy. This dedicated area provides students with access to advanced tools, materials, and digital fabrication technologies, supporting the development of critical thinking, problem-solving, and design skills. The makerspace fosters interdisciplinary exploration, allowing students to bridge STEM fields with arts and crafts, and serves as a hub for both curricular and extracurricular innovation. Internationally, Agrupamento de Escolas de Freixo is deeply embedded in transnational educational networks, actively participating in Erasmus+ projects and cross-cultural exchanges. This international engagement is reflected not only in its curriculum and partnerships but also in the inclusive and globally oriented character of its learning environments. The school cultivates a mindset of intercultural understanding, preparing students to thrive in a connected and rapidly evolving world.



SCHOOL BUILDING.

Source: photograph taken by Ádám Tihanyi

The institution consists of several separate buildings and blocks, some of which are connected by enclosed corridors. The school is well-equipped, featuring a large gymnasium (suitable for hosting various sports events), sports fields, a stationery shop, a cafeteria, a stage, a school radio, a mini studio, and communal spaces. These areas are made homely by numerous children's creations, paintings, visual art pieces, installations, and posters. For this purpose, the communal spaces also include game tables, planter boxes, and wall decorations — some created by the students themselves (e.g., a

<sup>28</sup> The website of the school: <https://aefreixo.pt/>

Mondrian-inspired painting on a school locker, tiled decorations on the school walls, etc.). The school operates a meteorology club<sup>29</sup>, where students, together with their teacher, collect daily weather and seismological data. This information is gathered via meteorological stations, detectors, and seismographs placed at various points throughout the school. The students analyse and process the collected data, then prepare reports and presentations. Their findings are shared through different channels and social media platforms, such as YouTube. The club enhances students' communication skills, teaches responsible use of smart devices, the internet, and social platforms, and brings together students from different age groups and classes, thereby strengthening the school's sense of community. (It is also assumed that internet-based platforms, such as YouTube, could be utilized in other subjects as well, for example, to share student-created content like readings of literary works, drama club performances, or vocal and musical presentations — further developing students' diverse skills.)

### **Observations during the visit:**

#### **(1) Making the school homely:**

- Children's drawings displayed on walls and doors.
- Indoor plants placed in corridors and communal spaces.
- Various colourful surfaces and graphics on walls and doors.
- Installations and figures, e.g., a figure made of cardboard boxes.
- Children's artwork on walls and doors.
- Game tables in communal spaces.

#### **(2) Making the school experiential:**

- Mondrian-inspired painting on a school locker.
- A small nook in the schoolyard.
- Shaped and patterned concrete elements in the yard.
- Ceramic decorations on the facade.

#### **(3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes:**

- Earthquake detector.
- Use of community platforms, e.g., YouTube, for educational purposes: students regularly produce weather reports that are accessible to anyone online.
- Mini studio for school recordings.
- Technology classroom.

#### **(4) Educational technology tools:**

- Banner used as a backdrop during school activities.
- Space-saving school furniture (combining chair, bag hook, and writing desk).
- Periodic table made from tin cans displayed in the school corridor.
- Historical tools and machines displayed in the corridor.
- Scientific elements exhibited in the science classroom, e.g., skeleton, planets, etc.

#### **(5) Multifunctional spaces:**

- Former classroom converted into a communal, educational, and event space, with playful, mobile furniture, movable tiered seating, and a projector.
- On the ground floor next to the cafeteria, a communal and educational space was created, featuring a stage at the end, making it easily usable as a venue for performances and events.
- The library functions not only as a space for borrowing books and reading but also as an educational and presentation space, displaying numerous children's creations.

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<sup>29</sup> The YouTube channel of the meteorology club: <https://www.youtube.com/@MeteoFreixo>

## (I) Making the school homely



Motivational graphics displayed.



Air hockey table in the communal space for free to use.



Playful, cheerful installations displayed.



A small nook and stone playhouse in the schoolyard.



Mondrian-style painting on the school locker.



Graphics on the school fence wall, celebrating the 50th anniversary of the Portuguese Revolution. A student project aimed at raising awareness of the achievements of that time and commemorating the heroes of the revolution.



### (3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes



Demonstrations tools accessible to everyone.



Banner used as a backdrop in school activities.



Insect hotel in the science classroom.



Space-saving school furniture (a combination of chair, bag hook, and writing desk).



Various seeds and legumes displayed in the canteen.



Periodic table made of tin cans displayed in the school corridor.



#### (4) Educational technology tools



Earthquake detector.



Use of community platforms, e.g., YouTube, for educational purposes: students regularly produce weather reports that are publicly accessible online, e.g.:  
<https://www.youtube.com/@MeteoFreixo>

Mini studio for producing school recordings, school podcasts. The green wall technology enables to produce virtual backgrounds, special effects and much more. The professional audio devices enable the students to produce podcasts, audio shows, discussions or record any type of audio for an event or show.



Well-equipped makerspace and technology classroom. The equipment serves the making and using creative technologies from soldering, through using different types of machines, until the 3D printing and laser cutting. The makerspace is in a separated building but enables the students to visit the space at any time, additionally, many STEM lessons (physics, chemistry, technical classes) are organised particularly in this space for the students.





## (5) Multifunctional spaces



Movable tiered seating furniture, stage, and presentation area.



Stage, multifunctional communal space, and at the same time a venue for school events and sports activities.

On the ground floor, next to the canteen, a community and educational space was created, with a stage at the far end, making it easily usable as a venue for performances and events.



The library, in addition to offering book lending and reading, also functions as an educational, presentation and event space, where numerous children's creations are displayed, too. Additionally, the school library also provides opportunities for parents and students to read together, to collect good and liveable experiences around books, reading and literacy. This service is particularly useful for underprivileged families and less-educated parents to connect to the community and the school with ease.





## EPRALIMA – Escola Profissional do Alto Lima — Delegação de Arcos de Valdevez

EPRALIMA – Escola Profissional do Alto Lima, located in Arcos de Valdevez<sup>30</sup>, values the quality of its educational spaces, maintaining an ongoing dialogue with the school community about improving facilities and fostering a more inclusive and innovative learning environment.

The school conducts quarterly surveys with the participation of students, teachers, and other staff, integrating their suggestions into continuous improvements. This participatory ethos, embedded in the institution's EQAVET quality assurance framework, ensures that spatial and pedagogical decisions align with the needs and well-being of the entire school community and remain transparent regarding available resources. EPRALIMA is currently implementing a profound architectural and pedagogical transformation through the construction of a **Specialized IT Center**. This new facility exemplifies a forward-thinking approach to educational space design, modernizing furniture and equipment to support pedagogical innovation. The renovation also includes digitizing administrative and learning processes, installing interactive whiteboards and videoconferencing systems, and thereby reinforcing the school's commitment to transitioning into a fully digital learning environment. The architectural reconfiguration prioritizes flexible interior layouts and adaptive furniture that foster collaborative, project-based learning and learner autonomy. Another important aspect is the school's explicit focus on inclusivity, reflected in the creation of the **EMAEI (Inclusive Education Support Office)**, which provides technical and individualized support to students with cognitive or other special educational needs. Here, inclusive design principles transcend mere digital tools, encompassing spatial accessibility, adaptive equipment, and specialized human support.



SCHOOL BUILDING.

Source: photograph taken by PREVIFORM Lda.

Community spaces at EPRALIMA are also being redesigned, with the new technology center envisioned as a dynamic hub that enables future-oriented educational practices. The integration of digital infrastructure and modular furniture promotes flexibility, collaboration, and innovation, creating learning environments that are both engaging and inclusive. To complement these spatial and technological developments, EPRALIMA invests continuously in **teacher training**. By preparing educators to apply **multi-level, differentiated teaching methods**, the school ensures that its pedagogical strategies evolve alongside its architectural and technological advancements, fostering an educational environment that effectively meets the diverse needs of all students. This integrative

<sup>30</sup> The website of the school: <https://www.epralima.com/website/> Facebook, Youtube

strategy underscores EPRALIMA's commitment to creating school spaces that are not only architecturally and technologically advanced, but also pedagogically inclusive, equitable, and responsive to the challenges of 21st-century education.

### **Observation during the visit:**

#### **(1) Making the school homely:**

- Common Room: A space with chairs and tables where students can relax and socialize during breaks.
- Creative Drawings Outdoors: The outdoor areas are decorated with creative drawings by students or artists, adding colour and personality to the school.
- Outdoor Tables: Tables in the gardens and outdoor spaces provide places to study, socialize, and carry out group activities in the open air.

#### **(2) Making the school experiential:**

- Creative Drawings Outdoors: The outdoor areas are decorated with creative drawings by students or artists, adding colour and personality to the school.

#### **(3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes:**

- Microsoft 365: Epralima, in partnership with Microsoft, offers all its students and teachers access to Microsoft 365 work tools.
- INCoDe.2030: INCoDe.2030 aims to increase digital literacy, as well as the development and recognition of digital skills, targeting students in Epralima's Professional Courses.
- Microsoft Imagine Academy: Epralima is committed to innovation in this area and is internationally certified as a Microsoft Imagine Academy. This Academy provides a comprehensive solution that equips teachers with technology skills and supports students to succeed, increasing their employability and gaining certifications relevant to the industry.

#### **(4) Use of furnishings and equipment that reflect the school's thematic focus and namesake identity:**

- School Entrance with Slogan: As you enter EPRALIMA, the first thing that stands out is the school's slogan, proudly displayed: "Epralima – A minha escolha!" ("Epralima – My choice!"). This phrase reflects the school's commitment to creating a welcoming and inspiring environment for students who have chosen EPRALIMA for their Education.
- Computer Room: The computer room at EPRALIMA is equipped with desktops for each student to use. This space serves as a hub for classes focused on information technology, coding, and digital literacy, ensuring students gain essential skills for the modern workplace.
- School Bus: EPRALIMA provides a dedicated school bus service, ensuring safe and convenient transportation for students from surrounding areas. The bus service not only adds to the accessibility of the school but also fosters a sense of community among students who travel together each day.

