



This book is provided in digital form with the permission of the rightsholder as part of a Google project to make the world's books discoverable online.

The rightsholder has graciously given you the freedom to download all pages of this book. No additional commercial or other uses have been granted.

Please note that all copyrights remain reserved.

About Google Books

Google's mission is to organize the world's information and to make it universally accessible and useful. Google Books helps readers discover the world's books while helping authors and publishers reach new audiences. You can search through the full text of this book on the web at <http://books.google.com/>

Camilla Casonato
Marco Vedoà
Gloria Cossa

DISCOVERING THE EVERYDAY LANDSCAPE

A cultural heritage education project
in the urban periphery



ISBN 978-88-6242-794-4

First english edition October 2022

First italian edition October 2021

© LetteraVentidue Edizioni

© Camilla Casonato, Marco Vedoà, Gloria Cossa

No part of this book may be reproduced or transmitted in any form or by any means, including photocopying, even for internal or educational use. Italian legislation allows reproduction for personal use only, provided it does not disadvantage the author. Therefore, reproduction is illegal when it replaces the actual purchase of a book as it threatens the survival of a way of transmitting knowledge. Photocopying a book, providing the means to photocopy, or facilitating this practice by any means is similar to committing theft and damaging culture.

If mistakes or omissions have been made concerning the copyrights of the illustrations, we will gladly make a correction in the next reprint.

Book design: Gaetano Salemi

Cover design: Gloria Cossa

LetteraVentidue Edizioni Srl

via Luigi Spagna, 50P

96100 Siracusa, Italy

www.letteraventidue.com

Camilla Casonato
Marco Vedoà
Gloria Cossa

DISCOVERING THE EVERYDAY LANDSCAPE

A cultural heritage education project
in the urban periphery

The contents of this book have been in part discussed at conferences or in publications produced during the research in order to disseminate the results. Therefore, the volume extends, elaborates, and deepens the reflections made during the research, integrating them into a broader and more unified discourse. The essays previously published on the partial results of the study are indicated in detail in chapter five and appear in the general bibliography of the book.

The text is the result of a joint work and its contents are shared by the three authors. Within the book, specifically, the first chapter "Heritage Education in the Everyday Landscape", the second "The School Activates Resources Project" and the fifth "The ScAR Model" were written by Camilla Casonato; the third chapter "Activities Aimed at Understanding and Interpreting" was written by Gloria Cossa, and the fourth chapter "Technologies to Read and Communicate" was written by Marco Vedoà. The "Introduction" and the "Final Considerations" are instead common to the three authors.

The authors translated the foreign language citations into English.

The images contained in the volume, unless otherwise specified, were produced by the research team of the Scuola Attiva Risorse project.
Illustrations and graphics by Gloria Cossa.

The sites and web links reported were last visited in June 2021.

CONTENTS

8 Presentations

by Elisabetta Borgia, Marina Di Berardo, Susanna Occorsio

by Laura Galimberti

10 Preface

by Gabriele Pasqui

12 Introduction

CHAPTER 1

17 Heritage Education in the Everyday Landscape

17 European guidelines

Heritage education

Heritage, landscape and the right to cultural inheritance

Education *through* heritage

Training young citizens in a multicultural society

Strategies for the 21st century: heritage and community

29 The Italian situation

Regulatory background

National Plans for Cultural Heritage Education

Landscape education

Scenarios and prospects, the role of schools

CHAPTER 2

45 The School Activates Resources Project

45 School Activates Resources (ScAR)

Project objectives

Peripheries, rich and fragile areas

A complex network of stakeholders: schools, universities, institutions, foundations, museums...

- 69 Towards the construction of a methodology**
Design and co-design
Training teachers
Pilot actions and open activities
Teaching paradigms
From primary schools to university courses (and back)
Alternating school and work

CHAPTER 3

91 Activities Aimed at Understanding and Interpreting

- 91 Discovering the city**
Travelling through the neighbourhoods
Video interviews with experts
Depicting the heritage and the landscape through drawing
Reading the landscape from the towers of the contemporary city
Drawing mental maps
- 109 Rewriting spaces**
“Constructing” the city: from map to maquette
Redesigning neighbourhoods: micro urban regeneration projects

CHAPTER 4

125 Technologies to Interpret and Communicate

- 125 Supporting processes**
Digital tools as a means of starting down a path
ICTs for bottom-up pathways of learning
- 129 Sharing representations**
Building narratives: digital storytelling and map storytelling
Constructing virtual tours of the neighbourhoods
Exchange via social networks

140	Offering tools to the community
	Playing and engaging others: landscape gamification
	Creating interactive guides for curious tourists
	Sharing reflections, products, methodologies: the digital atlas of memories

CHAPTER 5

157	The ScAR Model
------------	-----------------------

157	Actions for sharing
	Communicate and spread knowledge
	Schools as stakeholders in sharing: events
	From the school to the international scientific community
	Events to dialogue with the city and the institutions
	Exhibitions

171	An ongoing experience
	Digital collections, narrations and projects
	ScAR in Italian Regions and South America

183	The participants' perspective.
	Understanding the impact of the project

209	Final Considerations
------------	-----------------------------

218	References
------------	-------------------

228	Appendix
------------	-----------------

235	Acknowledgments
------------	------------------------

The research project entitled “*Scuola Attiva Risorse (ScAR). Ricucire il patrimonio disperso delle periferie*” [“School Activates Resources: Mending the Dispersed Heritage of the Peripheries”], the results of which this text aims to summarise, is configured based on a pathway of learning that is fully in line with the frameworks of the last National Plan for Heritage Education and the contribution of the Centre for Educational Services, which operates under the Directorate-General for Education, Research and Cultural Institutions of the Ministry of Culture. The goals of the project have also proven – in no small part thanks to the significant involvement of a sizeable and heterogeneous group of partners – to be particularly functional in their inclusion of issues and phenomena currently at the forefront of heritage education, both with respect to the variety of social contexts and possible addressees in their relationship with the ‘cultural landscapes’ of everyday life, and with respect to the use of different comparisons and methodologies to offer new spaces of representation for narratives and creative productions, particularly with regard to younger people. In much the same vein, for years the Centre has, in accordance with institutional guidelines, been contributing to fostering the growth of a shared, participatory educational system aimed at all kinds of audiences – capable of responding to instances of active citizenship, interculturalism, lifelong learning and universal accessibility – whilst also supporting the Directorate-General with its coordination of the system of local educational services and, on an annual basis, promoting the National Educational Offer established by the department. Based on these premises and a fruitful and harmonious shared vision, we believe that the research carried out constitutes a useful jumping-off point for wider reflections on future scenarios and on the impacts generated by the learning methods tested, with a view to raising the profile of practices such as active citizenship, participation and awareness of the common right to access and safeguard the habitats and elements of cultural heritage to which people belong.

Elisabetta Borgia, Marina Di Berardo, Susanna Occorsio
Centro per i servizi educativi – Servizio I, Ufficio studi
Direzione generale educazione, ricerca e istituti culturali
Ministero della Cultura*

*Centre for Educational Services of the Italian Ministry of Culture

"Scuola Attiva Risorse" is a multidisciplinary project aimed at young people and that, also for this reason, we have followed with great attention in recent years. The landscape is the environment in which we live and of which we risk neglecting the memory, losing the knowledge of places and people. Especially in a time of continuous change, curiosity can be stimulated, and discovery always gives great satisfaction. It builds a method, competence and a careful look at what surrounds us. Every district of Milan reserves surprises and richness for those who know how to explore it, in the centre as in the peripheries.

Walking, mapping, drawing, rereading, interviewing... these are the tools of an innovative didactic, which uses digital, video and technology alongside the pencil and pen, in a mix of different ages that meet and distant cultures that become close. In short, the school that we like: open to the territory and soul of the neighbourhoods, a place to be educated to a responsible and active citizenship. A school that knows how to enhance its heritage and community, building real territorial pacts.

An almost prophetic project at a time when everyday life is organized closer and closer to home. At 15 minutes we want to find services, but also history, discoveries and stimuli. We want to find beauty and learn to recognize it. Moreover, the gaze can be educated. A project that we would really like to involve the whole city, starting from schools.

Laura Galimberti

Assessore all'Educazione e Istruzione del Comune di Milano
Councillor for Education, Municipality of Milan

PREFACE

Never before has it been so clear that education, training and schools are a crucial part of any strategy that truly intends to address the issue of the urban peripheries and the concerning growth of social and spatial inequalities in our cities.

The *annus horribilis* that separates us from the start of the pandemic (I am writing in April 2021) has thrown into sharp relief that the effects of the COVID-19 epidemic are felt in a particular way – often even more dramatic than elsewhere – in our peripheral areas. First of all, because these urban peripheries are home to a significant segment of the fragile population, with many having lost an already precarious job, now at risk of falling prey to structural unemployment. For obvious reasons, precarious and undeclared employment is the first victim of the current crisis, and for individuals and families, losing a job – however unstable it may be – is often responsible for triggering a vicious cycle which will usually affect their housing situation later on. The other dimension in which the difference between richer areas and peripheral or marginal areas has already become tragically clear is, as explored here, that of schooling. The drastic transition to distance learning proved a much less simple task in schools – especially primary and lower secondary schools – where the levels of social and cultural capital, but also the standards of basic technological equipment, were lower. Consider, for example, foreign children and teenagers who had recently arrived in Italy and who do not speak the language well, or families unable to guarantee sufficient coverage in terms of connectivity for the few devices in their possession; what's more, schools with extremely limited technological equipment have already faced a great deal of backlash in terms of an increase in school dropouts, difficulties catching up for students who were unable to keep up with remote learning activities, and further ghettoisation of school complexes.

It is precisely these sorts of problems that reveal the potential and richness of the work behind the research action presented in this book. Though this work began before the outbreak of the pandemic, in the framework of the activities of the Polisocial Awards competition dedicated to the peripheries, launched by the Politecnico di Milano, it shows further potential for development in light of the difficult situation that we are now in.

The first pieces of the project – “ScAR – Scuola Attiva Risorse”, coordinated by Camilla Casonato and developed by an interdisciplinary team – were put together by connecting three different dimensions: the recognition of how the students experience their space on a daily basis as a key to exploring and discovering living situations and landscapes in the urban peripheries; the activation of multi-actor networks as a condition for the development of educational projects involving both

schools and local areas; and the use of ICTs to interpret, communicate and support processes of exploration, learning and socialisation. The “ScAR model” which was the ultimate product of the project – based on some incredibly vibrant interaction with figures from both the schools and the local areas, including certain private actors – offers a tool suitable for use in a wide variety of contexts, an experimental path capable of consolidating processes that are often already underway with a view to the mutual fertilisation between schools and local areas in some of the most fragile parts of our cities.

The crucial idea of the project, which is perfectly conveyed in this volume, is that the exploration and mapping work carried out by the students can offer a solid contribution to the familiarisation, promotion and communication of a cultural heritage and landscape that is widespread throughout our peripheral areas, but at the same time provide an important platform for the dialogue between schools and local areas, between institutions and society, between one generation and another.

With this in mind, this book offers usable tools and knowledge in which a combination of experimental teaching, the use of innovative technologies, and co-design can offer an opportunity for both collective learning and combating the processes of marginalisation and stigmatisation that weigh heavily on certain areas of the city which are already suffering with processes of deterioration.

Recognizing the value and beauty of our daily life place, especially for children, is in fact an opportunity to learn to aspire, to think concretely about how to improve their own environment, inside and outside the school borders.

In this perspective, in which schools become “actors of the sharing”, the ScAR project and this book that tells its story can become a piece of a renewed pact between schools and their living environments, contributing effectively to produce common goods, urban quality and knowledge to strengthen our peripheral areas and avoid the risks of a society, and a city, increasingly polarized and unequal.

