



# Designing for Children

- With focus on 'Play + Learn'

## From past heritage to innovation in architecture for Nursery and Kindergarten in the Italian experience

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**Abstract:** This work aims at highlighting the reasons of the relevance of the Italian contribution in contemporary design innovation for nurseries and kindergartens, whose main and best known result is the definition of the “piazza” (Emilia Romagna regional research) i.e. a core space for a comprehensive pedagogical experience, from play to learning. The study intends to enlarge this perspective by looking at those Italian examples, whose topics are supposed to have been a possible reference for the most recent applications, such as the nursery in Como by Terragni, the nursery in Ivrea by Figini and Pollini, the neorealistic version of schools for infancy proposed by Ridolfi in the second post-war period, until the prefab models of schools developed by Luigi Pellegrin. The final issue is a critical proposal aimed at focussing on the peculiar features of this excellence production, in order to overview possible suggestions for an innovative contemporary approach to nursery and kindergarten design.

**Key words:** *architecture for children, education, historical heritage, innovation.*

### 1. Introduction

The work is based on a research currently developed by the authors on the architecture of nurseries and kindergartens. Among the themes that have been identified, the Italian contribution to innovation in this field has been one of the main subjects, mainly due to the international fame gained by some of the experiences made in our country, such as the ones of Emilia Romagna and, most recently, of Lazio, with its requalification program “Meno è più”. Introducing some possible new points of view for looking at the historical panorama of Italian architecture, the section of the research here presented comes to a critical proposition, for a clearer and most sincere lecture of past and present Italian innovation in educational space for early year children.

## **2. Method**

The main question that has been dealt with is the origin of the recognized excellence of actual Italian contribution. The hypothesis was, in fact, that, since the earlier modern realizations, Italian research has revealed an appreciable interest, thanks to the talent of great architects.

Therefore, the questions have been the following: to what extent the second post-war architectural production in this field has been influenced by that first season and what is its contribution to the subsequent research? In this case the idea was that it could be possible to recognize a continuity line between these two moments, in spite of the quite different stylistic results produced.

Just starting from this reflection, two further questions have been the following: which topics could we extract from the whole Italian production for early years children education buildings? And how can these topics contribute to future innovative research in this field?

Starting from these hypotheses, and from the necessary, wide knowledge of contemporary international architectural and theoretical production, an historical and critical recognition has been subsequently carried out. The sources consulted in this work have been the following: the original projects; the critical literature of the period on the buildings and their authors; the typological studies; the critical contribution of sociologists and pedagogues.

## **3. Innovation+play+learn. A lesson from the past**

### **3.1 Individualisms**

The Italian heritage in construction of nurseries and kindergartens, shaped from 1930s to 1970s, is the result of poetic trajectories, of technical research and wide urban visions. But, with reference to the arising and prevalent architectural issues, is the overall personality of each single author to initiate design themes, that becomes gradually peculiar in the Italian tradition. So if on one hand we have the precise but controversial coordinated program of the O.N.M.I houses (The National Opera for Infancy and Mother custody, not so advanced from a pedagogical point of view) (Carbonara, 1958), on the other hand we have some really interesting single examples that, nevertheless, reveal the common presence of some topics.

### 3.2 Topics from the past

The strength and thickness of architectural topics, introduced by personalities such as Ridolfi, Terragni, Figini and Pollini like emerging themes from past, was open, and still is, towards new design categories that we can summarize by operating an interpretation of masterpieces.

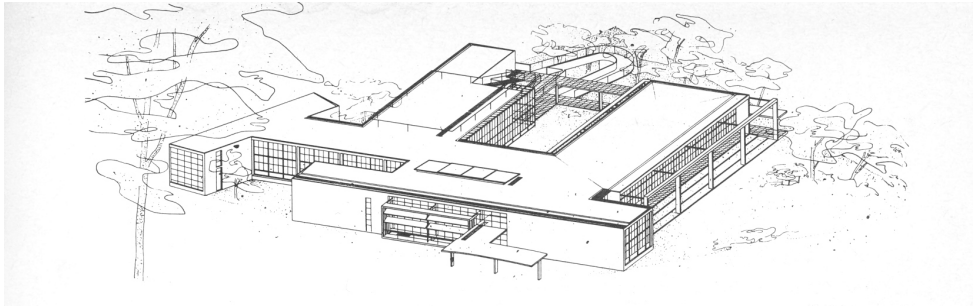


Figure.1 Terragni, Kindergarten S'Elia in Como, 1936

The nursery Sant'Elia in Como by Giuseppe Terragni is the aged case (Zevi, 1987). Built in 1937, it proposes the theme of a “rich” relation between indoor and outdoor spaces. With its dilatation of common spaces and its 3-dimensional sheathing, it shows the continued architectural discourse with the external margin. Space here is eloquent and full of light, the idea of traditional educational environments joins a rarefied and abstract vision of playgrounds. If the classrooms are divided and sorted, the common areas are large and free. If the way to “learn” is clear and orderly, the way to “play” is open to the possibility of arranging and disposing space.