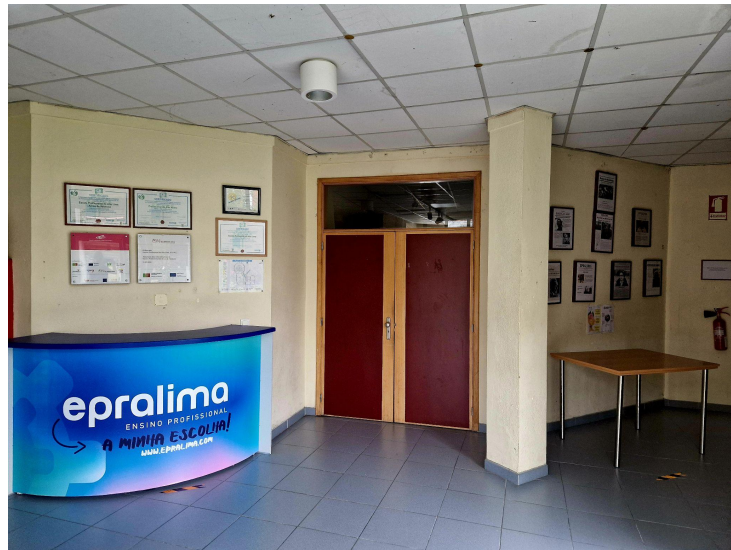
#### **(5) Multifunctional spaces with optimised acoustics:**

- The external space can be considered multifunctional: it has basketball hoops and football fields that are not only used during classes. It is an open space for all students and can be used by them at any time, as long as classes are not taking place in the space at the same time.
- Air conditioning: Ensures the thermal comfort of the space according to the students' needs.
- Direct access to the outside: The official multipurpose space is on the ground floor and has a door with direct access to the school garden.
- Auditorium with optimal acoustic conditions, featuring wooden walls and acoustic plasterboard, ensuring a high-quality sound



**(1) Making the school homely and (2) experiential and (4) use of furnishings and equipment that reflect the school's thematic focus and namesake identity**

School Entrance with Slogan: As you enter EPRALIMA, the first thing that stands out is the school's slogan, proudly displayed: "Epralima – A minha escolha!" ("Epralima – My choice!"). This phrase reflects the school's commitment to creating a welcoming and inspiring environment for students who have chosen EPRALIMA for their Education.



Outdoor Tables: Tables in the gardens and outdoor spaces provide places to study, socialize, and carry out group activities in the open air.



Creative Drawings Outdoors: The outdoor areas are decorated with creative drawings by students or artists, adding colour and personality to the school.





## (5) Multifunctional spaces with optimised acoustics

Auditorium with optimal acoustic conditions, featuring wooden walls and acoustic plasterboard, ensuring a high-quality sound environment.



The external space can be considered multifunctional: it has basketball hoops and football fields that are not only used during classes. It is an open space for all students and can be used by them at any time, if classes are not taking place in the space at the same time.



Although versatile, multi-purpose spaces and mobile furniture are not yet commonplace throughout the school, such solutions can already be found in some learning environments. Comfort is further enhanced by air conditioning systems and the possibility of immediate connection with nature.



## EPRALIMA – Escola Profissional do Alto Lima — Delegação de Ponte da Barca

EPRALIMA – Escola Profissional do Alto Lima, Delegação de Ponte da Barca<sup>31</sup>, stands as a regional benchmark for vocational education that thoughtfully integrates spatial quality, pedagogical innovation, and inclusivity. The institution demonstrates a clear understanding of how the design of physical learning environments directly influences educational outcomes and well-being, aligning its spatial strategies with contemporary educational paradigms.

The school environment is characterized by learning spaces that, while not yet uniformly equipped with versatile layouts and fully mobile furnishings, already feature **adaptable solutions** in certain classrooms. This progressive approach acknowledges the pedagogical value of flexibility, enabling spaces to support a variety of teaching modalities, from collaborative group work to individualized learning. The overall sense of comfort is enhanced through climate control systems, ensuring thermal comfort, and through deliberate architectural openness that facilitates immediate visual and physical connection with nature — a key element in fostering well-being and environmental awareness among students. EPRALIMA at Ponte da Barca emphasizes the importance of contextual and thematic coherence in its interior environments. Furniture and fixtures are thoughtfully selected to reflect the school's thematic focus and namesake identity, creating a coherent, inspiring atmosphere that reinforces its educational mission and cultural roots. This attention to detail contributes to a strong sense of belonging and identity within the school community. The school's ongoing modernization efforts highlight its commitment to harmonizing architectural innovation with inclusive educational practices. Spaces are designed not only for functionality but also to support diverse learners and to accommodate differentiated instructional strategies. This alignment between spatial design and pedagogy underscores the institution's forward-looking vision of vocational education as both inclusive and attuned to 21st-century challenges.



SCHOOL BUILDING.

Source: photograph taken by PREVIFORM Lda.

At EPRALIMA, there is a strong focus on the well-being of all users of the school's facilities. The School Council regularly discusses improvements to the spaces, and as a Certified School under the EQAVET Framework, it ensures comfort, accessibility, and quality, including satisfaction surveys. Ana Elisa Cerqueira Barbosa, the school's director, welcomed us and gave us a tour of the facilities, sharing insights about her leadership. The school, built in the 2000s, was specifically designed as a professional institution, featuring both theoretical classrooms and practical laboratories. Over the past five years, the focus has been on maintenance and small adjustments, with the only major change being the construction of a gatehouse. Recently, new educational equipment, including 3D printers and a CNC machine, was acquired, and the WIFI network was strengthened. All administrative processes were fully digitized. In 2024/2025, a Specialized Technology Centre will be implemented with a €1.2 million investment to modernize spaces and technological equipment, enhancing students' preparation for the job market.

<sup>31</sup> The website of the school: <https://www.epralima.com/website/> Facebook, YouTube.

### **Observations during the visit:**

#### **(1) Making the school homely:**

- Student bar: A dedicated area where students can relax, socialize, and enjoy various amenities.
- Student work display cork board: A cork board for displaying student work, showcasing achievements, and sharing updates.
- Display cabinet for student work: A cabinet for exhibiting student projects and creations, providing visibility and recognition for their efforts

#### **(2) Making the school experiential:**

- Colourful cafeteria room: A vibrant space designed for students to gather and socialize, promoting a cheerful atmosphere.
- Walls painted in various colours: Walls adorned with colours to create an engaging and lively environment.
- Computer rooms: Equipped with computers and technology for students to use for learning and projects.

#### **(3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes, including educational technology:**

- Computers: Used in all courses and available for free access to all students.
- Robots: Examples of robots for robotics courses.
- Mannequin head: Used in hairdressing and makeup courses to practice hairstyles, cuts, and makeup techniques.
- Microsoft 365: Epralima, in partnership with Microsoft, offers all its students and teachers access to Microsoft 365 work tools.
- INCoDe.2030: INCoDe.2030 aims to increase digital literacy, as well as the development and recognition of digital skills, targeting students in Epralima's Professional Courses.
- Microsoft Imagine Academy: Epralima is committed to innovation in this area and is internationally certified as a Microsoft Imagine Academy. This Academy provides a comprehensive solution that equips teachers with technology skills and supports students to succeed, increasing their employability and gaining certifications relevant to the industry.
- The school is well-equipped with educational technology, particularly with tools and devices tailored to the needs of vocational education and training. The facilities include a variety of school robotics equipment designed to foster students' logical and algorithmic thinking skills, supporting hands-on, inquiry-based learning approaches that are integral to modern STEM education.

#### **(4) Use of furnishings and equipment that reflect the school's thematic focus and namesake identity:**

- Electronics laboratories: Equipped spaces for students to explore and experiment with electronic circuits, devices, and technology.
- Mechanical laboratory: A specialized lab for hands-on learning in mechanics, machinery, and related technical skills.
- Cabinets for cabins and aesthetics: Storage cabinets designed for aesthetics courses, providing organized space for materials and equipment used in beauty and wellness practices.

#### **(5) Multifunctional spaces with optimised acoustics:**

- Television in the multipurpose space: students can watch whatever they want on television in this multipurpose space. It is for leisure only.
- Air conditioning: Ensures the thermal comfort of the space according to the students' needs.
- Direct access to the outside: Although it is not evident in the photo, the multipurpose space is on the ground floor and has a door with direct access to the school garden.



**(3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes, including educational technology and (5) Multifunctional spaces with optimised acoustics**

Mechanical laboratory: A specialized lab for hands-on learning in mechanics, machinery, and related technical skills.



Auditorium with optimal acoustic conditions, featuring wooden walls and acoustic plasterboard, ensuring a high-quality sound environment.



Mannequin head: Used in hairdressing and makeup courses to practice hairstyles, cuts, and makeup techniques.



The school is well-equipped with educational technology, particularly with tools and devices tailored to the needs of vocational education and training. The facilities include a variety of school robotics equipment designed to foster students' logical and algorithmic thinking skills, supporting hands-on, inquiry-based learning approaches that are integral to modern STEM education.



## EXPERIENCES FROM THE STUDY VISITS IN ITALY



## ITT Marco Polo — Florence

The [Istituto Tecnico per il Turismo Marco Polo in Florence](#) <sup>32</sup>represents a remarkable example of how spatial and architectural design can underpin a pedagogical mission rooted in inclusion, innovation, and contextual learning. As a secondary vocational school specializing in tourism, it cultivates an environment that aligns physical spaces with the professional and interpersonal skills its students are expected to acquire.

From an [architectural perspective](#), the building embodies the typology of a mid-20th-century institutional facility yet has been incrementally adapted to contemporary educational needs. Its internal configuration is structured around wide, light-filled circulation spaces and modular classrooms, allowing flexibility for differentiated instructional methods, from frontal teaching to collaborative, project-based work. The school's corridors and foyers are designed to function not only as transit areas but also as informal social and learning zones, fostering a sense of community and collegiality.



SCHOOL BUILDING.

Source: Website of the school: <https://www.ittmarcopolo.edu.it/>

A hallmark of the school's [learning environment](#) is the integration of specialized, discipline-specific spaces. Fully equipped language laboratories, ICT suites, and tourism simulation rooms — with reception desks, travel agency counters, and mock customer service settings — support experiential learning. These spaces are conceived not merely as training facilities but as pedagogical devices that bridge classroom learning with real-world practices, embodying the principle of *situated learning*. In terms of [inclusive and sustainable design principles](#), the school demonstrates sensitivity to accessibility and the psycho-social well-being of its users. Barrier-free access to all key areas, along with ergonomic furniture and adjustable lighting, ensures that students with diverse needs can participate equitably. The spatial organization promotes natural light penetration and visual connection between spaces, contributing to a calm, welcoming atmosphere conducive to concentration and collaboration. The [community areas](#), including a library, multipurpose auditorium, and outdoor courtyard, extend the learning experience beyond the classroom, accommodating both formal instruction and informal interaction. These communal spaces reinforce the school's role as a community hub, consistent with the European Bauhaus principles of sustainability, aesthetics, and inclusivity. During our visit to the school, we were welcomed by Ludovico Arte, the Principal, who guided us through the building and the courtyard. At the end of the tour, he invited us into the principal's office, where we had the opportunity for a personal conversation.