Gabriele Pasqui

Scientific Coordinator of the Project Department of Excellence
“Territorial Fragilities” Department of Architecture and Urban Studies,
Politecnico di Milano

INTRODUCTION

Due to its transdisciplinary and multicultural nature, heritage education has long been acknowledged at the European level as a crucial vehicle for training young people to engage in active, responsible citizenship, in part by protecting commons. There is a renewed focus on the issue at the national level, as evidenced by the emergence, in recent years, of *Piano nazionale per l'educazione al patrimonio culturale* [National Plans for Cultural Heritage Education], as well as by the development of a reflection on possible training scenarios and the manifold implications of effective educational actions conducted *on* and *through* cultural heritage. Providing an effective response to the demands made by both the legislation and the scientific community on civil society, and in particular on the world of education, is an issue that opens up a whole host of questions. What do we mean by cultural heritage and landscape when operating in educational contexts? What does it mean to educate young people about heritage when attempting to undertake a systematic, structural approach that includes all areas of the country? What role should schools play in this process, in their capacity as our main educational agencies and the crucial hub for moulding tomorrow's citizens? Are schools ready to take on this new responsibility? These are just some of the fundamental questions raised, though there are many others, all no less pertinent. Can heritage and landscape education be delivered in fragile, marginalised or deteriorated areas? How can we identify the hidden value in the landscapes of everyday life, and how can we construct new representations of these areas to counteract often stigmatising collective perceptions of them? Can technologies help us to achieve objectives, and can they be both innovative and accessible at the same time? And last but not least: what contribution can universities and research provide to a process of transformation and methodological innovation that also involves schools, institutions and the local communities?

This book offers a reflection on these questions and more, rooted in the real-life experience provided by a project; indeed, the text provides the results of a research project entitled "*Scuola Attiva Risorse (ScAR). Ricucire il patrimonio disperso delle periferie*" [School Activates Resources (ScAR). Mending the Dispersed Heritage of the Peripheries], funded as part of the Politecnico di Milano's programme of social commitment and responsibility, known as Polisocial. Launched in 2018, in just over two years the project saw the involvement of over seven hundred students across three levels of education, as well as various partners including public institutions and private actors, engaging them in a research action based on criteria of participation and co-design, focused specifically in the southern area of the city of Milan. The text illustrates the entire process, from its launch to its

final phase, laying out the actors, defining the premises, providing an overview of the methodologies, describing the main steps, and explaining the results and developments.

The first chapter introduces the reader to the research topic, outlining the framework of legislative and policy guidelines at both European and Italian levels. This analysis identifies in these documents the guidance for working in fragile contexts and constitutes the premise for a reflection on the role of schools in establishing widespread, structured actions as part of an approach to heritage and landscape education.

The second chapter describes the framework for the project, defining the context of action, the actors and the goals, as well as presenting the methodology. As it would have proven impossible to provide an account of all the actions implemented in partnership with the schools, the third and fourth chapters serve to trace a path through the many educational projects involved, highlighting the types of activities carried out along thematic lines. As such, the activities are briefly illustrated, with reference to examples, anecdotes and results of processes and products, with a view to shedding light on their meaning and potential. The focus of the fourth chapter is the role of new technologies, suggesting a possible bottom-up approach to the broader topic of the digitalisation of cultural heritage in the educational context.

The fifth and final chapter covers the dissemination of the actions which, by virtue of carrying out an initial distribution of the operational format and indicating possible lines for development, should be considered an integral part of the project itself. The book concludes with a reflection on the results of the research, based on the feedback from the people involved, first and foremost the testimonies of the teachers. Finally, the appendix offers a brief overview of the various classes' educational projects conducted in the central stage of the research; whilst this report does not do justice to the enormous effort made by the students and teachers who worked tirelessly, using their passion to bring the project to life and allow it to materialise, it does at least offer an insight into some of the countless possible interpretations of the methodology.



chapter

1





HERITAGE EDUCATION IN THE EVERYDAY LANDSCAPE

European guidelines

Heritage education

The concept of heritage education as it is understood today in the context of European institutions has taken shape over the past few decades, as evidenced by the documents produced by European bodies, in particular the Council of Europe, in the areas of knowledge, protection and enhancement of cultural heritage and landscape. This process is also connected to the changing concept of *cultural heritage itself*, which has become progressively broader and more structured, with increasing attention being paid to the relationship between heritage and territory, between heritage and culture, between the tangible and intangible heritage features (Di Berardo 2019, Bortolotti et al. 2008). In correspondence with this “semantic shift”, the idea of a specific educational approach has emerged, which revises the tradition of teaching cultural heritage by making it more complex and varied.

Recommendation n. 5 on Heritage Education, adopted by the Council of Ministers of the Member States of the Council of Europe in 1998¹ represents a milestone in this respect. The document specifies that cultural heritage includes any tangible or intangible trace of human action,² and defines heritage education as «a pedagogy based on cultural heritage, including active teaching

1. Council of Europe, *Recommendation of the Committee of Ministers to member states concerning heritage education, adopted by the Committee of Ministers on 17 March 1998* (Recommendation n. R (98) 5).

2. «Cultural heritage includes any material or non-material vestige of human endeavour and any trace of human activities in the natural environment» (Recommendation n. R (98) 05, art. I).

methods, a cross-curricular proposal, a partnership between the educational and cultural sectors, and employing the widest possible variety of modes of communication and expression».³ From this point of view, the role of schools in implementing correct and appropriate heritage education seems fundamental: being interdisciplinary by nature, heritage education could and should indeed be promoted within the framework of school subjects at all levels.⁴

The document undoubtedly still represents a crucial stage in the development of a common policy on the subject at European level, but more than 20 years later it is not easy to verify its ability to produce tangible results. Difficulties in implementation had already surfaced in a 2006 evaluation carried out in the framework of European projects, in collaboration between the Council of Europe and Italian institutions (Branchesi 2006). On that occasion, the difficulty of establishing the real impact of the Recommendation in the different countries was highlighted and, with reference to the Italian case, although the increase in projects and the good dissemination of the contents among professionals was underlined, it was acknowledged that the document was mostly ignored by political and administrative decision-makers (Branchesi 2006, pp. 175-180).

Among the experiences taken as reference for the drafting of the Recommendation and mentioned in the document itself, the most significant seem to be the Heritage European Classes project and the seminar sponsored by the Council of Europe and held in Brussels in 1995, entitled “Cultural heritage and its educational implications: a factor for tolerance, good citizenship and social integration”. In the seminar proceedings, the potential role of heritage education in the struggle against intolerance, racism and discrimination and for the promotion of social inclusion is supported through the use of concrete examples (Council of Europe 1998).

The European Heritage Classes, which came into being in that period on the basis of the pioneering experiments initiated in France in the 1980s, certainly represent a significant contribution of the Council of Europe to heritage education, especially for the development of methodologies and their experimentation in the field (Council of Europe 1993, Council of Europe

3. «Heritage education means a teaching approach based on cultural heritage, incorporating active educational methods, cross-curricular approaches, a partnership between the fields of education and culture and employing the widest variety of modes of communication and expression» (Recommendation n. R (98) 05, art I).

4. «Heritage education, which is cross-curricular by its very nature, should be promoted through the medium of different school subjects at all levels and in all types of teachings» (Recommendation n. R (98) 05, art. II).

1998). However, in relation to the initiative's supranational and programmatic dimension, they have a limitation common to other similar projects which, since they can reach a limited number of people, risk assuming an episodic role, while maintaining an important experimental drive and often presenting a high level of quality. While this initial phase of exploration was followed by a greater dissemination of actions, these nevertheless remained limited and, although they increased the repertoire of good practices, they tended to be translated into "practices", thus showing a halt in the spirit of discovery and in the initiating project drive (Branchesi 2006, p. 55-58). Moreover, these experiments – which were inherited from the French tradition of the "Classes of Historical Monuments" – show, at least in the first phase, an approach to the concept of heritage that is still largely linked to the notion of "monument".

An interesting turning point, to be noted in the context of the enrichment of this approach and a more general broadening of the notion of heritage that was being consolidated, is the project *"Europe from one street to the Other"*, launched in 2001 in over twenty countries. In this case the project focused on the study of neighbourhood heritage oriented towards cultural encounters. The street is taken as «the medium par excellence between the memory of the individual and the memory of the community, between the memory of one community and the memory of all the communities that inhabit it. The place of the collective imagination» (Viola 2006, p. 106).

Heritage, landscape and the right to cultural inheritance

A significant step in the reformulation of heritage education was taken with the appearance of the European Landscape Convention (ELC) in 2000⁵. The document proposed a new approach to the theme and concept of landscape, one that was more open, inclusive and above all focused on the physical and cultural interaction between populations and territories. In this way, the Convention also contributed, directly and indirectly, to the emergence of a new educational approach that involves learning in the field, based on the relationship between heritage and context, and open to application in a variety of fields. Landscape is part of the cultural heritage that will be passed on to future generations, and in this sense, in all its forms, it can be considered as cultural

5. Council of Europe, *European Landscape Convention, Florence 20 October 2000*. Signed by Italy in the same year, the *European Landscape Convention (ELC)* was ratified in 2006.

heritage itself, and therefore, naturally, should be included in heritage education. Landscape education can take its cue not only from the landscape itself, but also from the interpretation of the tangible and intangible cultural assets that are embedded in and constitute it. Landscape can therefore play a major role in the context of heritage education, especially if a systemic approach is adopted, based on the interpretation of the different elements that are part of the heritage in their relationships with each other and with communities.

Defining the landscape as «a certain part of the territory, as perceived by the populations, the character of which derives from the action of natural and/or human factors and their interrelationships» (art. 1), the Convention famously covers natural, rural, urban and peri-urban spaces, and extends its scope to include everyday or degraded landscapes (Art. 2). In this sense, it can be said that «whether it is outstanding, everyday or degraded, the landscape is, more generally, a common good with a spatial dimension that will be passed on to future generations», as stated in the “Glossary of the Information System of the Council of Europe Landscape Convention”, formulated by the Council of Europe specifically to clarify key terms in the ELC (Council of Europe 2018, p. 23).

There are no explicit references in the Convention to the subject or methodologies of landscape education. However, among the specific measures of application, it is stated that the participating states undertake, in the context of education, to promote school curricula that deal, within their respective disciplines, with the values connected with the landscape and with issues relating to its protection, management and planning (Art. 6). Consequently, it is important that training institutions work together to propose ways of identifying and assessing landscapes and making their methodologies available, at all levels of education. The ELC emphasises the importance of identification the different possible cultural values attributable to landscapes. Such identification takes place not only and not necessarily in the context of a cultural tradition and expert knowledge, but in relation to the expression of groups of people, thus through consultation and interpretation actions and through participatory processes. This approach becomes crucial when educational actions are directed at ordinary, marginal or even problematic and degraded contexts, such as living environments or everyday landscapes. In the light of the changes in the structure of the concept of landscape and the experiences of application of the ELC, the Council of Europe proposed, some years after the formulation of the Convention, a set of guidelines for the implementation of the agreement, collecting them in a recommendation specifically dedicated to the application aspects and entitled Recommendation on the guidelines

for the implementation of the European Landscape Convention (2008).⁶ The guidelines are specifically designed to respond to the difficulties that arose during the international workshops, which were organised to implement the principle of mutual assistance and exchange of information between member countries. In view of the experiments conducted, the document provides a number of conceptual, methodological and operational guidelines (Scazzosi 2017, p. 28). The text takes up the general principles of the ELC and emphasises certain aspects, such as the concept of the territory as a whole, the importance of public perception of landscapes and the activation of participatory processes.

In recalling the definition of landscape, the text dwells on the theme of the quality of living contexts, taken as a precondition for individual and social well-being and sustainable development, expressing the conviction that strengthening the relationship between people and their living environment can only act positively in this direction. In particular, the document emphasises the need for an interpretation of the different perceptions of the landscape which, alongside the historical dimension, takes into account recently acquired meanings. The theme of the social perception of the landscape is further explored by making explicit reference to the emotional and sensorial aspects (visual, auditory, olfactory, tactile, gustatory) that characterise the relationship between the population and the living environment.