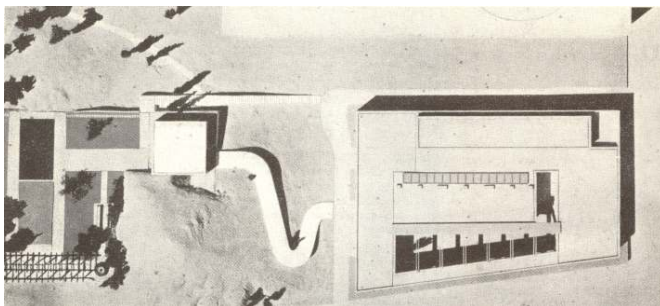


Figure.2 Figini and Pollini, Nursery Olivetti in Ivrea, 1941

The nursery Olivetti of Ivrea, drawn by Figini and Pollini and developed in 1941 (Savi, 1990), proposes an exceptional interpretation of the pedagogical space thanks to the introduction of a “thick wall” absorbing a thin and stretched open space, that is - however

- limited and secure. Starting from this space a long open-air promenade leads to a detached pavilion that induces the exploration of space around and the natural world (Mantero, 1984).



Figure.3 Ridolfi, Nursery and Kindergarten Olivetti in Ivrea, 1966

The examples of Mario Ridolfi: the Nursery Olivetti of Ivrea (Canton Vesco) and the nursery of Poggibonsi (Palmieri, 1997), while expressing a strong sense of adhesion towards the craft of the Italian tradition, propose powerful themes of innovation in the Italian panorama. The first example with its articulated plan, is made up of little and low volumes that refer to the idea of a little and porous urban space. Moreover the series of minute shelters on the roof and of terraces introduces the figurative theme of a landscape of fable in which small enclosed space and little open-air areas alternate.



Figure.4 Ridolfi, Kindergarten in Poggibonsi, 1961

Such a rich architectural and pedagogical language is similarly found in the infancy school of Poggibonsi, that is made up of little pavilions connected around a large quadrangular common area (Bellini, 1993). Also in this case, the building makes reference to the themes of rural architecture, but the language is well far from being vernacular, it is rather playful and evocative. The spaces are measured for children, in the large rustic glass the little users can find low opaque glasses that become translucent in the top. The idea is to interpret the relation with outside with perception games.

### 3.3 Rediscovering prefabrication

In the sixties and the seventies, during the period of increasing interest for prefabrication shared by many European countries, Italy offered an important contribution to the research in this field throughout intensive works on norms and typologies developed by Centro Studi of the Italian Ministry of Education. The relevance of this input to innovation has been clearly demonstrated by the production of a really interesting prototype of school for infancy, designed by Luigi Pellegrin, and realized in more than one situation (Panizza, 1985). The traditional prefabrication approach, starting from volumes shaped according to modular assembly elements, is substituted by a flexible system, whose main architectural character is an horizontal roof with three-dimensional beams, covering and enlightening internal and external surfaces (Leschiutta, 2004) also from the top. The result is an open plan organised in different zones, separated by sandwich walls or delineated by floor patterns and furniture design.

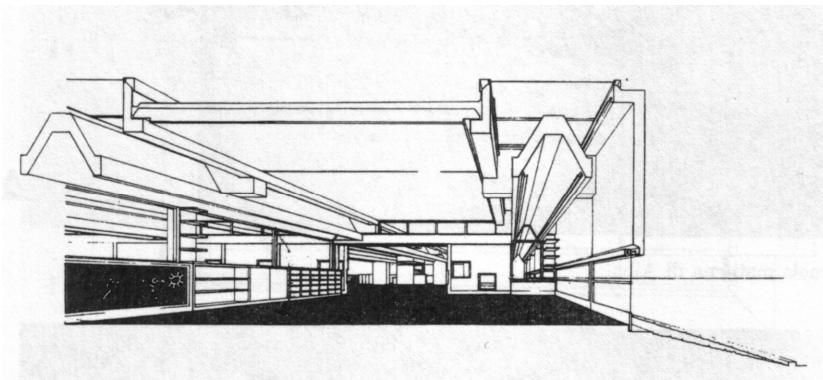


Figure.5 Pellegrin, School for infancy prototype

However, despite the overlapping between quality of space and flexibility, as for architectural quality things are different. The evidence of its character, nevertheless, does not allow flexible solutions in the relationship with the different sites.