The school, built around 1960–70, focuses on the theme of travel and tourism. Twelve years ago, when Ludovico took over the institution, both the building and the adjoining courtyard were in a state of disrepair and neglect. Over the past twelve years, thanks to various grants and projects, it has been

<sup>32</sup> Videos about the improvements: <https://www.youtube.com/watch?v=YzWYSmpYCRc> and <https://www.youtube.com/watch?v=cLMUYBFrSu0>. The website of the school: <https://www.ittmarcopolo.edu.it/>



gradually renovated. The success of this renewal is well reflected in the fact that every year there are more applicants than available places in the announced year groups.

Throughout the renovation and development process, Ludovico collaborated with numerous professionals (e.g., architects, artists) and sought to involve his colleagues in the renewal efforts, maintaining regular consultations with them as well. The institution is not only accessible to its enrolled students but also open to the wider community: for example, external visitors can attend Italian language courses at the school, where their learning is supported and assisted by volunteers.

### **Observations during the visit**

(1) Use of furnishings and fixtures reflecting the school's theme and namesake:

- Projection screen designed as a ship's sail.
- Wooden ship's bow installed in the courtyard that also functions as the ship's sail.
- Painted representations of the Moon and Earth symbolizing space travel.

(2) Creating a homely atmosphere in the school:

- A piano placed at the entrance.
- Various vending machines available.
- Placement of plants and flower boxes.
- Upholstered, colourful furniture and fittings in communal spaces: sofas, armchairs, floor lamps, curtains, coffee tables, designer lighting.
- Outdoor furniture arranged for meetings and gatherings.
- Student lockers along the corridors.
- Poufs and beanbags of various shapes and colours in the communal areas.
- Transformation of the school library into a homely, communal space.
- Placement of schoolbooks along corridors, complemented by reading corners.

(3) Enhancing the experiential quality of the school:

- Corridor decorations: painted moon and Earth.
- Playful wall paintings and inscriptions in the restrooms.
- Wooden ship's bow and sail shading structure in the courtyard.
- Playful, colourful façade paintings with various shapes and patterns.
- Murals and painted shapes, patterns, and anime scenes on classroom walls.
- Use of vivid, bold colours and playful furniture: wall-mounted chairs that serve as decorative elements but can be taken down and used at any time, and matching tables that can be assembled from modular components.

(4) Educational and pedagogical elements, furniture, and methods:

- Educational and instructive inscriptions, e.g., Italian song lyrics on stair risers.
- Boards and posters in English, German, French, Spanish, and Italian.
- Outdoor furnishings and equipment suitable for learning and holding classes.
- Trapezoidal tables designed to support teamwork.
- An open-door school leader's office to signal that students, teachers, and staff can discuss anything with the principal at any time.
- Open teacher's lounge to ensure that parents and students can approach teachers
- Removal of the teacher's podium in classrooms to foster student-teacher teamwork.
- Repositioning of the teacher's desk away from the centre to diminish the teacher's overly dominant role. (According to the principal, at first some colleagues pulled student desks back in front of the blackboard, and it took time for them to adjust to the new approach.)
- Educational technology equipment: room-sized projection capabilities, touchscreen projectors and interactive whiteboards, cinema room.
- Improving acoustics: use of curtains, textiles, wooden surfaces and acoustic panels.

(5) Multifunctional spaces:

- Renovated former classrooms that now serve as community spaces, recreational areas, and instructional spaces.
- Courtyard furniture and themed spatial elements aligned with the school's concept, usable for both private retreats and teaching.
- Conversion of the former library into a reading room, instructional space, and cinema room.

**(1) Examples of furnishings and equipment reflecting the school's theme and namesake**



The projection screen is designed as a sail, symbolizing the theme of travel.



In the courtyard, the ship's bow not only delineates and defines the space but also reinforces the school's theme. The accompanying sail and mast also serve as a shading structure. The installation simultaneously functions as an outdoor instructional space.



The depiction of the Earth and the starry sky, imitating space travel.



In the communal space designed for teachers, the projection screen takes the form of a sail, with the ship depicted as a wall painting beneath it. The ship's wheel simultaneously houses the equipment and controls needed for projections.



## (2) Examples of creating a homely atmosphere in the school



The use of pleasant, calming colours and wooden surfaces on the armchairs and sofas.



Curtains, floor lamps, tables, poufs, and similar elements enhance the sense of homeliness.

Creating playful communal spaces in the courtyard.



A community space made homely by cushions, curtains, textiles, upholstery, and a carpet.





### (3) Enhancing the experiential quality of the school:



A humorous “gag” in the restroom.



Storing school chairs on the wall.



Comic-style decals on the back wall of the classroom.



Use of custom-labelled lamps, including acoustic panels.



Painting colourful shapes and patterns in the communal spaces.



The depiction of the Moon and the starry sky, imitating space travel.





Furniture designed to imitate textbooks.



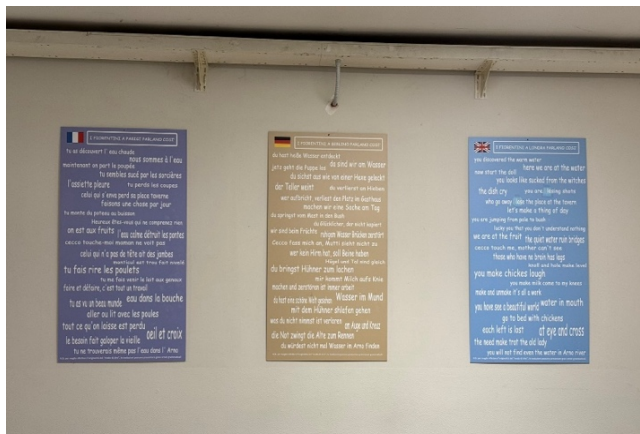
Painting various coloured shapes and patterns on the school façade.



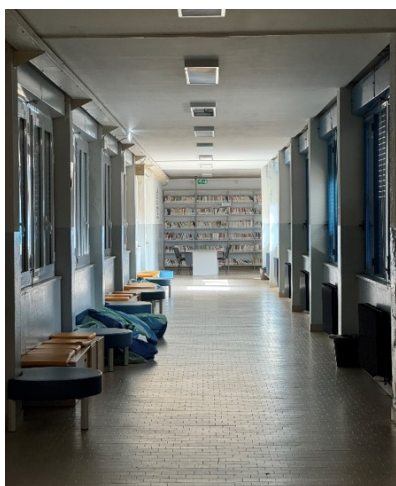
**(4) Examples of elements, furniture, and pedagogical methods/tools placed with educational and instructional purposes:**



Placing inscriptions on the stair risers.



Posters displayed in multiple languages.



Bookshelves installed in school corridors with benches and chairs.



Science classroom.



Furniture that fosters teamwork.



Transforming the library into a community space.



#### (4) Educational technology equipment for education and acoustic solutions

Room-sized projection screen in the library and recreation zone that creates a space for adventure, journey and exploration.

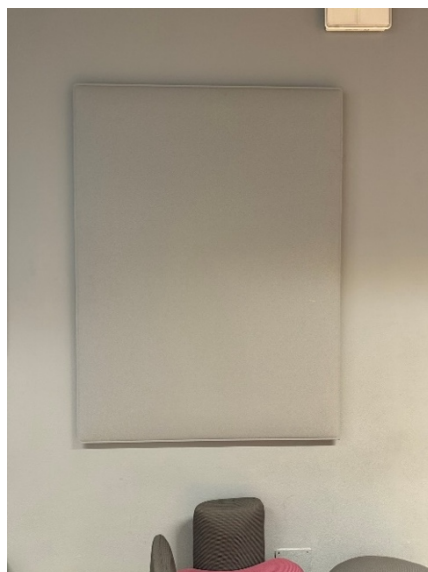


Creation of a cinema room within the communal space.



Use of acoustic panels in communal spaces to improve sound conditions

(on the left)



Use of curtains, textiles, and wooden surfaces in communal spaces to create better acoustics

(on the right)





## (5) Multifunctional zones indoor and outdoor





## Istituto Comprensivo Don Lorenzo Milani — Viareggio

The Istituto Comprensivo Don Lorenzo Milani in Viareggio<sup>33</sup> embodies a contemporary approach to educational architecture that aligns with pedagogical aspirations of inclusivity, well-being, and collaborative learning. Situated in the Tuscan seaside city of Viareggio, the school's architectural configuration is conceived not merely as a container of educational functions, but as an active participant in the formation of community and the cultivation of 21st-century competencies.

The **learning environment** is articulated through an assemblage of spatial typologies that accommodate differentiated instruction and varied didactic modalities. The main building's design demonstrates a clear hierarchy of circulation and zoning, ensuring both permeability and legibility, while maintaining necessary thresholds between communal, semi-private, and private zones. Classrooms are organized to maximize natural light and cross-ventilation, enhancing environmental comfort and cognitive performance. The **interior architecture** privileges flexibility: movable partitions, modular furnishings, and adaptive layouts support a spectrum of learning scenarios—from traditional frontal instruction to project-based and cooperative learning. The integration of breakout spaces and informal learning nodes within circulation areas further encourages spontaneous collaboration and peer-to-peer interaction. **Specialized areas** for STEM education, arts, and inclusive support services are seamlessly integrated, underscoring the school's commitment to equity and educational innovation. The presence of shared community spaces—such as the multi-purpose hall and library—extends the building's role beyond school hours, serving as civic infrastructure that fosters lifelong learning and intergenerational exchange. Materially, the building foregrounds a palette of durable, low-maintenance finishes and biophilic elements, creating a warm yet resilient environment that supports the psychological and emotional well-being of its users. **Outdoor learning gardens and courtyards** complement the interior spaces, providing additional venues for experiential, nature-based education.



SCHOOL BUILDING.