In order to promote public awareness, the 2008 Recommendation calls for the active involvement of the public. It also states that specialist knowledge should be accessible to all, and should therefore be readily available, structured and presented in a way that non-specialists can understand. Finally, the document calls for participation, highlighting the importance of enabling the public to play an active role not only in monitoring landscape quality objectives, but also in the formulation and implementation of these objectives. Although not explicitly referred to, it is clear that these principles have considerable potential for application in education. As mentioned above, the ELC, in addition to indicating the desirability of raising the awareness of civil society, affirms the need to provide specialised training and school and university courses on the values associated with the landscape and issues relating to its protection, management and planning (Art. 6). The 2008 Recommendation and the guidelines contained therein suggest a new awareness of the

6. Council of Europe, *Recommendation of the Committee of Ministers to member states on the guidelines for the implementation of the European Landscape Convention, adopted by the committee of Ministers on 6 February 2008* (CM/ Rec (2008)3).

importance of involving young people. Indeed, there is an explicit reference to the introduction of landscape education programmes in primary and secondary schools and, more generally, to the development of a conscious awareness of the issue in children, particularly in relation to their living contexts, also intended as a means of reaching the population through their families.⁷ Landscape education brings with it a close connection of individuals with places and fosters the assumption of a personal commitment; the development of a direct relationship enables people to get to know their landscape in depth, to understand its potential and to identify its shortcomings. Building the basis for a personal involvement and commitment to the landscape, however, is the best prerequisite for its sustainable development (Pedroli, Van Mansvelt 2006, p. 121). This approach becomes central in a new recommendation drawn up in 2014 and dedicated specifically to promoting landscape awareness.⁸ «The subject of landscape – the document reads – provides many advantages for pupils' education and is an important means for them to become familiar with the surroundings considered as their living space and to understand them. It should provide an opportunity to discover the role of each individual in his or her role as an inhabitant guardian of its identity and its culture and as a protagonist aware of its future development» (Council of Europe, Recommendation CM/Rec(2014)8, part I). It also states the need to propose an educational approach that extends beyond visual aspects and addresses landscape in its complexity, recommending the involvement of children in active processes of research and discovery of their living environments.

Among the documents which are fundamental to the definition of the European concept of heritage and heritage education is the Council of Europe Framework Convention on the Value of Cultural Heritage for Society, presented in the city of Faro in 2005 and therefore known as the Faro

7. «While schools in certain states already offer landscape training, such training should be strengthened so as to develop children's sensitivity to questions which they are likely to experience when looking at the quality of their surroundings. Furthermore, this is a way of reaching a population through the family» (CM/Rec (2008)3, part II).

8. Council of Europe, *Recommendation of the Committee of Ministers to member States on promoting landscape awareness through education, adopted by the Committee of Ministers on 17 September 2014* (CM/Rec(2014)8). The following year a new recommendation was dedicated to landscape education in primary schools (Council of Europe, *Recommendation of the Committee of Ministers to member States on pedagogical material for landscape education in primary school, adopted by the Committee of Ministers on 14 October 2015* (CM/Rec(2015)7). On the topic of landscape education as an element in the application of the European Landscape Convention, the work of Benedetta Castiglioni (Castiglioni 2012, Castiglioni 2015) should also be noted.

Convention.⁹ It extends the concept of respect for human rights to cultural heritage by drawing cultural and heritage-related rights from the more general right to participate freely in cultural life, enshrined in the 1948 Universal Declaration of Human Rights (Art. 27). The document states that «everyone, alone or collectively, has the right to benefit from the cultural heritage and to contribute towards its enrichment;» (Art. 4). Hence, the parties undertake to «encourage everyone to participate in: the process of identification, study, interpretation, protection, conservation and presentation of the cultural heritage» (Art. 12).

The Faro Convention also explicitly calls for the principles set out in the document to be included in educational processes (Art. 7). However, its greatest contribution in terms of heritage education is that it essentially indicates heritage education as a citizen's right: it is in fact a fundamental vehicle for accessibility to heritage, which must be physical and economic, but also sensorial, cognitive and cultural, and must be made available by institutions (Bortolotti et al. 2008 , pp. 38-45).

Education *through* heritage

Heritage education has long been recognised in the European context as a means of training for citizenship, understood as an inclusive and supranational identity value. In his 2006 paper for the Council of Europe entitled “European democratic citizenship, heritage education and identity”, Tim Copeland explores the concepts of citizenship and heritage together, investigating their mutual relations and possible applications in education. In this way, the author states that he wants to challenge the misconception that heritage and heritage education are marginal in the development of the European citizen (Copeland 2006a, Copeland 2006b). The document not only highlights the importance of developing heritage education within the school curriculum, but also advocates its adoption as a methodological approach in different subject areas. Moreover, interest in heritage, as we have seen, has been identified by European policies as being part of the right of every citizen to participate freely in cultural life since the Faro Convention.

9. Council of Europe, *Framework Convention on the Value of Cultural Heritage for Society*, Faro 27 October 2005. The Faro Convention or *Council of Europe Framework Convention on the Value of Cultural Heritage for Society* was signed by Italy in 2013 and ratified in 2020.

In relating the concepts of citizenship and cultural heritage, Copeland shows that there is a correspondence in the changing meanings of the two notions. With the end of the last century and the onset of the new, the concept of citizenship has developed from an exclusive, elitist, formal dimension, based on content, knowledge and didactic transmission, to an inclusive and participatory one, based on process, values and interactive interpretation. At the same time, new approaches to the concept of heritage have arisen in Europe, marking a shift from an understanding based on top-down, national identification criteria to a social, intercultural, community-based interpretation. This process shifted the focus from the centrality of experts to the importance of facilitators, and marked a shift from an objective, historical and static approach to a memory-oriented, dynamic and emotional one. In the context of these changes Copeland (Copeland 2006a, pp. 17-18) identifies three possible dimensions in heritage education:

- *education about heritage*, the more traditional approach, in which the cognitive dimension is primarily applied to a category of heritage and a geographical space;
- *education through heritage* occurs when the cognitive dimension is associated with the affective one, and heritage becomes a medium for trans-disciplinary work that conveys knowledge through the lenses of the different disciplines;
- *education for heritage*, in which a cognitive, affective and action-based approach combines to accompany students in an engaging and meaningful interaction with different aspects of heritage, thus encouraging a broad and diversified educational experience. In this way heritage elements can be related to the past of individuals and to the past of the context in which they are immersed, which young people reinterpret, enriching their life experience in a cognitive and emotional sense.

In this sense Copeland reinforces the principle that “heritage education is not a subject but a type of education” (Copeland 2006a, pp. 19). This concept is also clearly expressed in the aforementioned Recommendation No. 5 of the Council of Europe on Heritage Education: «heritage education means a teaching approach based on cultural heritage, incorporating active educational methods, cross-curricular approaches, a partnership between the fields of education and culture and employing the widest variety of modes of communication and expression» (Recommendation n. R (98) 5, Appendix, I Scope and definitions).

Training young citizens in a multicultural society

The seminar held in Brussels in 1995 entitled “Cultural heritage and its educational implications: a factor for tolerance, good citizenship and social integration” – to which we have already referred – marks an important step in the affirmation of the centrality of heritage education in the construction of an intercultural pedagogy. For this to be possible, as Copeland points out in the seminar proceedings, the traditional approach must be altered by shifting (and multiplying) points of view. It has long been observed in European contexts where the multicultural composition of classrooms is an established reality, that many ethnic groups feel excluded from the past. The view of heritage is essentially linked to the view of the prevailing culture: monuments that are significant for national history, and which speak little about the common man, minority or ethnic groups are generally selected (Copeland 1998). If this approach is overcome, or better still, enriched, the approach to cultural heritage can allow us to come into contact with processes of cross-fertilisation, stratification and cultural diversity and thus to question multiple expressions of identity. This makes it possible for the learner to enter into dialogue with his or her own world and that of others, marking a fundamental step in the development of intercultural competence (Bortolotti et al. 2008, p. 52).

Looking at the past from other points of view, including those of other cultures or minority groups, facilitates the involvement of pupils from different cultural backgrounds and helps them to develop a sense of belonging to that past, and to use it creatively. It is therefore a question of working to develop an emotional response to places, trying to generate empathy for the past, while aiming to initiate children into an understanding of a past, rather than the dominant culture. It is therefore important that all young people living and growing up in a European country, including those from other cultures, gain an insight into its history through a multicultural experience.¹⁰

10. Referring also to his own experience in the field, Copeland summarised this approach as follows: «we felt it was important that children who were from other cultures who were living, and would grow up in, England should be given access to aspects of its history as part of their multicultural experience» (Copeland 1998, p. 40).

Strategies for the 21st century: heritage and community

The European Year of Cultural Heritage, launched in 2018 under the motto “Our Heritage: Where the Past Meets the Future”, was created as an opportunity to strengthen people’s sense of belonging to a common European area. The project hosted projects and events all over Europe with the aim of enabling citizens to come closer to and learn more about their cultural heritage. During this international event, in which the project on which this book is based also took part, an interesting policy review on the state of European cultural heritage research was carried out and published under the title “Innovation in Cultural Heritage Research. For an integrated European Research Policy” (Sonkoly, Vahtikari 2018). The report reconstructs the progressive change of the concept of cultural heritage since its nineteenth-century formulation, and mainly examines the scenarios of what is called the “third regime” (Sonkoly, Vahtikari 2018, p. 9). In this third phase, which began in the last decade of the last century, the notion of heritage or cultural inheritance took on its current complexity, and the approach that focused on protecting the components of the past and preserving them for the future was complemented by an increasing emphasis on the present time. This led to a shift in the focus and energy of research, from the object itself to its value and the subjective aspects of attributing that value, as well as the open question of identifying heritage itself. Alongside the objectives of limiting degradation and avoiding loss, which are inherited from the tradition of monument conservation, new concepts have been introduced with a view to social and ecological sustainability, including the resilience of heritage communities. In this respect, there has been a shift from a scenario in which expert knowledge identified monuments, based on the assumption of a clear separation between cultural and natural heritage and between tangible and intangible heritage, to a heritage that takes various forms, identified through heterogeneous methods and with a new focus on its physical, cultural and social contexts. Within such contexts, different forms of heritage are considered as part of complex and diverse systems, with attention to the relationships that communities have with them (Sonkoly, Vahtikari 2018, pp. 12-14). For this reason, in identifying the strategies present in the most recent expressions of research, the paper emphasises the crucial role of communities and the issue of their heritage rights.

It should also be considered that, in correspondence with the consolidation of the composite character of cultural heritage, the social and cultural heterogeneity that characterises heritage communities is also apparent. This heterogeneity highlights the need for a more nuanced approach to research

that can adapt to different scenarios, just as there are many ways of experiencing heritage in the interaction between people and between people and places. «The importance of the personal identification with space as part of the heritage experience is embodied in the notion of cultural landscape and its related sensory “scapes” (audio-, oleo-, walksapes, etc.), in which a great variety of individual and community appropriations merge» (Sonkoly, Vahtikari 2018, p. 37). In line with this direction, the document underlines how the agenda outlined by the European “Horizon 2020” research programmes on cultural heritage has integrated new themes, such as landscapes, participation, sustainability, and the social value of heritage, thus indicating the path towards a holistic approach to the topic. The institutional framework, however, remains fragmented, and within it there often remain dualisms typical of the phases prior to the “third regime”, such as that between natural and cultural, tangible and intangible heritage, or between digitisation and traditional methods of protection (Sonkoly, Vahtikari 2018, p. 39).

It is interesting to note that the report, looking at scenarios for the future of research, suggests a list of themes that are closely linked to the issues raised by the experience from which this work stems. Possible (and desirable) areas of enquiry in fact include: urban intangible heritage; heritage and migration; heritage and the digital age; tangible methods for stakeholders to collaborate with professionals and academics in identifying cultural heritage; democratic practices in assessing the social significance of heritage; participatory practices of heritage recognition for combating social and cultural inequalities (Sonkoly, Vahtikari 2018, p. 40).

The Recommendation of the Committee of Ministers of the Council of Europe on the European Cultural Heritage Strategy for the 21st Century of 2017¹¹ already clearly laid out some key points of this scenario, providing precise guidelines for future action. A number of issues emerged from the framework of the considerations proposed in the document, which are worth mentioning here and which are structured around four main themes: society and community, inclusion and participation, neighbourhood heritage and, lastly, education.