Due to their general rigidity, prefabricated technologies have been subsequently largely abandoned; in the meanwhile, building processes have turned towards computer guided production. That is the reason why the current revival of some pre-fab building models seems to arise certain interest. Once more, the Italian contribution is appreciable, and paves the way towards some new potential options: a new interest for wood as an ecologic material; a new attention to the pedagogical impact of the physical materiality of architectural space; the consequent new consciousness of the educational message

originating from a more ecological design approach; a renewed interest for a light way and impact of building construction.

Once again, one of the most complete approaches is the one of Emilia Romagna, as in the case of the Tetrapack nursery (Arian, 2006).



Figure.6 ZPZ, Tetrapack nursery in Modena, 2005

#### **4. Innovation+play+learn. Topic for the future**

##### **4.1 Common and Core space for play + learn**

In contemporary interpretation of common and core spaces, the Italian contribution is wide and multiple with examples originating from the well known experience in the construction of early education buildings developed by Emilia Romagna. The theme of central common space, as a field of educational experimentation, in these cases is related to a pedagogical vision of space, based on the ideas of educator Loris Malaguzzi. In this example, the Italian experience, stemming from two areas of opposing interests, i.e. design and pedagogy, makes reference to a single theme: the introduction of a common central space in relation with classrooms and outdoor areas as a quality parameter of space.

As anticipated in Terragni's vision, through its double internal and external wide common space, the idea of a central "square" makes reference to the concept of Italian urban "piazza" that has become a significant part of the current Program Reggio Children (Dudek, 2007). In this wide program which includes the construction and improvement of more than 150 buildings, the central space is essential for child learning education and not

only for his care and play. These areas of aggregation must be multiple with large open spaces and small niches; the idea is to induce the child to discover (the different characteristics of space) (Tizard, 1976). This contemporary theme presented as a quality parameter emerges from the idea proposed by Figini and Pollini in the nursery of Ivrea, in which the “thick wall” is a thin and stretched space crossing the large central area leading to open-air areas which has a small lateral cavity dug in the enclosed volume. Here a single complex space contains several ways to discover together the open-air space.

#### **4.2 “Relationship”, “Osmosis”, “Community”, “Rich normality”, “Polysensoriality”**

Among the outputs of the program of Reggio Children, one of the most interesting is the theoretical attempt to come to a possible definition of the qualities required to a space for infancy (Ceppi, 1998). The objective of creating a world in a smaller scale, but in relationship with external world, finds an extraordinary support in the conceptual notions so described. The sensorial perception is the main key to this approach. Soft complexity, relationship, osmosis, polysensoriality, community, rich normality, constructive capacity, epigenesis, and narration are the conceptual categories explaining the ideal qualities of infancy space; they are directly extracted from nursery and kindergarten and built within the Reggio children program.

Even in this case, however, we find a significant anticipation of these themes in the historical examples previously described. If visual perception is one of the most eloquent aims in the spatial conception of the buildings developed both by Terragni and by Figini and Pollini, the tactile experience belongs to the Ridolfi program in the materials’ choice.

#### **4.3 The care of furniture**

Extreme care for the furnishings is one of the results achieved by Terragni and Ridolfi in their elegant solutions.



Figure.7 Terragni, Furniture for S'Elia nursery

These works anticipate today's design teams specializing in the manufacture of furniture, like ZPZ architects, who focus on the quality of interior spaces for infancy school. Main guidelines are today oriented towards sensory qualities, employing the use of opposites: soft-crushproof, neutral-colourful, small-large. Furniture aim at generating landscapes of imagination to recreate the child, and enhance spatial differences. We can find an anticipation of the same themes in the rich work by Ridolfi in the nursery Olivetti in Ivrea. The whole building is organized with surfaces like fine lace with changing textures, rough or smooth, that express a rooting towards the tactile and sensory world.



Figure.8 ZPZ, Furniture for Tetrapack nursery



## 5. Conclusions

The critical proposal herein presented, demonstrates a long life interest of the Italian production in early years education architecture. Looking at the high quality of this production, we can affirm that an overview to innovation was present in any epoch, even in a country where XX century architecture has suffered from an ambiguous relationship with the traditional approach to building construction.

The rich heritage of Italian masterpieces, introduce new architectural themes in early education buildings; these themes are still strong and powerful, as demonstrated by the most significant and recent constructing program. The pedagogical role of common space for learning and playing, the attention to the materiality of space and to the perceptual aspects, the integrated design of furniture, a new vision of prefabrication, represent now the conceptual basis for the construction of new buildings. Moreover, the consolidated attitude to a programmatic approach, still now suggests a successful way for organizing the architectural research in architecture for children early education, which found a current demonstration in the Lazio region program, with its own further contribution to innovation (landscape approach, as well as the programmatical involvement of pedagogues and artists) (AA.VV., 2006).

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