Source: Website of the school: <https://icdonmilani-viareggio.edu.it/>

During the visit, we experienced a remarkably high level of inclusion. In many areas, we encountered students requiring special care and their dedicated aides. The school provides a dedicated room for these students, offering a quiet retreat for those who feel overwhelmed, as well as a space for developmental and therapeutic activities. Adjoining this room is a calming “quiet room,” carefully designed with protective, non-destructive materials to ensure the children's safety and comfort. Throughout the school's corridors, numerous intimate, sheltered nooks for two students have been integrated to facilitate focused engagement. These spaces are freely accessible to all students and were actively used during our visit, including for studying. The school yard has been wholly adapted to the institution's needs and educational objectives, featuring a variety of sports courts, a greenhouse, a playful plant maze, and a didactic garden, all supporting experiential and outdoor learning. Beyond its internal pedagogical mission, the school also plays an active role in the local community life — for

<sup>33</sup> The website of the school: <https://icdonmilani-viareggio.edu.it/>



example, it organizes the annual Paper Festival, for which students prepare papier-mâché creations and architectural models.

### **Observations during the visit**

#### **(1) Making the school homely:**

- Children's artworks displayed on the entrance pillars, above and next to the main door.
- Photographs, banners, and projections of students in the main hall.
- Wall paintings featuring drawings, graphics, and cartoon characters aimed at children.
- Flowers and indoor plants.
- Armchairs, chairs, sofas, and secluded nooks for reflection placed in corridors and communal spaces.

#### **(2) Making the school experiential:**

- Wall paintings of drawings, graphics, and cartoon characters created for children.
- Modern art installations in larger spaces, e.g., Mondrian-style painting in the entrance hall.
- A greenhouse in the yard.
- School garden.
- A school stage equipped with pianos.
- Playful planting arrangements, e.g., bushes planted in a spiral shape forming a maze.
- Classrooms decorated with students' work.
- Student projects displayed in communal areas, such as a model of Mount Etna and a ship model.

#### **(3) Educational technology tools:**

- A wooden drawing mannequin that can be posed in various ways.
- A desktop mini robot.
- A plotter.
- A 3D printer.
- Kits demonstrating different types of movement.
- Special plant-growing stands.

#### **(4) Furniture, elements, and pedagogical tools designed for educational and instructional purposes:**

- School garden. Greenhouse. Sports courts.
- Rolling chairs equipped with bag holders and writing surfaces, providing more space and facilitating easy reconfiguration.
- Tables of various shapes and sizes arranged in diverse layouts, e.g., clustered for teamwork, semi-circular, U-shaped, or pushed together.
- Educational tools placed in corridors, e.g., a table displaying the parts of a human body mannequin.
- A classroom kitchen for teaching cooking and dining.
- Project-based student work displayed in communal spaces, e.g., Mount Etna model.
- Terrariums and aquariums, e.g., a terrarium designed for stick insects in one classroom.
- Posters, inscriptions, and texts with instructional or educational intent, e.g., inscriptions placed on stair risers.

#### **(5) Improving acoustics:**

- Mobile acoustic screens.

#### **(6) Multifunctional spaces:**

- The atrium serves not only as a circulation area but also as a communal and educational space, with a stage at the end allowing it to function as a venue for performances and events.
- The schoolyard, enriched with a student garden, greenhouse, sports court, and playful planting (spiral-shaped hedge), serves as a space for recreation, physical activity, teaching, and play.
- Circulation areas double as communal spaces, usable for reading, withdrawal, and also as exhibition areas for students' creative works.

### (1) Making the school homely:



The school entrance is adorned with children's work, creating a sense of homeliness.



A contemplative nook in the corridor, designed for two people, providing a retreat and a sense of security.



A communal space with subdued colours, architectural models, and unique benches that convey playfulness and a sense of safety.



A community space with playful furniture, and planter boxes creating subtle boundaries, dominated by muted pastel tones, greens, and natural wood and cheerful paintings.



A creative workshop featuring playfully shaped tables arranged facing each other, fostering teamwork and providing the experience of collaborative creation.



## (2) Making the school experiential:



A Mondrian-style wall painting, with flowers placed in front of it and projections about school life displayed on a screen.



A school stage decorated with Mondrian motifs, equipped with a piano.

Plants arranged in a spiral shape in the schoolyard. Once the vegetation matures, it can serve as a play area and, when walking among the plants, evokes a sense of shelter and protection.



Viareggio is a seaside town, and this theme is reflected on the wall.



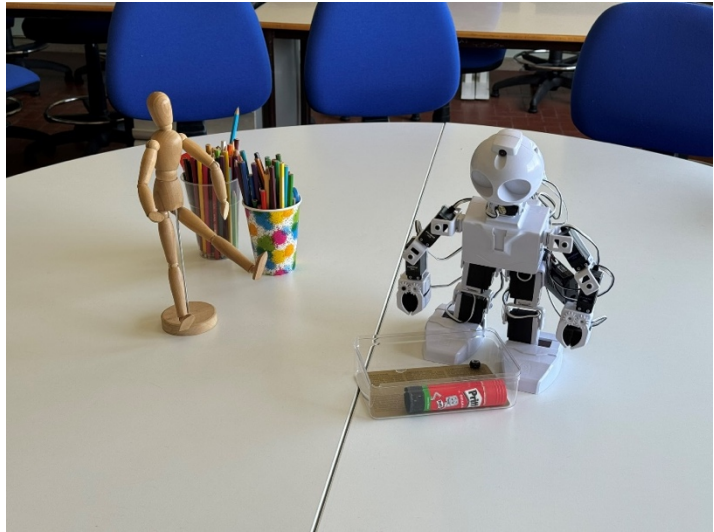


### (3) Educational technology tools:



A tool for tending to plants, which can help foster students' connection to nature.

Various skill development tools and LEGO robots.



A robot and a human figure in the creative workshop.



A plotter machine that enables the printing of larger digital works.



#### (4) Examples of elements, furniture, and pedagogical methods

Implemented with educational and instructional purposes. The circulation areas also function as communal spaces, providing opportunities for reading and retreat, and serving as exhibition areas for showcasing students' creative work.



Space-saving school furniture (a combination of chair, bag hook, and writing desk) and an acoustic wall.



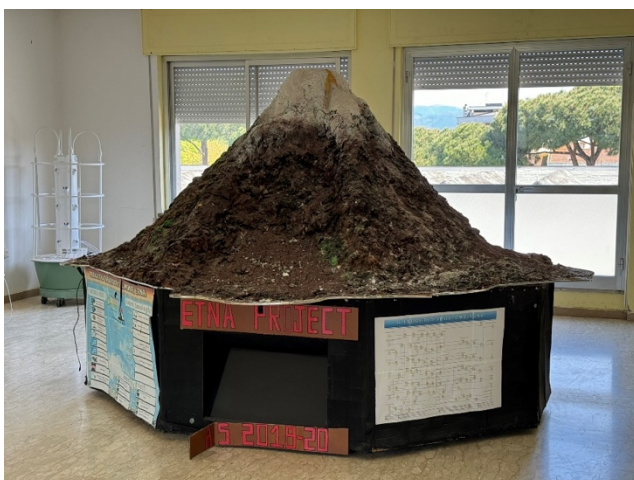
Presentation and demonstration tools available to everyone in the corridor.



Classroom arranged for group work.



Terrarium in the classroom.



School project work exhibited in the community space.



Library room with freely movable furniture.



**The schoolyard, featuring a student garden, greenhouse, sports court, and playful planting (a spiral-shaped hedge), serves as a space for recreation, physical activity, education and play**

The greenhouse stands in the schoolyard, where the children themselves grow various vegetables and fruits, or cultivate ornamental plants used for decorating the school.



The plants arranged in a spiral shape, along with the row of trees behind them, create a setting for reflection, contemplation, and learning. These secluded, contemplative spaces are particularly beneficial for children on the autism spectrum, as well as for those with special educational needs or behavioural challenges.



The expansive garden and the sports field are not solely for the school's use; they are also accessible to the local community. The school sees itself as an integral part of its surroundings and presents itself as a kind of communal space — the only difference being that it is attended by children. Year after year, the school actively participates in organizing community life and contributes to the work of local associations and initiatives.





## Istituto Industriale Superiore Leonardo Da Vinci — Florence

The Istituto Industriale Superiore Leonardo Da Vinci in Florence<sup>34</sup> is a distinguished technical and vocational secondary school that exemplifies the integration of robust pedagogical practice with purposeful architectural design. As a flagship institution in the field of industrial and technological education, it fosters an environment where spatial organization and educational strategy work synergistically to prepare students for the complexities of contemporary industry and innovation.

The school's architectural character reflects its technical vocation: the learning environments are functionally designed yet imbued with flexibility, accommodating both traditional instruction and project-based, collaborative methodologies. Laboratories and workshops are equipped with cutting-edge educational technology and specialized industrial equipment, mirroring real-world professional contexts and thus facilitating authentic, practice-oriented learning experiences. Dedicated robotics and automation labs, for example, cultivate students' algorithmic thinking and problem-solving competencies, aligning with the principles of STEM education and fostering future-ready skills.

The interior design of the school prioritizes modularity and adaptability, with learning spaces that can be reconfigured to support group work, seminars, or individual tasks. This is complemented by a thoughtful material palette and spatial layout that ensure comfort, functionality, and a strong sense of identity, resonating with the legacy of its namesake, Leonardo da Vinci, as a symbol of innovation and interdisciplinary excellence. The furnishings and visual elements pay homage to his creative and scientific spirit, reinforcing the school's thematic coherence. Natural light, climate control, and connectivity to outdoor spaces are integral to the design, enhancing both physical well-being and cognitive performance. The school also emphasizes inclusivity in its spatial solutions, ensuring that its facilities are accessible and supportive of diverse learners, while also promoting community engagement through multipurpose spaces that serve both academic and social functions. Through this convergence of advanced educational technology, architecturally intelligent design, and a commitment to inclusive, student-centred pedagogy, the Istituto Industriale Superiore Leonardo Da Vinci stands as a model of how educational spaces can be designed and managed to inspire innovation, foster resilience, and prepare students for meaningful participation in the knowledge economy.



SCHOOL BUILDING.