With reference to this structuring, an attempt will be made here to summarise in a few passages the most relevant issues in relation to the theme of this book and the research to which it refers to:

11. Council of Europe, *Recommendation of the Committee of Ministers to member States on the European Cultural Heritage Strategy for the 21st century* (CM/Rec(2017)1), adopted by the Committee of Ministers on 22 February 2017.

- *society and community*: cultural heritage is a key factor in re-focusing European societies on the basis of intercultural dialogue and respect for identity and diversity;
- *inclusion and participation*: there is an urgent need for policies that involve the communities that are its custodians in the protection and promotion of heritage. It is therefore necessary to propose an inclusive approach that allows citizens to play a significant role in the implementation of the European strategy for the present century;
- *neighbourhood heritage*: the first of the recommendations on cultural heritage and society outlined in the document concerns the involvement of citizens in the enhancement of their everyday heritage. In this sense, participatory practices of heritage identification bring into focus the immediate surroundings, within the context of citizens' lives. These practices help to foster a sense of belonging and stimulate shared responsibility;
- *education*: knowledge and education are the fundamental foundations of the strategy for the current century, alongside the social element and economic and territorial development.

The 2017 Recommendation contains numerous indications, among which, again in relation to the issues around which this work is developed, we highlight:

- encouraging the involvement of citizens and local authorities in capitalising on their everyday heritage;
- making heritage more accessible, promoting heritage as a vehicle for intercultural dialogue, peace and tolerance; fostering citizens' participation, in particular in heritage identification processes;
- considering heritage in sustainable tourism development policies, paying attention also to lesser-known areas and slow cultural tourism;
- using innovative techniques to present cultural heritage to the public; incorporating heritage education more effectively into school curricula.

From this review of the issues focused on by the 2017 Recommendation and the indications contained therein, it becomes clear that the topics discussed in the following chapters delve deep into the most urgent directions of cultural heritage research. More generally, from the overview outlined in these pages through a selection of documents illustrating the framework of European guidelines, present and future scenarios of heritage education are described. The considerations concerning the field research experience from which this work takes its cue move within this framework. This experience, however, cannot be examined without first describing, more specifically, the Italian context, and without underlining the theme of the school as a

privileged place, a fundamental means and a strategic context for a broader, plural, community-based heritage education, adapted to local contexts and accessible to all.

The Italian situation

A description of the framework of heritage education in the landscape of everyday life in Italian schools should start with an overview of the many (and often very interesting) actions carried out by individual institutions, as a reaction to calls for proposals or for internal initiatives. However, this is beyond the scope of this book and would be both useful and complex. In order to place the work described in the following chapters in a broader context, we will simply recall here the main legal references and the initiatives of the institutions in charge of education, protection and enhancement of the cultural heritage that constitute an essential guideline for those who work in the field of heritage education in schools or in partnership with schools.

Regulatory background

The ratification process of the Faro Convention was only completed in Italy in 2020. The principles of the Convention, however, have already influenced national policies for some time (Scazzosi 2017, p. 29), as have those of the European Landscape Convention (ELC), ratified in 2006. Even before the ratification of the ELC, principles consistent with the ELC were introduced in the main legal reference on cultural heritage, the *Codice dei beni culturali e paesaggistici* [Code of Cultural Heritage and Landscape], known as the *Codice Urbani*.¹² In the section devoted to landscape heritage (section three), general reference is made to landscape education; where landscape is intended, inline with ELC, as «a homogeneous part of the territory whose characteristics derive from nature, human history or mutual interrelationships» (art. 131). A reference to education, intended as an action aimed at knowledge, appears

12. Decreto Legislativo 22 gennaio 2004, n. 42 (D. Lgs. 42/2004).

again in the article dedicated to cooperation between public administrations, where it is stated that «in order to spread and increase knowledge of the landscape, public administrations shall undertake training and education activities» (art. 132).¹³

On the whole, although the *Codice Urbani* contains explicit references to higher education in the field of knowledge, protection and restoration of the cultural heritage and landscape, it does not address the issue of cultural heritage education as a basic training action and as a school task. The text, however, refers to the establishment of permanent study centres, in the spirit of actions aimed at the use and enhancement of heritage (art. 118).¹⁴ A prototype of such centres can be identified in the *Centro per i servizi educativi* [Centre for Educational Services], which was established in 1998, the year of the publication of Recommendation No. 5 of the Council of Europe on Heritage Education. The Centre is an operational and research unit aimed at promoting measures to educate people about cultural heritage, with the institutional task of «supporting the dissemination of knowledge about cultural heritage through educational projects and activities aimed at different audiences, with special reference to schools, pursuing the objective of consolidating the use, research and promotion of cultural heritage and places».¹⁵ The body has a national co-ordinating role in heritage education, communication and accessibility and is entrusted with the configuration of the most recent institutional methodologies in this field, as well as the conception of operational guidelines on the implications of heritage in terms of citizenship development and social integration.

13. *Codice Urbani* states «the Ministry may enter into agreements with the Ministries of Education and of Universities and Research, the regions and other interested territorial public bodies, The Ministry may conclude agreements with the Ministries of Education, Universities and Research, the regions and other public bodies concerned, to disseminate knowledge of cultural heritage and promote its use' and that 'the heads of institutes and places of culture [...] may enter into agreements with universities and schools of all levels [...] for the development and implementation of training and refresher courses, related teaching programmes and the provision of audiovisual materials and aids for teachers and teaching staff» (art. 119).

14. «In order to guarantee the collection and systematic dissemination of the results of studies, research and other activities [...] the Ministry and the regions may enter into agreements to set up permanent centres for the study and documentation of the cultural heritage at regional or inter-regional level, with the participation of universities and other public and private bodies» (D. Lgs. 42/20042, art. 118 “*Promozione di attività di studio e ricerca*” [“Promotion of studies and research activities”]).

15. See the website of the Ministero dei Beni e delle Attività Culturali e del Turismo [Ministry of Cultural Heritage and Activities and Tourism] (MiBACT) educational services. Available at <http://www.sed.beniculturali.it/>.

During its two decades of operation, the Centre has been assigned to four different bodies.¹⁶ These institutional steps seem indicative of the difficulty in finding an effective location for a body called upon to play a coordinating and guiding role in heritage education, and therefore capable of acting transversally with respect to the different interpretations of the concept and the different fields of application, in order to assume a role of theoretical and operational reference for the various institutions operating in the field of cultural heritage. Today, it is part of the *Direzione generale Educazione, ricerca e istituti culturali* [Directorate-General for Education, Research and Cultural Institutions], which, in addition to promoting knowledge of cultural heritage, is also called upon to promote its civil function at local, national and international level.¹⁷ Since 2015, the Directorate's tasks have included the preparation of the most important guideline document on a national scale for heritage education, the *Piano nazionale per l'educazione al patrimonio culturale* [National Plan for Cultural Heritage Education], together with the management, implementation, monitoring and evaluation of the actions set out therein.

National Plans for Cultural Heritage Education

The *Piani nazionali per l'educazione al patrimonio culturale* [National Plans for Cultural Heritage Education]¹⁸ are a fundamental step in defining guidelines in the national context. The First Plan was created in 2015 in line with the

16. From the *Ufficio Centrale per i Beni Architettonici, Archeologici, Artistici e Storici alla Direzione Generale Patrimonio Storico Artistico ed Etnoantropologico, all'Ufficio del Segretario Generale, alla Direzione Generale B.A.S.A.E. (Servizio IV Musei Mostre e Valorizzazione)* [Central Office for Architectural, Archaeological, Artistic and Historical Heritage to the General Directorate for Historical, Artistic and Ethno-anthropological Heritage, to the Office of the Secretary General, to the General Directorate for B.A.S.A.E. (Service IV Museums Exhibitions and Enhancement)].

17. See the website of the *Direzione generale Educazione, ricerca e istituti culturali* [Directorate-General for Education, Research and Cultural Institutions]. Available at <https://dger.beniculturali.it/>.

18. Three plans have been published. The *Primo piano nazionale per l'educazione al patrimonio culturale* [First National Plan for Cultural Heritage Education], dated 2015, was introduced by the Decreto del Presidente del Consiglio dei Ministri (DPCM) del 29 agosto 2014, n.17, "*Regolamento di organizzazione del Ministero dei beni e delle attività culturali e del turismo*" ["Regulation of organisation of the Ministry of Cultural Heritage and Activities and Tourism"], which stipulated that it should be updated annually. The Plan was prepared by the Directorate-General for Education and Research (now the Directorate-General for Education, Research and Cultural Institutes) of the Ministry of Cultural Heritage and Activities and Tourism (now the Ministry of Culture). This was followed by the *Secondo piano nazionale per l'educazione al patrimonio culturale* [Second National Plan for Heritage Education for 2016-17 and the third for 2018-19].

discussions that were taking place in Europe and in alignment with Law 107 approved that same year. The document incorporates the most up-to-date European guidelines on cultural heritage education, espousing the principle of heritage education as a global approach, rather than as a discipline, and proposing a concept of heritage that is in many ways more open and inclusive than the national legislation itself. The *Codice Urbani* defines “places of culture” as museums, libraries, archives, archaeological areas and parks and monumental complexes. The Plan broadens its scope to include more complex cultural sites such as landscapes, historic centres, industrial complexes and artists’ studios (Primo Piano 2015, p. 16). The legislation, according to the document, «is very explicit in recognising the educational function of museums and archaeological sites, but does not clearly attribute this function to other spheres, such as landscape or intangible heritage. This Plan, on the contrary, has the ambition to understand cultural heritage in its entirety» (Primo Piano 2015, p. 19). Heritage education should not be understood as a teaching subject, but rather as global education with an interdisciplinary nature and based on active and participative methodologies. In this sense and as an action addressed to all individuals, heritage education takes place in both formal and informal settings, in which heritage is understood both as an objective and as an educational tool. The text also emphasises the importance of informal learning, understood as «learning that is not necessarily intentional and takes place within the family, in social or civic life» (Primo Piano 2015, p. 13). The broadening of educational scenarios that this vision brings with it implies a particular focus on the accessibility of heritage, to be understood – as already underlined – in the physical, socio-economic, sensorial and cognitive sense. The theme of accessibility goes hand in hand with that of participation, which is advocated at all levels, including in a planning sense, and with reference to a plurality of stakeholders, indicating the importance of also including the public in scientific research processes. Research in the field of cultural heritage, it is emphasised, must adopt an intercultural perspective, be multidisciplinary in nature and favour action-research processes (Primo Piano 2015, pp. 10-14).

Although it covers all educational fields and emphasises the importance of action aimed at all age groups, the Plan identifies schools as a key element and gives them a fundamental role in the development of heritage education. The Italian education system undoubtedly has an important tradition of art education, especially in historical terms, and of promoting direct knowledge of local cultural heritage. However, the document shows that, in order for schools to fulfil their educational task, some steps are necessary. In particular, it advocates

overcoming the logic of studying cultural heritage from a purely disciplinary perspective, and opening up to a local approach that links heritage education and the territory. It then underlines the articulated pedagogical dimension of heritage, proposing a broader vision of its educational value and finally highlighting the need for specific training for teachers, who must be involved in the first instance, tangibly and pervasively (Primo Piano 2015, pp. 19-20).

The long-term objective of this document, now in its third edition, is the «creation of a heritage education system capable of involving a plurality of subjects, which translates into real forms of involvement in the management and safeguarding of cultural sites and in the acquisition of new and qualified knowledge, with mutual benefit for society and heritage itself» (Primo Piano 2015, p. 1). The Plan refers to training linked to cultural heritage as a means of contributing to the cultural and social improvement of each individual's life, also by developing, through informed participation, a sense of belonging to one or more cultures and to the territory. It is also pointed out that the transmission of knowledge and values of cultural heritage, by stimulating identity-building processes and strengthening the sense of belonging to the communities of reference, can have positive social effects (Primo Piano 2015, pp. 6-7).

