

1. Record Nr.	UNINA9910366609903321
Autore	Della Torre Stefano
Titolo	Buildings for Education [[electronic resource]] : A Multidisciplinary Overview of The Design of School Buildings // edited by Stefano Della Torre, Massimiliano Bocciarelli, Laura Daglio, Raffaella Neri
Pubbl/distr/stampa	Cham, : Springer Nature, 2020 Cham : , : Springer International Publishing : , : Imprint : Springer, , 2020
ISBN	3-030-33687-5
Edizione	[1st ed. 2020.]
Descrizione fisica	1 online resource (xvii, 326 pages) : illustrations (some color)
Collana	Research for Development, , 2198-7300
Disciplina	690
Soggetti	Buildings—Design and construction Building Construction Engineering, Architectural Energy efficiency Building materials Materials science Schools Building Construction and Design Energy Efficiency Building Materials Characterization and Evaluation of Materials Schools and Schooling
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Nota di bibliografia	Includes bibliographical references.
Nota di contenuto	PART 1: THE URBAN AND SOCIAL ROLE OF SCHOOL BUILDINGS, The open-air school typology in the Milanese experience: the Trotter and the Rinnovata Pizzigoni -- The topic of the school in the Milanese Professionalism -- Space and figuration of the school building in the construction of the metropolitan periphery: the school as a for social emancipation workshop -- Imagining the School of the future -- Modernist schools in the new rural landscape of the Pontine Plain --

Rural and urban schools: Northern Greece in the interwar period -- The schools as heritage and a tool for political and cultural integration. The buildings of the Plan de edificación escolar in Buenos Aires -- Origins and development of the American Campus: the "Academical Village" of Thomas Jefferson -- Bovisa: a Park for Work and Research -- The city's New Road. The fundamental role of nature in urban transformation processes -- The quality of the project and the MIUR standards for the control and funding of the buildings for education and training -- The scholastic typology in post-earthquake reconstruction in Central Italy -- Design for schools -- PART 2: THE PATHS TO INNOVATION: TOOLS MODELS AND PROCESSES, A BIM-based process from building design to construction: a case study, the school of Melzo -- A collaborative approach for AEC industry digital transformation: a case study, the school of Liscate -- Use of predictive analyses for BIM-based space quality optimization: a case study, progetto Iscol -- The technical-scientific support for the reconstruction of school buildings involved in seismic events. The case of the Technological State Institute "E. Divini" in San Severino Marche -- "A factory for the future". Inveruno New School -- Field of education and "corpus socialis" -- Space-Places and the Third Teacher. The Issue of Architectural Space in the Age of Knowledge Cities and Schools 3.0 -- PART 3: MANAGEMENT, TRANSFORMATION AND ENHANCEMENT OF THE BUILT HERITAGE, The school building surveying: a support tool for School Building Registry Office -- Extension for the Accademia di Brera at the Farini Marshalling Yard in Milan. The architecture of the campus and spaces for teaching -- Camillo Boito's "Capannone" for the Accademia di Brera in Milan. Reuse of a railway depot -- A university campus for medical disciplines for the redevelopment of the Guglielmo da Saliceto Hospital in Piacenza -- Application of externally bonded fabric reinforced cementitious matrix to existing masonry and concrete structures -- Strengthening of different types of slabs with composite reinforced mortars (CRM) -- Energy Retrofit Potential evaluation. The Regione Lombardia school building asset -- Energy and environmental retrofit of existing school buildings: potentials and limits in the large scale planning.

Sommario/riassunto

This open access book presents theoretical and practical research relating to the vast, publicly financed program for the construction of new schools and the reorganization of existing educational buildings in Italy. This transformative process aims to give old buildings a fresh identity, to ensure that facilities are compliant with the new educational and teaching models, and to improve both energy efficiency and structural safety with respect to seismic activity. The book is divided into three sections, the first of which focuses on the social role of the school as a civic building that can serve the needs of the community. Innovations in both design and construction processes are then analyzed, paying special attention to the Building Information Modeling (BIM) strategy as a tool for the integration of different disciplines. The final section is devoted to the built heritage and tools, technologies, and approaches for the upgrading of existing buildings so that they meet the new regulations on building performance. The book will be of interest to all who wish to learn about the latest insights into the challenges posed by, and the opportunities afforded by, a comprehensive school building and renovation program.