Source: IAL Toscana Innovazione Apprendimento Lavoro srl. Italy Impresa Sociale

The IIS "Leonardo da Vinci" has as its fundamental mission the education of students from a human, cultural and professional point of view which is achieved through education for active, aware,

<sup>34</sup> The website of the school: <https://www.isisdavinci.edu.it/>, [YouTube](#). Old photographs about the school are available [clicking here](#).

responsible, democratic citizenship, which strengthens students' respect of oneself and others, critical and in-depth knowledge of contemporary socio-political reality, respect for the environment, the sense of belonging to the community as well as the acquisition of skills and abilities necessary to profitably enter the world of work. It is a school founded in 1865; it was the first industrial training institute in the whole Tuscany Region. The present school building was built in 1929-30, today welcomes cca. 1200 students, in various branches. In 1950 the ministry established the IPIA experimentation in ten cities and the only non-state experiment was activated at the "Leonardo da Vinci" in Florence with the specializations of electricians and radio equipment, followed by engine engineers and mechanical designers. Since then the offer of courses and courses has multiplied, reaching the current six ITI courses, 11 IPIA qualification courses, 8 IPIA post-qualification courses, in addition to the European projects and the IFTS (Higher Technical Training Institute). A piece of the history of 20th century Florence passes through the "Leonardo da Vinci": this is demonstrated by the events described, but also by the traces present on the instruments and machines self-built by students and teachers in the period between the two wars, as well as the tombstones that meet in the IPIA area, testimonies of sacrifices linked to the fight for freedom which also involved students of the school. Over the last 40 years the school has constituted, not only for the province of Florence, but also for the neighbouring ones, a **centre of notable importance both for the preparation of apprentices, specialized workers, technicians and for the training of managers and entrepreneurs**, as demonstrated by the composition of the newly formed association of our alumni. This school was also a point of reference for the education of workers in the industries of the district, for the specialization of technicians through numerous afternoon and evening courses, now no longer active, but which will soon be able to resume thanks to the new IFTS regulations. As an active community open to the territory, the Institute aims to represent an important cultural reference point, a centre of professional innovation in the field of science and technology and a training hub in line with the employment demands of the companies in the area.

### **Observations during the visit:**

#### **(1) Making the school homely:**

- various vending machines, the buffet.
- plants, flower boxes.
- the use of furniture for courtyard gatherings and gatherings.
- student lockers in the hallways.
- transforming the school library into a homely and communal space.

#### **(2) Making the school experiential:**

- the laboratory is like a 'normal' working place.
- the use of robotics, 3D printers etc.
- the museum – very interesting for the students and for external visitors

#### **(3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes, including educational technology:**

- permanent exhibition of historical – scientific instrumentation of the “Leonardo da Vinci” Industrial and Professional Technical Institute of Florence.
- the spaces for the laboratory (with robotics etc) made in 2013 by the financing of the local chamber of industry – a good example of collaboration (for the old photos see the above-mentioned site).
- the old aula for new uses.
- at first sight it is a more traditional school, also because the vocational training they offer are more “traditional” figures (mechanics, machine reparation etc). But they are very well equipped with new machines and technology, and they are using methodologies like “full immersion”, “making the training as if it was in a real enterprise” to give the best preparation to students.
- they have interesting collaborations with other actors, external to school: 1) the local chamber of industry (financing many projects in the school too), 2) with the association of former enterprise owners/directors, now retired. These former directors come to the school once each month and make a lesson with students about how to deal with an enterprise/ innovation /new market demands etc. It is an interactive way to learn from real situations, experiences

#### **(4) Multifunctional spaces:**

- laboratory – many different specialities working together.



### (3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes, including educational technology

The spaces for the laboratory (with robotics etc) made in 2013 by the financing of the local chamber of industry – a good example of collaboration (for the old photos see the above-mentioned site).



The newly designed laboratories, positioned adjacently, are thoughtfully aligned with the specific requirements of vocational education. The school's reputation extends well beyond the confines of Florence or even the Tuscany region, reflecting its broader influence and standing in the field of technical and industrial education.



The historic hall in new colours: the school's once-patinaed central atrium has been revitalized and now frequently hosts theatrical performances, professional demonstrations, exhibitions, and lectures, transforming it into a vibrant hub of cultural and educational activity.



## Istituto Tecnico Economico e Tecnologico Ludovico Einaudi — Bassano del Grappa

The Istituto Tecnico Economico e Tecnologico Ludovico Einaudi in Bassano del Grappa<sup>35</sup> stands as a prominent example of a contemporary educational institution that harmonizes advanced pedagogical approaches with thoughtfully conceived architectural spaces. As a technical and economic secondary school, it is dedicated to equipping students with the competencies and mindset needed to navigate the evolving demands of the global economy and technological innovation. Bassano del Grappa is one of the walled cities of north-eastern Veneto, and is located in an area classified as MAB Unesco, at the foot of Monte Grappa and the Asiago plateau, at the exit of the Brenta valley.

The school's architectural composition reflects its dual mission: to deliver rigorous academic and professional preparation while fostering a collaborative and inclusive learning culture. Learning environments are functionally zoned yet designed with adaptability in mind, allowing for seamless transitions between traditional instruction, cooperative learning, and individual exploration. Specialized laboratories and technology-rich classrooms are equipped with state-of-the-art tools and digital infrastructure, mirroring real-world professional settings and encouraging experiential, hands-on learning. Interior spaces emphasize transparency, natural light, and flexibility, cultivating a sense of openness and intellectual curiosity. Furniture and fittings are chosen to promote mobility and reconfiguration, supporting differentiated instruction and diverse pedagogical practices. This adaptability extends to shared community spaces, which serve as venues for exhibitions, professional demonstrations, and cultural events — reinforcing the school's role as a civic and educational landmark within the wider community. The school's design and operational ethos are grounded in inclusivity and sustainability, ensuring accessibility for all learners while integrating environmentally conscious practices. These principles are evident in both the spatial organization and the educational programming, which emphasize equity, critical thinking, and interdisciplinary connections.



SCHOOL BUILDING.  
Source: Google Maps, street view

<sup>35</sup> The website of the school: <https://www.einaudibassano.edu.it>. More presentation about the building and interior: <https://sites.google.com/einaudibassano.edu.it/einaudiformazionesteam/>



LEinaudi a beautiful school: this is the first impression you will have upon entering. Colour, furniture, accessories, tools, technology. Everything is designed to create a learning environment where you can experience the everyday life of the school day feeling welcomed and appreciated for who you are, and where learning and studying will be pleasant, even if challenging LEinaudi is a new school: it offers essential content and skills for today and for tomorrow, for your future job or for any university path you want to choose, and it does so with methodologies suited to you. As they say: "LEinaudi a school that doesn't stand still and grows together with you."

ITET Luigi Einaudi in Bassano del Grappa is an institute with a strong innovative vocation. The school is equipped with 6 computer laboratories and an atelier for multimedia and robotics. The learning environments have been set up to create co-working areas that serve as a connection between the classrooms, which for the two-year technical economic course and for the entire technological path are organized with the system of thematic classrooms. All students use BYOD. ITET Einaudi is the provincial hub school for the PNSD, adheres to Indire's Educational Avant-gardes, coordinates the Orientation project for the Territorial Network of Bassano del Grappa - Asiago, and for years has organized training especially on the topics of innovative teaching.

### **Observations during the visit:**

#### **(1) Making the school homely:**

- colourful furniture and plants.
- moods like in a living room.
- decoration of walls.
- general and colourful decoration.

#### **(2) Making the school experiential:**

- When we talk about renewal, we often think of a chase for technological innovations, and this chase will certainly give us a sense of inadequacy because innovations are too fast, we don't have time to get the interactive whiteboard, we're already at the tablets and Google classroom. So if these objects (although very innovative) are not placed in a clear context and a precise idea of school, they will be wasted. We must therefore think about broadening the horizon and thinking about innovations in collaboration with the people who are inside our school. Only in this way could we build in a synergistic way.
- as a starting point they propose a map of well-being which is divided into five themes): sharing, hospitality; support, environment and common spaces.

#### **(3) Elements, furniture, and pedagogical methods implemented for educational and instructional purposes, including educational technology:**

- Outdoor lessons possible.
- Common work for the common spaces: including students.
- Flexibility of the spaces.

#### **(4) Multifunctional spaces:**

- Common spaces everywhere and flexible rooms.
- L. Einaudi proposes: a "cluster" of classrooms.
- laboratory area.
- a corridor of languages; connected by a "hub" of free spaces (like corridors and other, inserted in this ecosystem);
- a widespread library (books scattered throughout the various areas, not all piled up in a dedicated room); in these environments' digital is "normal", we do not emphasise the use of tools and wi-fi, but we encourage all to use them for learning purposes.
- lots of greenery, plants, a wall of lichens that provides a sense of well-being and nature.
- The school is then open beyond school hours, from 7.20 AM to 7.30 PM which further creates informal learning occasions.

## (1) Making the school homely and (4) multifunctional spaces

The school library also functions as a community space: it serves simultaneously as a place for learning, acquiring knowledge, spending time together, and quiet reflection. The space is filled with natural light, the furnishings are nearly new, and everything is vibrant and colourful.



The classrooms are also simple: they are bright, spacious, and arranged in an uncomplicated layout. The walls are mostly white or painted in very light pastel tones. The furnishings support collaboration, allowing students to work face-to-face at the same table. In addition, the furniture offers flexibility, enabling the space to be reconfigured as needed.



The school canteen also serves as a hub of community life, providing a place where students can sit down and engage in conversation. The space evokes the atmosphere of an office or industrial canteen designed for adults, intentionally conveying to students that they are taken seriously as important members of the school community. At the same time, it familiarizes them with the kind of environments they are likely to encounter in real life.



The communal spaces are vibrant and colourful, with furniture in bold, lively hues. Students have access to numerous seating options, fostering opportunities for connection and social interaction. These community areas are spacious and well-maintained, encouraging students to show respect for the environment through their behaviour and to take care of the space they share.





## **GUIDELINES FOR THE ADAPTATION OF LEARNING ENVIRONMENTS**

In this chapter, we have outlined ideas and recommendations that facilitate the easier and faster adaptation of the practices observed.