The Plans, in all their editions, not only indicate precise guidelines, but also highlight the critical points and shortcomings that characterise the current scenario. It should be noted that the First Plan reveals a lack of responses to the training and research promotion requirements of the universities, and sets as a political priority the launch of educational programmes in cultural centres that bring together schools and universities, as well as ministries and regions. In the university programmes, the document indicates a lack of training of professionals who combine knowledge of the heritage with pedagogical, communication and research skills, as well as a specific capacity to design flexible didactic transposition processes, differentiated in relation to the different target groups (Primo Piano 2015, p. 1). The second edition of the Plan (Secondo Piano 2017), on the other hand, places particular emphasis on critical issues related to the sustainability of heritage education programmes. It should be noted in this respect that the different phases of the drafting of guidance documents, as well as the implementation of related actions, are not supported by specific funding. The Second Plan also returns the first results of a review of the consistency and management methods of the educational services of the MiBACT, *Ministero dei Beni e delle Attività Culturali e del Turismo* [Ministry of Cultural Heritage and Activities and Tourism]. The review was launched at the same time as the first edition of the document, indicating an evident «disproportion between the human resources employed in various capacities in the

design and implementation of educational activities and the lack of dedicated financial resources» (Secondo Piano 2017, p. 8).

In general, the holistic approach of the first version, its programmatic thrust and its vocation for a transversal reflection on the actors and potentials of heritage education are less prominent in this second document. The text focuses instead on actions concerning the Ministry specifically and its educational services, giving an initial account of the actions undertaken. A number of themes already present in the first plan are taken up again with reference to specific actions, including landscape education, particularly in its local forms. Added to this is the interesting theme of the connection between heritage education and tourism strategies, which highlights the importance of building citizens' awareness of the heritage around them and responding to new forms of tourism demand, particularly those that favour "experience" over "consumption" (Secondo Piano 2017, p. 24).

The *Terzo piano Nazionale per l'educazione al patrimonio culturale* [Third National Plan for Cultural Heritage Education] was drawn up in 2018 to coincide with the European Year of Cultural Heritage, which marked an important time for reflection on cultural heritage policies at European level. Once again, the issues of accessibility and participation are highly relevant in the document. The First Plan already emphasised the importance of promoting learning in the local area and in the places of culture, recognising the centrality of the learner/visitor as the bearer of their own ideas, experiences and values (Primo Piano 2015, p. 13). The Third Plan stresses the importance of fostering the participation of everyone in cultural heritage, and particular attention is given to the issues of inclusion and involvement of citizens, including through cooperation with professionals and institutions. A new emphasis is given to the issue of educational design: while the first general objective set by the document is to consolidate governance for heritage education, the second is to promote and improve the design of educational sectors. In this direction, there is a need for more planning, also within the school system, with regard to the specific objective of making the training and educational offer systemic.

Finally, in this third version, greater attention than in previous versions seems to be paid to the theme of landscape education, also with reference to national policies on the subject. Indeed, the Third Plan includes among its lines of action the identification of a number of specific themes, the first of which is landscape.

Landscape education

As we have seen, the broadening of the meaning of cultural heritage and landscape in recent decades has facilitated, also in the context of education, a rapprochement between the two areas, based on the idea that heritage education and landscape education should be closely intertwined. Since its publication, the European Landscape Convention has brought with it a debate on educational strategies for its implementation. In recent years in particular, this debate has been reflected in a number of academic and institutional forums. When it comes to heritage education, in fact, there is easily a shift from the concept of cultural heritage to that of landscape and vice versa. In this context, the territory should be understood as «the connective tissue in which the cultural heritage of a community is rooted and distributed, a complex system of signs and heritage itself, a place of construction and recognition of individual and collective identities, a spatial and temporal *continuum* equipped with peculiar qualities: material, historical, symbolic, relational, aesthetic» (Bortolotti et al. 2008, p. 59).¹⁹

The Report on the state of landscape policies presented in 2017 at the “*Stati Generali del Paesaggio*”²⁰ [States General of Landscape] defines «Education to and in the landscape is an integral part of education to cultural heritage, the main purpose of which is not the mere transmission of content, but the real possibility of contributing to the cultural and social improvement of each individual’s life» (MiBACT 2017a, p. 416). For this reason, it needs «active and participatory methodologies which, avoiding an instructive-didactic approach, leverage the affective dimension of learning and are able to support the process of recognising the role and value of the landscape as a place to read the traces of history and plan the future» (*ibidem*). The *Carta Nazionale del Paesaggio* [National Landscape Charter] (MiBACT 2018), drawn up by the *Osservatorio nazionale per la qualità del Paesaggio* [National Observatory for the Quality of the Landscape] and presented on the occasion of the second edition of the “*Giornata Nazionale del Paesaggio*” [“National Landscape Day”], took shape from the reflection of the 2017 “*Stati Generali del Paesaggio*”.²¹ The promotion of education and training in the culture and knowledge of the landscape is identified as one of the main

19. The text states that the territorial and landscape cultural heritage «represents the outcome, never given in a definitive way, of the processes of relationship that over time have characterised the identities of places» (Bortolotti et al. 2008, p. 59).

20. Rome, 25-26 October 2017.

21. 14 March 2018.

objectives. The text several times refers to awareness and involvement, which are indicated as goals and key tools of heritage education, and identifies as a key action the promotion of «landscape culture as a common good for the creation of a widespread civic awareness» (MiBACT 2018, p. 11). These passages indicate how the theme of landscape education is gaining increasing prominence within institutional and sector considerations in a promising consonance with what is happening around the twin theme of heritage education, and perhaps with a greater capacity to impact in operational contexts.²²

Scenarios and prospects, the role of schools

The most recent initiatives of the MiBACT *Direzione generale educazione e ricerca* [Directorate General for Education and Research] suggest the current programmatic lines of heritage education in Italy. The study conference “*Italia Europa. Le nuove sfide per l’educazione al patrimonio culturale*” [“Italy Europe. The New Challenges for Heritage Education”]²³ was organised by the Directorate in 2019 in line with the already-mentioned strategic recommendations of the Council of Europe for the 21st century²⁴ and the general objectives of the Third National Plan for Heritage Education (2018). The event marked a moment of exchange between institutions, academia, associations and civil society on the fundamental issues of heritage education, as well as experiences and future developments in the sector. Among the most interesting topics addressed during the discussion were the potential and systemic value of networks, access and mediation methods and the current challenges of active citizenship. Also noteworthy is the role

22. Among the actions of the Centre for Educational Services which mainly consist of events, training activities, conferences, publications, and pilot projects, we highlight the project “*Raccontami un paesaggio*” [“Tell me about a landscape”], an action-research launched in 2018, conducted in collaboration with the University of Padua and dedicated to the themes of landscape education and training whose outcomes were then presented at the 21st edition of the Ateliers of the European Landscape Convention (Tropea, October 2018). The project surveyed over three hundred educational projects and training activities carried out in Italy on the subject of landscape in the three years prior to its launch, highlighting an upward trend in both the number of projects and the number of recipients, which undoubtedly testifies to a growing attention to the subject. On this subject, see the website of the *direzione generale Educazione, ricerca e istituti culturali* [Directorate-General for Education, Research and Cultural Institutions], available at: <https://dger.beniculturali.it/educazione/progetto-raccontami-un-paesaggio/>.

23. The conference, held in Rome on 20-21 June 2019, was promoted and organised by MiBACT (*Direzione generale educazione e ricerca*) together with the Sapienza University of Rome and ICOM Italy, with the participation of the Council of Europe.

24. CM/Rec(2017)1.

attributed to the processes of digital transformation and the focus on education *to, for and through* cultural heritage in intercultural school education.

The *Note per l'educazione al patrimonio culturale* [Notes for Heritage Education], published by MiBACT following the 2019 conference, define the current status of heritage education in the national framework and foresee its sustainability for the future.²⁵ The text highlights the strategic role assigned to heritage education, which goes well beyond the transmission of a series of specific contents and assumes a transversal educational and training purpose, to be pursued through «flexible and interdisciplinary paths, committed to outlining complex cultural dimensions, improving learning processes and research skills, broadening specific competences and acquiring relational, communicative and planning skills that can be used in today's environment» (*Note per l'educazione al patrimonio culturale* 2019, p. 18). The intercultural value of this educational approach is emphasised, as well as the social role related to the enhancement of the identity of places, the affirmation of the principles of active citizenship, social sharing and cultural participation, in alignment with democratic values and sustainability goals. The document clearly shows the centrality of the methodological innovation to be put in place, since heritage education – it states – takes place «through experiential and workshop approaches that encourage open discussion»; it also «recognises the centrality and the space for representation of thought, narratives and the creative output of each person» (*Note per l'educazione al patrimonio culturale* 2019, p. 20). Only through these modalities we can support the practices of mediation, direct involvement, and dialectical construction as necessary steps for a contemporary interpretation of cultural heritage.

In conclusion, an examination of the documents on heritage and landscape education produced by institutions in recent decades (with a marked acceleration in the last five years) reveals a consistent and coherent – though still fragmented – body of principles and guidelines, from which it is possible to extrapolate significant indications for those working in the field. However, there is still a long way to go, both at national and supranational level, to translate the theoretical framework into a structured system approach, a verified methodological apparatus and shared, consolidated practices, which are key elements for broader, systematic action in the field. One strength of

25. The notes report on the experience of the first five years of activity of the *Direzione generale educazione e ricerca*, in the context of the vision of the *Piani nazionali per l'educazione al patrimonio culturale* [National Plans for Cultural Heritage Education], with a view to drawing up a proper Charter for Cultural Heritage Education.

the national scenario is undoubtedly the number of initiatives and the variety of contexts and promoters. These range from activities proposed by associations and voluntary organisations, to the innumerable activities launched by schools, in connection with local authorities and administrations, in relation to PON²⁶ projects or even with reference to alternating school and work programmes²⁷ which, in the Italian context, offer students training opportunities outside the school setting, aimed at testing abilities and providing guidance. The spontaneity and vivacity of project actions certainly constitute an indispensable resource from the viewpoint of methodological development, which does not risk becoming entrenched in rigid practices. Due to the scarcity of accessible contexts and systematic actions for the exchange of good practices, the fragmentation of initiatives makes it difficult to capitalise on experience, and does not aid the progress of reflection.

Even within the scope of the ministerial initiatives themselves, there are difficulties in applying and implementing the guidelines, especially in relation to landscape education. The documents²⁸ produced by the most recent policy review contexts show, for example, landscape education projects still have little relevance in the MiBACT training offer. In spite of the fact that the importance of education in the Ministry's policies is growing, the financial commitment does not seem adequate and it seems difficult to plan in the medium and long term, which is essential in this field. The survey conducted by the *Centro per i servizi educativi* [Centre for Educational Services] as part of the “*Raccontami un paesaggio*” [“Tell me about a landscape”] project²⁹ provides a significant overview of the current state of landscape education in Italy. The analysis reveals the lack of a truly systemic approach to landscape, capable of relating its various components such as built and natural, tangible and intangible, objective and subjective, synchronic and diachronic, intersubjective and intercultural.

26. *Programma Operativo Nazionale* (PON) [National Operational Programme], a seven-year programme based on the strategic priorities of the education sector, initiated by the Ministry of Education, Universities and Research and financed by European Structural Funds.

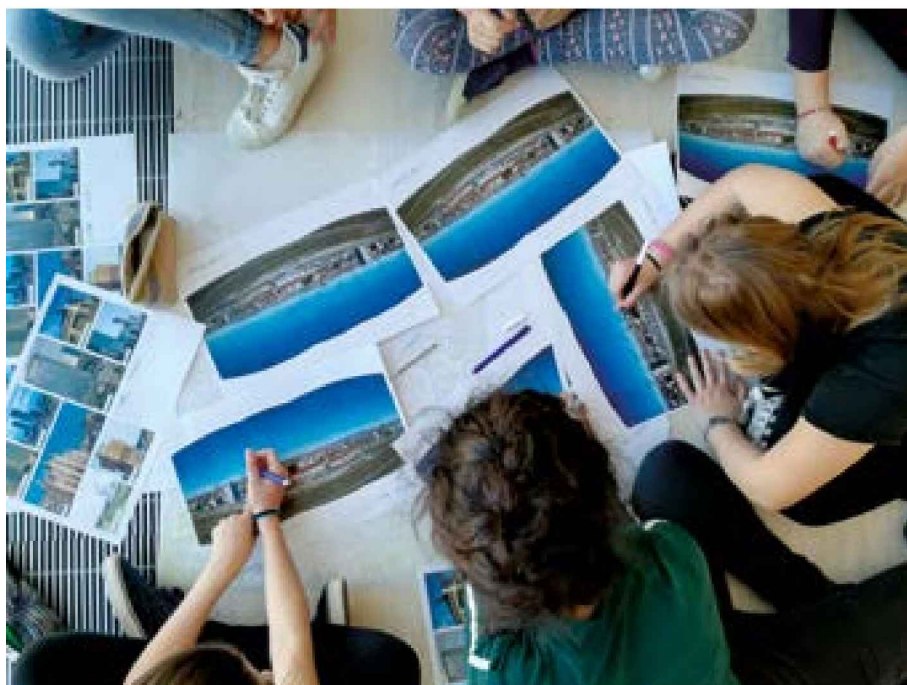
27. See chapter two, “Alternating school and work”.