### **What is adaptation?**

Adaptation never means full replication or immediate implementation. Adaptation in education refers to the deliberate process of adjusting, modifying, or contextualizing educational practices, materials, strategies, or environments to better meet the diverse needs of learners and the specific conditions of a given educational setting. Rather than being a simple replication of existing models, adaptation is an intentional, reflective act of tailoring pedagogical approaches, curricular content, and learning spaces to align with local cultures, resources, institutional goals, and student characteristics. In essence, adaptation acknowledges that educational contexts are dynamic, heterogeneous, and influenced by multiple social, cultural, economic, and individual factors.

At its core, adaptation in education is underpinned by the principle of responsiveness to diversity. Every learning community exhibits unique features — ranging from learners' cognitive profiles, linguistic backgrounds, and socio-emotional needs to infrastructural resources, technological capabilities, and cultural expectations. Therefore, adopting an external educational innovation or best practice without critical consideration of the local context often risks ineffectiveness, resistance, or unintended inequities. Adaptation mitigates these risks by fostering a process of localization: transforming externally sourced ideas into contextually relevant and meaningful practices.

Educational adaptation operates across several interrelated dimensions. One dimension is curricular adaptation, which involves adjusting content, learning objectives, or assessment methods to accommodate learners' prior knowledge, abilities, and aspirations. For example, a mathematics curriculum designed in one country may require modifications to examples, language level, or pacing to suit students in another cultural or linguistic setting. A second dimension is pedagogical adaptation, which refers to modifying teaching methods or classroom interactions to reflect students' learning styles, group dynamics, or inclusive education principles. Differentiated instruction, universal design for learning (UDL), and culturally responsive pedagogy exemplify pedagogical adaptation in action.

Another critical area of adaptation is the learning environment, which encompasses the physical and digital spaces where learning takes place. Schools or classrooms may be reconfigured — in terms of furniture, layout, or technological integration — to support collaborative learning, project-based work, or accessibility for students with disabilities. Even architectural elements, such as lighting, acoustics, and spatial flow, may be adapted to promote well-being and engagement.

Importantly, adaptation should not be understood as an uncritical or superficial modification. Effective adaptation requires a systematic approach that begins with needs analysis and stakeholder involvement. Teachers, administrators, learners, and sometimes families must participate in identifying which elements of an innovation are essential, which are negotiable, and which require transformation. This process not only ensures contextual fit but also fosters ownership, motivation, and sustainability of the change effort.

Adaptation is distinct from wholesale adoption or rigid standardization. While adoption assumes a one-size-fits-all solution, and standardization seeks uniformity, adaptation recognizes the need for flexibility, iteration, and continuous feedback. It is also not synonymous with improvisation, which can lack planning and coherence. Rather, adaptation is an intentional balancing act between fidelity to evidence-based principles and sensitivity to local realities.

In conclusion, adaptation in education is a cornerstone of equitable and effective teaching and learning. It enables educators and institutions to bridge the gap between innovation and implementation, ensuring that changes serve the learners they are intended to benefit. As such, adaptation is not merely an operational choice but a pedagogical commitment to inclusivity, relevance, and sustainability in education.

### **Managing the changing process**

Once an initial vision for transforming learning environments has been articulated — bearing in mind that this vision may evolve as school staff gain experience, reflect, and build expertise — careful and deliberate planning becomes both possible and indispensable. Planning must address all logistical aspects, resource allocations, and policy implications to create the necessary conditions for change. While it may seem self-evident, the systematic provision of resources is critical to enable

implementation and sustain momentum over time. Too often, transformation efforts have faltered because the necessary materials, time, or support were not secured at the outset, delaying progress and, in some cases, undermining the initiative altogether.

Planning should be regarded as an ongoing, iterative process rather than a single event. Much like a journey, the path may shift, new destinations may emerge, and adjustments may enhance both effectiveness and satisfaction. A plan provides a roadmap for initiating change, but it must remain flexible and responsive to evolving needs. Resource requirements, for example, often change as educators become more proficient in using innovative spaces and as the ways in which those spaces are configured place new demands on materials and support systems. Regular view on equipment and the need for updated supplies for teachers and students must also be anticipated and incorporated into the planning cycle. Beyond tangible materials and equipment, other types of resources are equally vital. Time is often overlooked yet essential — time for collaborative planning, for professional learning, for reflection and sharing among staff, and for acknowledging that achieving high levels of implementation often requires years, not months. Dedicated time for teams to discuss successes, troubleshoot challenges, and share strategies has proven invaluable in sustaining change.

Effective planning also involves defining how progress will be monitored and evaluated, establishing clear guidelines and benchmarks, and aligning or creating roles to support the implementation process. Regular and ad hoc meetings, procurement of new furniture and learning tools, allocation of spaces, and securing of financial resources must all be coordinated to ensure the envisioned learning environment can take shape and thrive.

Transforming learning environments means developing new understandings and engaging with spaces, practices, and tools in new ways. Change, therefore, is inseparable from learning: the process of professional and personal growth is both the foundation for and the outcome of meaningful transformation. Formal training, alongside other forms of professional development, is essential to preparing educators and staff to implement and sustain changes in how learning environments are used and experienced. Importantly, when change is understood as a process rather than an event, opportunities for learning must be ongoing, enabling implementers to progressively build expertise and confidence in leveraging the redesigned spaces and innovative practices.

Too often, training is concentrated at the outset of a change initiative, with little support beyond initial workshops. Yet experience shows that educators' most pressing concerns about the practical use of new environments often arise only once implementation has begun. Recognizing the *stages of concern* among staff allows leaders to design development opportunities that are aligned to these evolving needs — both during the preparation phase and throughout the implementation journey, as educators move from novices to proficient, reflective users of the new spaces and pedagogies.

Leaders overseeing the transformation of learning environments should consider a wide range of targeted interventions to support ongoing professional growth, including:

- scheduling development sessions at key stages, timed to support the progression from novice to expert use;
- engaging consultants or coaches, internal and external, to provide specialized guidance;
- offering clear information about the changes being introduced and their rationale;
- teaching practical skills and strategies specific to using the reimaged environments effectively;
- fostering positive attitudes toward the changes through dialogue and demonstration;
- organizing workshops, modelling sessions, and live demonstrations to illustrate effective use of spaces and technologies; and
- addressing and clarifying misconceptions about the purpose and potential of the new learning environments.

These interventions should be organized, intentional, and delivered through structured group learning opportunities — but always designed with the current concerns and aspirations of the staff in mind. Professional development efforts must remain clearly linked to the overarching vision for the learning environment and to the concrete realities of daily practice. When training is concerns-based and attuned to the lived experience of educators, it equips them with the knowledge, skills, and confidence to make effective, sustained use of innovative spaces.

All too often, professional learning has been unfocused and disconnected from the actual needs and questions of those expected to implement change. By centering professional development on staff concerns and the shared vision of what a transformed learning environment should achieve in practice, schools can ensure that investments in staff learning yield significant, long-term benefits — for teachers, students, and the broader educational community alike.



## Adaptability – Considering spatial manifestations of pedagogical principles

The constructivist paradigm of learning emphasizes active, learner-centred processes in which knowledge is constructed through interaction with the environment, collaboration with others, and reflection on experiences. Translating these pedagogical principles into spatial design results in learning environments that are flexible, inclusive, and responsive to students' needs and agency. Below are key pedagogical principles of constructivism and their corresponding spatial manifestations:

Principle	Spatial implication
Learning through interaction	Design open-plan classrooms and communal areas with flexible layouts that remove physical barriers and encourage communication. Include large, shared tables, movable partitions, writable walls, and spaces for group presentations to promote frequent, meaningful interaction among learners. Acoustic treatments help keep collaborative noise at a manageable level.
Learner-centeredness	Offer a range of seating options, zones, and furniture types — soft seating, high stools, individual desks, window seats — to let students choose what suits their comfort. Use modular, movable furniture to allow learners to reconfigure the space according to their own preferences and activities.
Learning as an active, constructive process	Equip spaces with makerspaces, fabrication labs, and project zones featuring workbenches, storage for tools and materials, and dedicated areas for hands-on projects. Surfaces should be durable and easy to clean, with ample display space for works-in-progress, emphasizing learning as a creative process.
Importance of students' emotional engagement and motivation	Design spaces that are visually stimulating yet not overwhelming, with warm, natural light, colourful yet harmonious palettes, and personal touches such as student artwork on display. Provide comfortable, inviting areas that feel safe and welcoming, such as soft seating clusters or cozy corners. Plants and biophilic elements enhance mood and connection to nature.
Acceptance of differences among students as natural	Apply universal design principles to ensure accessibility for all, including barrier-free circulation, adjustable-height furniture, sensory-friendly areas, and clear visual cues. Incorporate culturally responsive design elements, such as multilingual signage, diverse imagery, and flexible layouts accommodating different social and learning norms.
Scaffolding (supportive challenges) – ongoing formative assessment	Include display walls, digital screens, and pin-up areas to make learning visible and allow for feedback in real time. Design dedicated breakout rooms or quiet corners for one-on-one coaching, peer review, and formative check-ins. Provide teacher observation points without being intrusive, fostering a supportive rather than hierarchical dynamic.
Formal and informal learning settings	Complement formal classrooms with informal spaces — such as learning lounges, cafes, outdoor patios, and library corners — where spontaneous learning can happen. Ensure a seamless flow between these spaces, encouraging movement and cross-pollination of ideas between formal lessons and informal dialogue.
Innovation and experimentation	Equip classrooms and studios with highly adaptable, modular furniture on casters, movable partitions, and easily reconfigurable layouts that can support pilot projects and new teaching methods. Provide dedicated innovation labs or zones that signal freedom to try, fail, and iterate — with robust technical infrastructure to support experimentation.
Supporting the learning of the entire school community	Create multipurpose halls, atriums, and conference rooms for staff meetings, parent workshops, and community events. Provide shared staff collaboration areas and professional learning zones with writable walls, reference libraries, and flexible seating for collective planning and reflection.
Learning as structured and well-organized	Design clear zoning of functions in classrooms and buildings, with logical pathways, storage integrated into the walls or furniture, labelled supply areas, and well-defined activity zones (reading corner, project tables, teacher area). Wayfinding signage and visual cues help maintain order while enabling independence.

Below is a comprehensive list of observations and recommendations that can be effectively adapted and implemented within your organization.

We have prepared this list as a checklist for you to tick (1) all of those that you want to adapt and (2) what is the status of your improvements and mark (3) who are your collaborators and peers.