28. See, in particular, the papers of the 21st edition of the European Landscape Convention Workshops (Council of Europe, 2019). *Landscape and education, Proceedings of the 21st Council of Europe Meeting of the Workshops for the implementation of the European Landscape Convention, Tropea, Calabria, Italy, 3-4 October 2018, European spatial planning and landscape, No. 114*) and the already mentioned *Report on the status of landscape policies* (MiBACT 2017a).

29. See note 22. The project is described on the website of the *Direzione generale educazione, ricerca e istituti culturali* [Directorate-General for Education, Research and Cultural Institutions]. Available at: <https://dger.beniculturali.it/educazione/progetto-raccontami-un-paesaggio/>

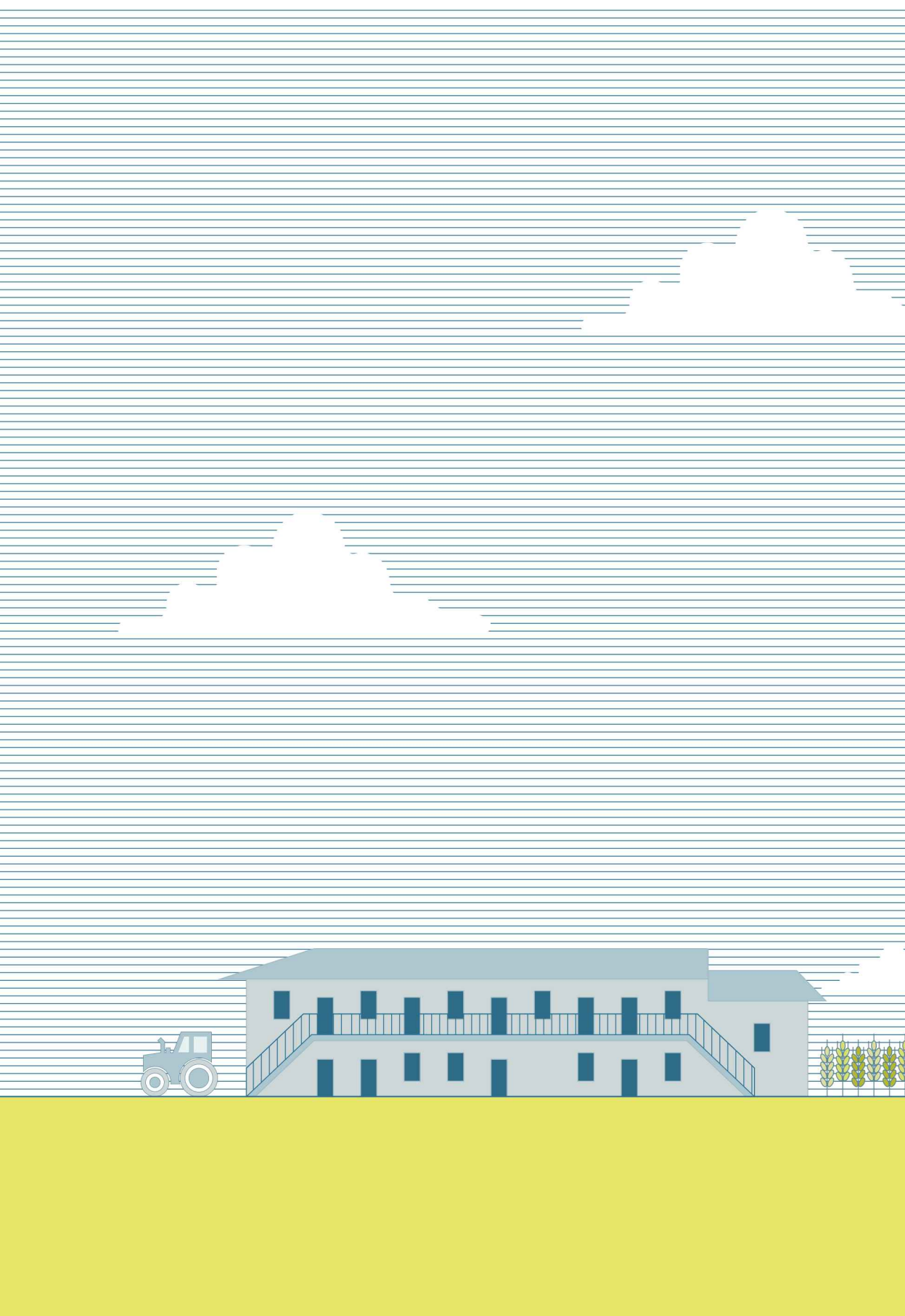


Primary school students present to the research team the modular grid at the base of the model of the Stadera neighbourhood they made.

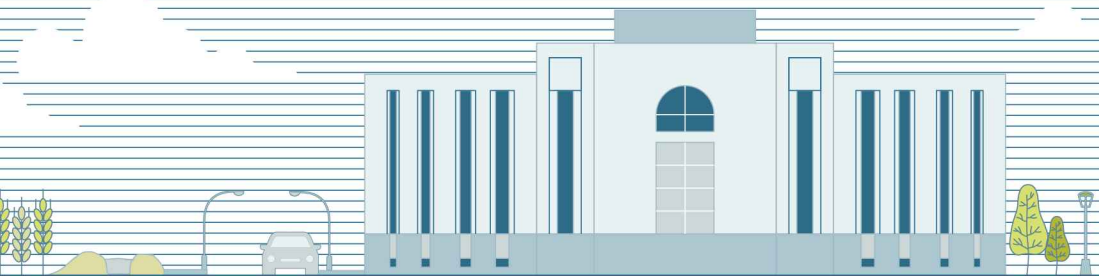


Urban landscape reading and interpretation activities with lower secondary school students.

In the framework that is now emerging, a conflict seems to be arising between the ambition and relevance of the objectives and the fragmented pattern of actions and investments. If the Faro Convention, signed by Italy in 2013, recognises as a citizens' right the participation in the life, maintenance and enhancement of cultural heritage, it is undeniable that this right brings with it an individual and collective responsibility that must be encouraged, explained and supported, in a context often characterised by widespread resignation and disillusionment towards any possible improvement (MiBACT 2017a, p. 444). These principles are at the root of the numerous activities carried out by voluntary associations and networks, which are pivotal in the Italian context. In order to embed in society the right/responsibility that binds citizens to their cultural heritage, a wide-ranging educational effort starting in schools seems crucial. In Italy, as in other countries – as Salvatore Settis reiterated at the aforementioned “*Stati Generali del Paesaggio*” – the lack of effective landscape education is due to the persistence of a “rhetoric of skills” that in the end prevails over knowledge and education for citizenship. «Education on respect for the landscape in its union with the historical-artistic heritage is – on the other hand – a very urgent task for schools, the true incubator of the right to the city and the right to the landscape [...] Shouldn't – then – the constitutionally guaranteed link between the protection of the landscape and the historical-artistic heritage and, more generally, culture, the horizon of civil rights and the practices of democracy, have a central role in our schools?» (MiBACT 2017, p. 75). The next chapters deepens, from a real experience with schools, the opportunities to achieve a heritage and landscape education according to the innovative reflections proposed by the institutions and the scientific community.



chapter 2





THE SCHOOL ACTIVATES RESOURCES PROJECT

School Activates Resources (ScAR)

The project “*Scuola Attiva Risorse. Ricucire il patrimonio disperso delle periferie*” [“School Activates Resources. Mending the dispersed heritage of the peripheries”] (ScAR) was set up in response to a call for multidisciplinary research, as part of Polisocial, a programme of commitment and social responsibility of the Politecnico di Milano financed with the 5xMille funds, the Italian tax revenue initiative to fund scientific, cultural, and social entities.

The project, winner of the 2017 edition of the Polisocial Award dedicated that year to the theme “Peripheries”, set out to address the demands for education on cultural heritage and landscape that, as we have seen, come from Italian and European institutions. The project proposed an experimental and methodologically innovative action, set in a context full of critical issues and on the fragile and less recognised heritage of urban peripheries. The idea was to make peripheral schools a driving force for the knowledge and sharing of local heritage, seen as a resource for the enhancement of the territory, social cohesion and the activation of latent potential.

In accordance with the European Landscape Convention and the most up-to-date policies in Europe, the project assumed cultural heritage in a broad sense, as a system of values identified by populations and in continuous evolution. As stated in Recommendation N. 5 (98) of the Council of Europe regarding heritage education, cultural heritage includes «any material or non-material vestige of human endeavour and any trace of human activities in the natural environment».¹ The result of a centuries-long process, the concept

1. Council of Europe, *Recommendation of the Committee of Ministers to member states concerning heritage*



Primary school students show the model they made representing the Stadera neighbourhood and the school's street.

of heritage is a dynamic one, just as the heritage itself is «continuously re-constructed, re-conceptualised and re-interpreted by the communities that experience it, including through cultural and social policies» (Bortolotti et al. 2008, p. 19). Heritage includes landscape as its basic element and, precisely because it is part of an open system and immersed in a process dimension, it is configured as a diffuse, evolving, relative, polyvalent, interdisciplinary and complex whole, as well as an identity and historical one (Borgia et al. 2019, pp. 176-179). Rather than concentrating on landscapes and assets of excellence, ScAR focused on everyday places, habitually inhabited or traversed by students, examining them as a whole, as cultural landscapes, contexts rich in

education, adopted by the Committee of Ministers on 17 March 1998 (Recommendation n. R (98) 5).

traces of past and present experience. The educational paths underlying the project thus aimed to guide participants in recognising this value system, describing, interpreting and communicating it.

In the collective perception of many of these areas on the fringes of the city, the image of a degraded and peripheral territory often prevails. In the process, however, the neighbourhoods examined have proved to be repositories of hidden heritages, vital urban identities and active social forces that represent a fertile fabric on which to build forms of recognition, sharing and transmission of values. This tangible and intangible heritage constitutes a valuable resource for the promotion of intergenerational and intercultural dialogue and can represent an opportunity for resilient social and territorial development.

Assuming an interest in heritage as part of the right to participate freely in cultural life (Faro Convention)², the project focused on citizens in training, assigning the school the role of driving force behind the development of the area. Schools have been placed at the centre of a participatory process based on the interaction between public institutions, private citizens and associations, aimed at understanding, protecting and sharing the peripheral landscape as a contribution to social cohesion and quality of life. The aim of the project was to equip teachers and students with the knowledge and skills necessary to enter into a dialogue with all the sources of knowledge relating to their area (experts in different disciplines, cultural heritage professionals, associations and cultural groups, families, ordinary citizens who are custodians of history), in order to initiate a cognitive and interpretative process founded on different modalities and forms of representation which would then lead to communicating and sharing the characteristics and values of a little-known landscape. Through the interpretations of young people, it became possible to carry out a process of signification and re-signification of the marginal space, clarifying and enriching its cultural value, even beyond the issues present in it. The assets of excellence, which at first might have appeared to be isolated episodes in a fabric devoid of interest, turned out, thanks to the route, to be part of an articulated system that also includes less conspicuous episodes, more subtle but no less significant traces; a dense and rich everyday landscape that the students rediscovered and helped the citizens to rediscover.