### Learning through interaction

Want	Status	Collaborators	Adaptation idea
			Use and arrangement of furniture that supports teamwork, e.g., tables of various shapes combined for group work, arranged in semicircles, U-shapes, or pushed together.
			Outdoor furniture designed for meetings and social gatherings.
			Transforming the school library into a homely, welcoming community space.
			Using corridors as informal community spaces.
			Atrium functioning as both a community and educational space.
			Time spent outside the classroom during breaks → fostering social connections.
			Creating a community and educational space next to the cafeteria, with a stage at the end.
			Professional collaborations with external partners.
			Cooperation with former entrepreneurs and business leaders who hold monthly interactive sessions with students on entrepreneurship, innovation, and market needs.
			Laboratory work involving collaboration among different disciplines.

### Learner-centeredness

Want	Status	Collaborators	Adaptation idea
			Removing the teacher's podium/desk from the classroom.
			Displaying student creations and projects on the school's interior and exterior walls.
			Showcasing photographs, projections, and documents depicting student life.
			Age-appropriate furniture, spaces, and tools for students, e.g., colourful walls, play corners, and community areas.
			Integrating digital platforms familiar to students into teaching, e.g., a dedicated YouTube channel.



### Learning as an active, constructive process

Want	Status	Collaborators	Adaptation idea
			"Full immersion" methodology: a learning experience resembling a real corporate environment.
			Laboratory functioning as a real workplace.
			Workshops equipped with tools, instruments, and manuals accessible to students.
			Use of community platforms (e.g., YouTube) for educational purposes, such as student-produced weather reports.
			Mini studio for producing school recordings.
			Classroom kitchen, school garden, and greenhouse.
			Professionally equipped workshop tailored to the specific vocation for learning purposes.
			Rolling chairs with built-in bag holders and writing surfaces, supporting greater student mobility and easy classroom reconfiguration.
			Outdoor, corridor, and community spaces designed for retreat and reading, e.g., nooks, quiet corners, and reading areas.
			Books placed accessibly in hallways.
			School library transformed into a homely, community-centred space.
			Piano placed at the entrance.
			School motto displayed at the entrance: "Epralima – My Choice!"

### Importance of students' emotional engagement and motivation

Want	Status	Collaborators	Adaptation idea
			Playful, colourful, and modular furniture (friendly, homely design with reconfigurability).
			Use of bright, bold colours in classrooms and communal areas.
			Playful wall paintings, child-friendly graphics, and cartoon characters.
			Modern art installations in larger spaces, e.g., murals in the style of Mondrian.
			Exhibition of student-created projects in the community space, e.g., a model of Mount Etna.
			Play corners and ping-pong tables.
			Decorations adapted to current events and holidays.

Want	Status	Collaborators	Adaptation idea
			Chalkboard walls for drawing and creative expression.
			Plants and flower boxes.
			Operation of terrariums and aquariums.
			Creative, playful solutions, e.g., a projector screen designed as a ship's sail.
			Various vending machines.
			Incorporation of the nook ("sut") into classroom activities.
			Display of photographs capturing school life and events.

#### Acceptance of differences among students as natural

Want	Status	Collaborators	Adaptation idea
			Wayfinding system supported by pictograms, colours, and images (clear and easy-to-understand signage).
			Posters illustrating the proper use of practical tools and equipment.
			Methodological flexibility, e.g., the ability to rearrange tables easily.
			Play corner set up within the classroom.
			Nook ("sut") padded with soft materials for comfort.
			Development rooms designed to support students with special learning needs.
			Quiet nooks for focused work, providing a calm learning environment.
			School bus service available for all students.

#### Scaffolding (supportive challenges) – ongoing formative assessment

Want	Status	Collaborators	Adaptation idea
			Score-based assessment and evaluation system developed according to unified standards.
			Well-being system that supports counselling and maintains student well-being measurements.
			Full immersion methodology: a learning experience modelled on a real corporate environment.
			Laboratory functioning as an authentic workplace.
			Workshops equipped and arranged for different professional occupations.

### Formal and informal learning settings

Want	Status	Collaborators	Adaptation idea
			Easily reconfigurable classrooms, community spaces, and atriums.
			Subject-specific rooms equipped accordingly, e.g., sports field, science classroom, music room.
			Outdoor furniture designed for learning and teaching activities.
			Library functioning as both an educational and learning space.
			Creation of reading corners, quiet nooks, and nooks ("sut") for retreat and reflection.
			Workshops and laboratories.
			Keeping the school open beyond regular teaching hours.

### Innovation and experimentation

Want	Status	Collaborators	Adaptation idea
			Advanced technological teaching tools, e.g., desktop mini robots, plotter, 3D printer, digital whiteboard, smart TV, displays, and interactive panels.
			Equipment provided for experimentation, e.g., specialized plant-growing racks and fully equipped science classroom.
			Full Wi-Fi access and Microsoft 365 suite available to both teachers and students.
			Support for digital learning, e.g., an ICT classroom equipped with desktop computers.
			Electronics laboratory where students can experiment with electronic circuits and devices.
			Mechanical laboratory providing opportunities for students to develop mechanical and technical skills.
			Microsoft Imagine Academy offering internationally recognized certification, delivering technology training and industry-relevant credentials to students.
			Laboratory spaces funded by the local Chamber of Commerce, designed to simulate real corporate environments and provide an immersive learning experience.



### Supporting the learning of the entire school community

Want	Status	Collaborators	Adaptation idea
			Providing the Microsoft 365 suite to all students and teachers.
			Permanent exhibition, e.g., of historical and scientific instruments.
			Open-door principal's office and teachers' lounge, enabling direct communication with parents, teachers, and students.
			Atrium as a space for school community collaboration, e.g., with a stage and exhibition area.
			Exhibiting collaborative projects and student work.
			Posters and banners in the hall and corridors showcasing school life, competitions, and programs.
			Educational texts displayed on walls, e.g., Italian song lyrics painted on stair risers.
			Selective waste collection implemented both inside the school and in the schoolyard.

### Learning as structured and well-organized

Want	Status	Collaborators	Adaptation idea
			Multifunctional spaces serving educational, community, and recreational purposes.
			Subject-specific rooms equipped accordingly, e.g., sports field, science classroom, music room.
			Conversion of an old classroom into a community, recreational, and educational space.
			Outdoor furniture suitable for both retreat and instructional use.
			Transformation of the old library into a reading room, educational space, and cinema room.
			Rolling chairs with bag holders and tablet arms, allowing for flexible layouts.
			Tables of various shapes and sizes adapted for teamwork and different learning modes.
			Atrium functioning as a community and educational space, also serving as a stage-equipped venue for performances and events.
			Schoolyard with garden and greenhouse.
			Multipurpose corridors designed for community building, reading, retreat, and exhibitions.

## Adaptability – Considering implementation costs

Below is a comprehensive collection presenting ideas and observations recommended for adaptation in other schools or institutions, organized according to the estimated level of investment required for full implementation. We have prepared this list as a checklist for you to tick (1) all of those that you want to adapt and (2) what is the status of your improvements and mark (3) who are your collaborators and peers.

### Easy adaptation – with low implementation costs

Want	Status	Collaborators	Adaptation idea
			Aligning basic school equipment with the school's theme, e.g., a projector screen designed to resemble a ship's sail.
			Making spaces feel homely and experiential through painted graphics and decorative wall decals.
			Student lockers in the hallways.
			Educational and inspirational inscriptions, e.g., Italian song lyrics painted on stair risers.
			An open-door principal's office to ensure students, teachers, and staff feel free to discuss matters anytime.
			Removing the traditional teacher's podium from classrooms to enhance teacher-student teamwork and collaboration.
			Improving acoustics and creating a sense of warmth through textiles, curtains, and wooden surfaces.
			Installing furniture and surfaces specifically for displaying student creations.
			Displaying student artwork throughout the school.
			Banners and projections showcasing school life, achievements, and events.
			Murals depicting graphics, drawings, anime, and storybook scenes.
			Adding flowers and indoor plants to enliven the spaces.
			Making previously decommissioned teaching aids available in common areas for everyone to use.
			Posters and inscriptions placed intentionally for teaching and educational purposes, e.g., motivational messages.
			Seasonal decorations aligned with current events and holidays.
			Displaying group projects in communal areas.
			Employing numerous subtle, creative pedagogical techniques, e.g., pictogram- and image-based timetables.
			Establishing rules that foster school life (e.g., requiring students to spend breaks in communal spaces).
			Arranging classrooms according to current pedagogical practices.
			Seasonal decorations reflecting the time of year.

Want	Status	Collaborators	Adaptation idea
			A school garden for hands-on learning.
			Educational and motivational texts and messages displayed on walls.
			Colourful, playful methods for illustrating current curriculum content.
			Operating and maintaining a classroom aquarium.
			Humorous graphics painted on furniture surfaces.
			Displaying furniture and objects made during practical lessons.
			Promoting and facilitating selective waste collection.
			Highlighting school events visually on floors and walls.
			Using community platforms such as YouTube for educational purposes.
			Motivational quotes and graphics throughout the building.
			Toys in classrooms, e.g., teddy bears or city-patterned play rugs.
			Desktop computers available in classrooms.
			Marking different functional areas with distinctive colours, e.g., one colour for practical spaces, another for communal areas.

#### Moderate adaptation – with moderate adaptation and implementation costs

Want	Status	Collaborators	Adaptation idea
			Involving professionals from different disciplines, e.g., artists, architects.
			Installing vending machines.
			Creating communal spaces furnished with homely, comfortable furniture.
			Outdoor furniture designed for gatherings and social interaction.
			Transforming the school library into a cozy, multifunctional community space.
			Placing books along hallways, complemented by reading corners.
			Outdoor furniture and equipment suitable for learning and holding lessons outside.
			Trapezoidal tables to facilitate teamwork.



Want	Status	Collaborators	Adaptation idea
			Quiet nooks designed for individual reflection and focus.
			Establishing a school garden.
			Playful planting activities in the schoolyard.
			Tables of various shapes and sizes arranged flexibly, e.g., grouped for teamwork, in semicircles, U-shapes, or aligned.
			Operating terrariums and aquariums.
			Desktop mini robots.
			Kits demonstrating various mechanical movements.
			Mobile acoustic partitions.
			Indoor play corners.
			Armchairs, chairs, benches, and cushions placed in hallways and communal areas.
			Wall surfaces designed for chalk drawing.
			Table tennis tables in community spaces.
			Playground equipment in the schoolyard.
			School stairs designed with bleacher seating.
			Creating mini gardens visible and accessible from indoors.
			Presentation tools for practical tasks, e.g., a mannequin displaying safety equipment.
			Game tables placed in communal areas.
			Operating a mini studio and school radio or podcast studio.
			Musical instruments and teaching tools in classrooms, e.g., piano, sheet music.
			Smart TVs and digital displays.
			Comprehensive use of Microsoft Office 365.
			The library serves not only as a space for borrowing and reading books but also as an educational and presentation venue, enriched with numerous instructional posters and materials.