2. Council of Europe, *Framework Convention on the Value of Cultural Heritage for Society*, Faro 27 October 2005. Council of Europe *Framework Convention on the Value of Cultural Heritage*, signed by Italy in 2013 and ratified in 2020.



The diploma of “Expert of their own territory and its cultural values” students earned at the end of the project activities.

Project objectives

As previously mentioned, the project aimed to help students become key figures in the knowledge and appreciation of the local cultural landscape, making it a source of dialogue between generations and cultures. The aim was to set in motion a process capable of progressively increasing young people’s awareness of the importance of themselves and of others as bearers of knowledge and points of view, their sense of belonging to their neighbourhoods, their sense of citizenship and their responsibility for looking after the cultural heritage and the commons, thus reinforcing the link with the local area for all students, including those of foreign origin and their families. The intention was also to help these young citizens understand the fragility of the landscape that surrounds them and the need to protect it, while also leading them to make their own suggestions for its enhancement. The students were encouraged to develop the knowledge and skills to become active citizens in the reflection and public debate on places and their cultural values, and to become the bearers of a demand for the protection of these values and landscape quality in

the broadest sense. At the same time, the project was committed to providing schools with tools for educational innovation, inclusion and technological updating, to promote an informed use of technology among young people and to bring them closer to the cultural heritage professions.

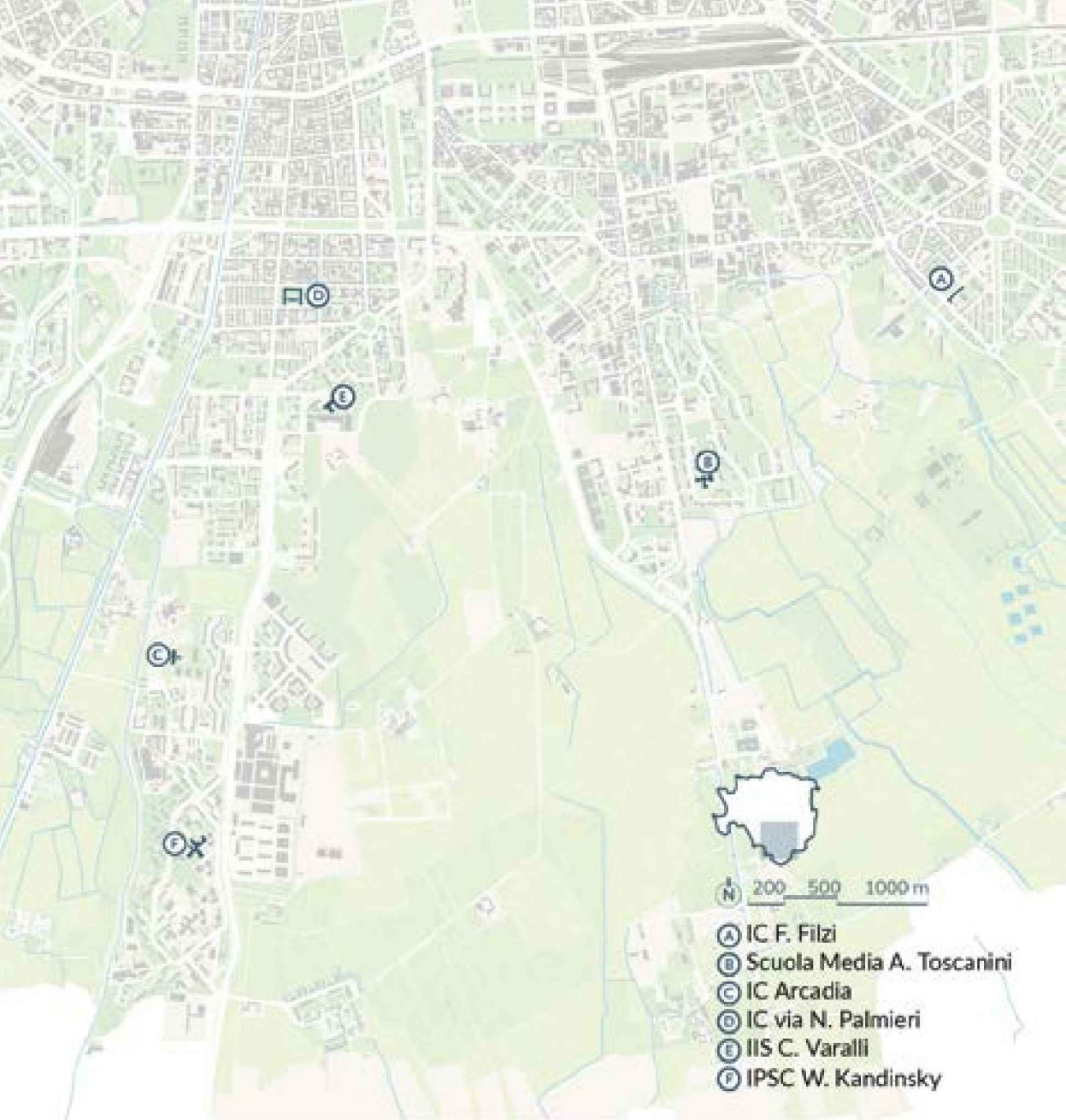
More indirectly, the set of actions undertaken was intended to contribute to building a new perception of the areas concerned, both among the inhabitants themselves and within the city, facilitating a wider and broader accessibility to its resources. The activities involved promoted and shared knowledge of a latent and nearby cultural heritage, also boosting the area's ability to attract visitors.

The main beneficiaries of the project were therefore the school's training and education staff on the one hand and, on the other hand, the students and their families, including students who are disaffected with school and at risk of dropping out, with learning difficulties or lacking inclusion. Secondly, formal and informal groups of stakeholders as well as active and passive citizenship, in particular neighbourhood citizenship, may be included among the beneficiaries of the project.

Peripheries, rich and fragile areas

In accordance with its objectives, the choice of the ScAR project was to set itself in a context full of critical issues and to act on the fragile landscape of the urban peripheries of a large city. Dealing with the various problematic nodes concentrated in the marginal areas has made the experimentation more articulated and ductile, and therefore suitable for dealing with different contexts, with a view to the replicability of actions and methodological approaches.

The project area, which includes Municipalities 4 and 5 of Milan, is made up of a frayed fabric, in some ways contradictory in its dual nature as a metropolitan periphery and an urban agricultural park, where the signs of city expansion and traces of rural memory are intertwined. In this area there are critical spatial, housing and social issues that are unevenly distributed, a clear fragmentation of settlements, neighbourhoods that are partially isolated from neighbouring areas, a certain lack of homogeneity in basic services and degradation of public buildings. At the same time, the area is rich in little-known and little-valued neighbouring cultural landscapes, often in a state of neglect or at risk of degradation, such as the agricultural system of the Parco Sud Milano, the waterways (Naviglio Pavese, Conca Fallata, Lambro Meridionale, etc.), the smallest and most valuable historical-architectural heritages (from the Abbey of Chiaravalle along the "Strada delle Abbazie", to episodes of modern and



Map of the research area with the location of the schools involved in the project.

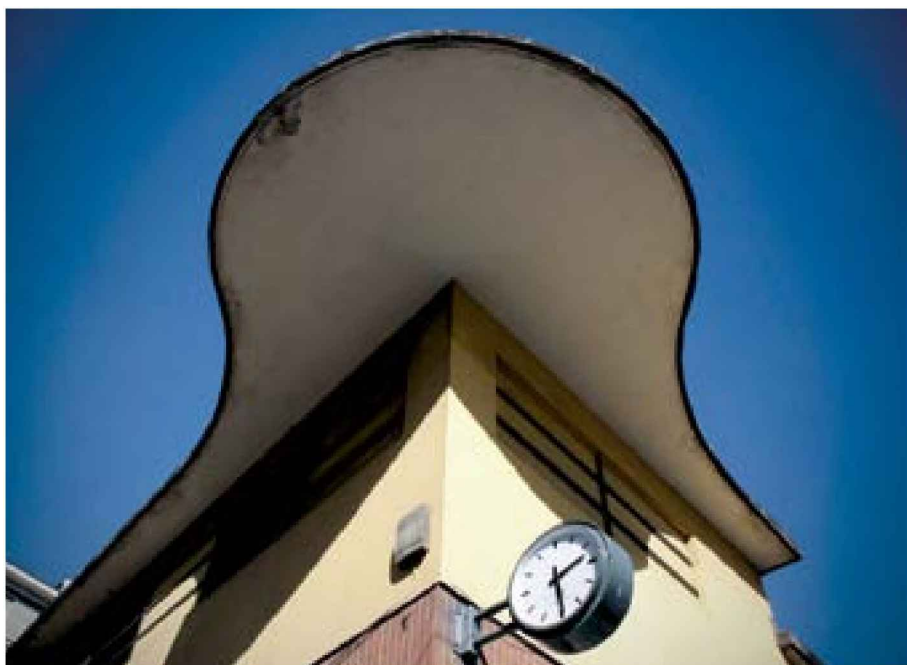
contemporary architecture and industrial archaeology), the historical villages (Chiaravalle, Nosedo, Vigentino), the urban design of 20th-century Milan (the Stadera district), the post-industrial city of new cultural attractions and major transformations (Scalo di Porta Romana-Viale Ortles, Ripamonti).

From a social point of view, the education system in this area is experiencing all the contradictions and challenges currently faced by state schools, which are often most evident and acute in areas that can be defined as marginal, such as the peripheries of large cities, but also in inland areas, depressed areas and others. Demotivation, isolation, early school leaving and segregation are complex phenomena that cannot be analysed in this context. However, it can be observed that in the project areas the risk indices of early school leaving are among the highest in the city³ and that in the surveyed institutions the number of pupils with first and second generation migration backgrounds can reach more than 80% of the student population. Indeed, although Milan is a city with a relatively homogeneous socio-spatial structure and residential segregation is actually relatively low compared to other large European cities (Boterman et al. 2019), levels of school segregation are much higher than one might expect and are clustered in specific areas. This phenomenon is largely due to the tendency of families to avoid neighbourhood schools when there is a significant proportion of migrants, choosing private schools or schools located in other neighbourhoods, resulting in a polarisation of class composition that ends up failing to reflect the cultural and social plurality of the population (Pacchi, Ranci 2017).

From the point of view of the features of the urban fabric, some of the schools involved are located in the heart of neighbourhoods with still vital historical identities, where traces of the industrial or rural history of the old villages are still evident. In other cases, important territorial transformations (urban expansion, deindustrialisation, migratory phenomena...) have led to significant rifts that make a historical interpretation of the territory more difficult. In these cases, the dimension of value and territorial identity is built on more tenuous traces that require ad hoc narratives capable of revealing them. This is the case, for example, of the interesting work of mapping and interpreting the graffiti system proposed by a school in a neighbourhood where it is difficult to read the patterns of memory such as Gratosoglio (fig. p. 131).⁴

3. School drop-out rates in Municipalities 4 and 5 of Milan are 12.39% and 10.24% respectively, compared to a city average of 9.71%. Source: Observatory on early school leaving and school integration, Early school leaving in Milan in the school register data, School year 2013-2014, research report by Valentina Bugli, Massimo Conte and Stefano Laffi.

4. See chapter four.



The historical market in via Montegani.
A view of the Stadera neighbourhood.



The students involved in the “*alternanza scuola-lavoro*” programme visit Parco Cascina Chiesa Rossa.

A complex network of stakeholders: schools, universities, institutions, foundations, museums...

In addition to the Politecnico di Milano, which is the project leader, the ScAR project has several strands. In fact, it has developed from the collaboration between numerous partners who, with different functions, responsibilities and timeframes, have played a fundamental role in the processes and in the definition of methodologies and tools. The academic team has built a dialogue with heterogeneous stakeholders who relate to the area and intercept the project themes in a multifaceted way. The project was therefore based on cooperation between different figures and forms of knowledge, with society and expert knowledge, between institutions and citizenship, investing in schools as social engines and activators of resources. Bringing so many elements together in a unified process was a challenge, but also a richness, a rare opportunity to pool skills, energies and visions.