### Difficult adaptation – with high or very high adaptation and implementation costs

Want	Status	Collaborators	Adaptation idea
			Playful, colourful murals on the school façade, incorporating various shapes and patterns.
			Room-sized projection capabilities.
			Cinema room.
			Dedicated science classroom.
			Establishment of a greenhouse.
			Creation of a school stage.
			Construction of sports fields.
			Classroom kitchen for teaching cooking and dining.
			Plotter investment.
			3D printer and laser cutters.
			Acquisition of multifunctional furniture (e.g., mobile chairs equipped with bag holders and writing surfaces, allowing for greater space efficiency and easier reconfiguration).
			Reconfiguring the function of a classroom through complete furniture replacement.
			Creation of an irregular quadrilateral-shaped space.
			Creation of openable, flexible spaces with movable walls to meet changing educational needs.
			Construction of a new school building that meets contemporary standards, approaches, and perspectives while responding to modern pedagogical needs and methods.
			Fully equipped technical classroom.
			Gym suitable for hosting sports events.
			Music room with easily movable tables and chairs, allowing it to function as an educational space, event venue, conference, or lecture hall.
			Achieving a high level of inclusion through dedicated teachers and support staff, as well as creating supportive spaces and acquiring appropriate equipment. (In addition to financial investment, the time required is also significant, as internal practices and experience must develop and be embraced by the entire teaching staff — without this, inclusion cannot be fully realized.)

Want	Status	Collaborators	Adaptation idea
			Scoring-based assessment and evaluation system built on unified standards.
			Well-being system that performs standardized measurements, facilitates counselling, and supports the maintenance of student well-being.
			Atrium designed not only as a passageway but also as a community and educational space, with a mobile stage that allows it to function easily as a venue for performances and events.
			Creation of “nooks” (quiet, intimate retreat space) in the classrooms or in the school library.

### Adaptability – Considering multifunctional spaces

Designing multifunctional spaces and integrating diverse functions is a key issue — and not only in schools where space is limited, load-bearing walls are immovable, and educators work with a wide variety of student needs. Multifunctional spaces represent the beautiful intersection of architecture and pedagogy, where a canteen can instantly transform into a theatre, and where the schoolyard becomes a natural extension of teaching and learning. Below are some ideas for designing multifunctional spaces. We have prepared this list as a checklist for you to tick (1) all of those that you want to adapt and (2) you finished the adaptation and mark (3) who are your collaborators and peers.

Want	Status	Collaborators	Adaptation idea
			Furniture facilitating the transformation of multifunctional spaces, e.g., rolling chairs, easily movable furniture, mobile acoustic elements, multifunctional furnishings, spaces that can be opened up or partitioned, movable tiered seating.
			Changing the previous function of a space, e.g., converting and renovating an old classroom or library → creating a new community, educational, recreational, or cinema space.
			Library serving as a community, educational, lecture, and exhibition space, e.g., using upholstered, colourful furniture and fittings: sofas, armchairs, floor lamps, curtains, coffee tables, designer lamps.
			Schoolyard serving as both an educational and community space, e.g., outdoor furniture and equipment suitable for learning and teaching, student gardens, greenhouse.
			Atrium serving as a community, educational, lecture, and event space, e.g., installing a stage in the atrium.
			Corridor functioning as both an exhibition and community space, e.g., displaying teaching tools or student work; incorporating elements suitable for reading or retreat.
			Educational space that includes a dedicated play area, e.g., play corner.
			Music room that can also serve as an event, conference, or lecture space, e.g., with movable tables and chairs to allow for different layouts.
			Multifunctional decorations, e.g., a projector screen designed to resemble a ship's sail, reflecting the school's theme; e.g., shading elements that double as sails on a wooden ship structure in the schoolyard.



## Adaptability – Considering social contexts

The social context of a school is an essential consideration when adopting a “whole-school concept.” The school’s environment — encompassing its social, societal, and economic circumstances, the lifestyle patterns of the local population, their socio-economic status, and even local law enforcement priorities — provides indispensable insights into who the students are, what expectations the surrounding community places on the school, and how the school is embedded in its broader social context. This social context is deeply rooted in the culture and national character of a given country, and in this respect the three countries studied differ significantly — perhaps this is the single most prominent dimension in which country-specific characteristics become evident. In southern European countries — such as Italy, Portugal, and indeed Spain as well — the school’s social context and its coexistence with its local environment appear much closer and more intertwined. Our observations revealed that schools in these countries are far more open to collaborating with their communities, often keeping their doors open after school hours so that residents can make use of the facilities. What is certain is that teachers and school leaders in these contexts are deeply involved in local public affairs, drawing information, energy, and inspiration from their community engagement while at the same time contributing to and supporting local life.

We have prepared this list below as a checklist for you to tick (1) all of those that you want to adapt and (2) you finished the adaptation and mark (3) who are your collaborators and peers.

Want	Status	Collaborators	Adaptation idea
			Creation of community spaces with <ul style="list-style-type: none"> <li>• Elements that create a homely atmosphere, e.g.: pleasant colours and materials, sofas, armchairs, floor lamps, coffee tables, designer lamps, poufs and beanbags of various shapes and colours, playful furniture elements, curtains, cushions, rugs, wall decorations, murals, decals (with age-appropriate themes and humour), writable wall surfaces, games, e.g., ping-pong table, air hockey table, foosball table, billiards table, plants, quiet nooks for reflection.</li> <li>• Multifunctional spaces also functioning as community spaces, e.g.: library, atrium, old classroom, schoolyard, corridors.</li> </ul>
			Furniture supporting collaboration, e.g.: trapezoidal tables for teamwork, removal of the teacher’s podium to enhance teacher–student collaboration, rolling chairs with integrated bag holders and tablet arms, providing more space and easier reconfiguration.
			Open, accessible meeting spaces, e.g.: open teachers’ lounge, allowing parents and students to approach teachers at any time.
			Representation of the school’s culture and theme within the building, e.g.: nautical theme integrated into the design.
			Display of community-created elements in the interior spaces, e.g.: children’s artwork on walls, columns, and in both interior and exterior spaces, photos of students; visual displays of school life events
			Written display of community rules in the interior spaces.
			Announcements and photo displays of events relevant to the school community.
			School community presence on online platforms, e.g.: dedicated school YouTube channel.
			School bus providing safe, communal travel for students.

## SUMMARY

**We have been on an incredible journey — together with you, the Reader of this Booklet. We are truly glad you joined us.**

We hope you will return to this booklet often and share with others the approach we followed throughout our observations. This publication — rich with experiences, research insights, and a collaborative methodology of discovery — highlights what is possible when experts committed to progressive thinking in education, design, and community come together.

We understand schools, teaching, and learning evolve slowly — often across generations. And yet, generations themselves are changing faster than ever. **Now, it is clear: modern pedagogy has lost its way with frontal, lecture-based teaching, where the only way to check the material is through frontal or summative questioning, citing what has learnt and being passive in the classroom.** For the purpose of the professionalisation of learning spaces (classrooms) 100-150 years ago, the eradication of illiteracy, these methods were up to the task. Today, however, new aspects are added to the purpose of education, such as education to become a man and a citizen, and integration into work and society.

One group of modern pedagogical methodologies complements these "classical" tools with other techniques and methodologies and tries to give less and less emphasis to the old methods; the other group rejects the old practices at all levels and puts the whole of education on a new basis. The vast majority of modern methodologies emphasise the experience of learning together, the importance of teamwork; a project-based approach; a practice and experience-based approach; evaluation through experiences, products and reports in a formative way; teaching the use of modern technologies and their integration into teaching. In addition, different pedagogical methods are used, depending on which technique best contributes to the acquisition of the knowledge to be acquired.

Practices and techniques are expected to make more use of the available spaces in teaching, e.g. the teacher using the classroom as a presentation tool or scale. The concept of school spaces built on a row of classrooms attached to a side corridor or a central corridor also needs to be reviewed, as this design is entirely geared towards frontal and controlled education. **There is a need for communal, supplementary, separable and open spaces that can be used flexibly, even by several classes at the same time. Pedagogical methods are changing on an ever-increasing scale and are becoming more diverse, with students and teachers using more and more varied methods and tools to acquire and share knowledge. School spaces should try to reflect this, with flexible, easily adaptable spaces and furniture.**

It is worth involving school management, representatives of the school's management and teaching staff in the design process, so that space relationships can be created that are better suited to their pedagogical methods and tools (e.g. which spaces should be openable and separable, which functions should be in the classroom and which in the lobby, hall, what kind of community spaces are needed, transparency, etc.). It is also important to recognise that education does not only take place within the building, so in addition to the internal spaces, great emphasis should also be placed on the external spaces, the schoolyard and its relationship with the city and the environment, paying attention to economy, existing fabric and structural options.

In this booklet, we introduced the reader to 12 schools across three countries, with the clear and intentional aim of learning together from these institutions. Some of the schools featured are equipped with cutting-edge technology and were developed through robust architectural programmes — yet many of them still feel "too new," not quite lived-in, not yet human enough in atmosphere and everyday use. Other schools, by contrast, may lack optimal technical or material conditions, yet they excel in fostering inclusive education, compassionate attitudes, and a genuine openness to the world around them. What we saw again and again is how much difference it makes when a school leader creates a strong and supportive culture, when teachers are deeply committed to their students, their environment, and their profession.

Educational architects often say that changing physical space is hard — knocking down walls, creating new rooms, reconfiguring old buildings is slow, expensive, and complicated. And they are right: school infrastructure evolves over decades. But what we also discovered is this: the success of learning environments depends not only on architecture, but primarily on how spaces are used — by whom, with what mindset, and through what methods.

**As we move into the next chapter of our mutual learning journey, it is precisely this question we wish to explore: how educational spaces come to life through practice, people and purpose.**

**We do hope, you are going to join us!**

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