Within the research group, different disciplinary approaches were compared. If the cultural heritage is the catalyst for the project, and therefore protection, enhancement and restoration are key competences, their role must be seen as part of a more general reflection on the city, on the systems of rules that govern it and on the design of its spaces, which refer to urban planning and policies. The processes of knowledge of the landscape and cultural heritage, the opportunity to develop descriptions of assets and places, and to build an effective communication of the values they contain, are based on quantitative and qualitative survey systems and on advanced methods and techniques of representation. These must be accompanied by bottom-up methodologies capable of initiating and nurturing the process of recognition of these assets as well as the construction of effective sharing strategies. Representation and communication are therefore at the heart of the processes. Finally, the whole process takes place within an educational context that requires the deployment of innovative teaching strategies that are essential for the process to work. This framework of interconnected requirements explains the different disciplinary skills that characterised the academic team: pedagogy, restoration, urban planning, representation, and design. The team involved three different university departments: the Department of Architecture and Urban Studies (DAStU), the Department of Electronics, Information and Bioengineering (DEIB) and the Department of Architecture, Built Environment and Construction Engineering (ABC). These are research structures with different vocations, internal skills and lines of work that have joined forces to achieve common goals.⁵

In the various phases of the work, professionals and specialists with different profiles intervened as collaborators, consultants and operators in the field, who contributed additional disciplinary and professional competences and made a very important planning and operational contribution. The process was supported by expertise in anthropology, history, teaching experimentation, graphic and web design, communication strategy and process management and facilitation.

5. The research areas of the members of the scientific team include: innovative didactics and didactic experimentation in the field of cultural heritage, participatory representation of local heritage, technological innovation for heritage education, experimentation of ICTs tools for participatory reading and mapping of the cultural landscape, urban planning and design in the field of heritage and heritage resources, and participatory urban design. Other skills include consultants, professional architects and an anthropologist, teacher and expert in ecomuseum participation.

The Politecnico di Milano research team

Scientific director:

Nicoletta di Blas, *Department of Electronics, Information and Bioengineering (DEIB)*

Project manager:

Camilla Casonato, *Department of Architecture and Urban Studies (DAStU)*

Research team:

Bertrando Bonfantini, *Department of Architecture and Urban Studies (DAStU)*; Micaela Bordin, *Department of Architecture, Engineering and Built Environment (ABC)*;

Valeria Pracchi, *Department of Architecture, Engineering and Built Environment (ABC)*; Marco Vedoà, *Department of Architecture and Urban Studies (DAStU)*; Daniele Villa, *Department of Architecture and Urban Studies (DAStU)*.

Collaborators: Gloria Cossa, Anna Greppi, Elena Negro.

Interns: Giulia Azzini, Maria Stella Buoncompagno, Alberto Casella, Maureen Anne Garcia, Julia Meazza, Maddalena Moltrér, Greta Zanaboni.

The city administration

The discussion with the institutions started with a direct dialogue with the administrative units of the Milan Municipality, Municipio 4 and 5, which undertook to actively collaborate and build connections with territorial planning. The municipality itself gave its endorsement right from the start, recognising a harmony of intent which was then translated into a direct dialogue with the education department and shared initiatives to disseminate the results. During the course of the project, the interaction with Municipio 5, the decentralised municipal entity, and its education department intensified to the point of becoming a continuous collaboration with numerous opportunities to meet, update, discuss and cooperate in the organisation of events to share the processes and results of the project with families, citizens and the municipality, and even to launch a spin-off project with external stakeholders, including those from the world of business and services.

School offices and contacts with ministries

The ScAR project was created with the endorsement of the territorial institutions belonging to the *Ministero dell'istruzione, dell'università e della ricerca* [Ministry of Education, University and Research] (MiUR). From the very beginning, the research group started a dialogue with school offices at both regional and provincial level. The *Ufficio scolastico della Lombardia* [Regional

The partners of ScAR project

Main partners are **seven schools** in Milan: Istituto Comprensivo Statale Arcadia; Istituto Comprensivo Statale F. Filzi, Istituto Comprensivo Statale Palmieri, Istituto Professionale per i Servizi Commerciali W. Kandinsky, Istituto Tecnico Statale a Ordinamento Speciale A. Steiner, Istituto Tecnico Industriale Statale G. Feltrinelli, Istituto di Istruzione Superiore C. Varalli (Istituto Tecnico per il Turismo e Liceo Linguistico). Additionally, the schools from other Italian regions that contributed to the research through the ScAR special track of PoliCultura contest.

Other partners are:

- the **municipal administration**, Municipio 4, Municipio 5 and the Councillor for Education of the Municipality of Milan;
- the **school administration**, Ufficio territoriale di Milano and the Ufficio scolastico regionale della Lombardia which have endorsed the project;

- **cultural entities, museums and foundations**: Fondazione Prada, Ecomuseo Milano Sud (MUMI), Compagnia Marionettistica Carlo Colla e Figli, the association Bei Navigli;
- **other universities**: Alma Mater Studiorum Bologna and Faculdade de Arquitetura e Engenharia dell'Universidade do Estado de Mato Grosso;
- **participation and training entities and projects**: PoliCultura, MOA the modelling laboratory of the Department of Architecture and Urban Studies (DASU) of Politecnico di Milano, the Guidance Office of Politecnico di Milano, the foundation Fondazione Rete Civica Milano;
- **third sector entities**: SIR consortium, the association Via Libera, the educational centre Monee and the families' centre "il Punto".

Education Office of Lombardy] expressed its interest in the proposed project objectives and strategies, and undertook to promote awareness of the actions in schools and dissemination of the project results. With the *Ufficio scolastico Provinciale di Milano* [Provincial Education Office of Milan], on whose territory the project actions are implemented, a partnership was established based on the institution's interest in participating through consultancy actions aimed at the operational translation of the project and its replicability followed by participation in the dissemination of the project, its restitution and the distribution of results. The interaction with the *Ufficio scolastico Provinciale di Milano* was an important step, both in practical and methodological terms.

Gathering researchers and university professors, teachers and school principals, museum and cultural institutions representatives, administrations and school offices in working groups in order to jointly search for operational strategies to be implemented in the territory, to be translated into tangible

actions and then into reflections and methodological tools to be returned to the school and to civil society, represented a significant challenge. Thanks to the willingness of all participants, heterogeneous subjects who, although driven by common goals are not always used to cooperating directly and actively, they were able to meet and discuss.

The project then grew, encountered new players and became involved in tangible actions, mainly carried out by teachers and researchers. Those first plural meetings, however, as well as subsequent ones with smaller groups, ensured that the guidelines for the operational phase of the project were drawn up, and it was important for this willingness to break out of one's own work patterns and the boundaries of one's own direct competences (which are not always easy to break) to be manifested once again downstream of the process, in order to verify and discuss the results in the direction of new perspectives. In any case, thanks to the support of the *Ufficio scolastico Provinciale di Milano*, the dissemination of the research can potentially reach a target of more than 1000 schools that may be interested in replicating and/or reworking the proposed methodologies in their territories, giving rise to new processes of (re)construction and transmission of memories and narratives.

ScAR was also recognised by the Ministry for Cultural Heritage and Activities and Tourism (MiBACT) as an official event on the Italian agenda for the “2018 European Year of Cultural Heritage” initiative, and was therefore able, through institutional communication channels, to reach a large number of people working in the sector, including teachers, cultural operators and citizens, as part of a framework of international initiatives. In the most advanced stage of the experience, the project team finally got in touch with the *Centro per i servizi educativi* [Centre for Educational Services] part of *Direzione generale educazione, ricerca e istituti culturali* [Directorate General for Education, Research and Cultural Institutes] of the same ministry to make the results of the research available in the context of the consideration of actions to implement the National Plan for Heritage Education.

Fondazione Prada

From the very first stages, the team formed a partnership with the prestigious cultural institution linked to the well-known Prada brand, which in 2015 opened its famous Milanese headquarters, located in the project area, to the public. The collaboration began on the basis of a shared desire to bring together two seemingly distant fields. On the one hand, there was a line of research deeply



A student takes a photo of Scalo Porta Romana from the Fondazione Prada tower building.

embedded in a local dimension, focusing on cultural expressions linked to local memory and the perception of ordinary citizens and based on bottom-up knowledge-building methodologies. On the other hand, there was a well established institution, with a strong international reach and operating in a museum system open to the general public, but oriented towards a cultural sector circulation, based on a curatorial system and a top-down knowledge building. Nevertheless, several factors indicated an immediate mutual interest in interaction.

The Foundation is located in the project area and is therefore part of the cultural heritage of the territory, both because of its cultural function linked to the permanent collection and the various initiatives (temporary exhibitions, cinema, conferences, workshops for children, events) and because it constitutes in itself an important architectural presence. The institution is housed in the buildings designed in 2008 by the international studio OMA led by Rem Koolhaas, working on an interesting industrial archaeology complex dating back to the early twentieth century, located near the Porta Romana railway station, on the border between three historic city districts, Vigentino, Morivione and Gamboloita. The Foundation, both as an architectural complex and as an urban entity, thus represents a significant episode in the profound transformations affecting the area, which in little more than half a century has seen the neighbourhoods go from widespread deindustrialisation to massive investment by new parties, all factors entailing incisive changes in the composition of the social fabric, in urban functions and in relations with the rest of the city. For all these reasons, the Fondazione Prada is not only a project partner but also a subject of considerable interest in relation to the research topics.

Suddenly settled in a marginal neighbourhood, an urban context still unfamiliar with the major transformations that had long affected other parts of the city, with its golden tower, a architectural language unfamiliar to the uninitiated and a cultural offer generally not aimed at the general public, the Foundation was looking for opportunities to build a more direct rapport with the inhabitants of the area, in particular with the elderly, whose memories are directly linked to the former distillery, but also with the younger generations. In particular, the institution wished to mitigate the inhabitants' perception of a gap between itself and the neighbourhood, also due to the fact that, although the Foundation's spaces are to a large extent freely accessible, the majority of visitors are in fact strangers to the neighbourhood. In this sense, building a bridge with the schools in the neighbourhood was an opportunity for the Foundation to make itself better known and to facilitate the openness of its spaces to local citizens. The project team's dialogue with the staff, curators and experts immediately opened up a number of interesting questions. One of the most methodologically significant



The new Adriano Olivetti square with the Fondazione Prada complex designed by OMA firm.

moments was the participation of staff from the museum's educational sector, and in particular from the "*Accademia dei Bambini*" ["Children's Academy"], in the initial working groups, which brought together the numerous stakeholders in the partnership. During the course of the project, the direct participation of the Foundation's staff in the planning and operational stages was limited, partly because of the difficulty of ensuring the cooperation of such heterogeneous working structures, but the collaboration made it possible to open the exhibition spaces to the schools and to carry out workshop activities within the project and specifically designed for the venue.⁶

Even though they live or study just a few minutes away from a place that is visited by visitors from all over the world and is a landmark in the Milanese landscape, many project school children were unaware of its existence and felt completely uninvolved in it. The activities organised in partnership, which extended beyond a simple school visit, allowed students to get to know the Foundation, to visit its spaces, to appreciate it as an element of their own territory and as an object of their own direct experience within a work path and a broader horizon of meaning.

6. See chapter three.



Local workshops and museums

From its earliest stages, the ScAR project involved another museum institution, different both in configuration and operating mode. It concerns the Ecomuseo Milano Sud (MUMI) [Ecomuseum South Milan] and its main partner and facilitator, the non-profit Fondazione Rete Civica di Milano (FRCM) [Civic Network Foundation of Milan]. The Foundation, born from the Laboratorio di Informatica Civica [Civic Informatics Laboratory] of the Università degli Studi di Milano, is engaged in the construction of digital environments and web-based processes for civic participation. During the course of the project, a structured interaction was built up between the project team and these organisations, which also led to direct cooperation activities in schools and on the territory, with initiatives open to citizens, as well as shared opportunities for dissemination and public discussion. In particular, this collaboration gave rise to the “*Atlante digitale delle memorie*” [Digital Atlas of Memories] project, a geo-referenced digital platform for sharing content and learning paths devised within the project activities, which will be described below. The significance of this tool is also due to the fact that, thanks to the involvement of the ecomuseum, it will be kept active beyond the end of ScAR and will also reach schools not directly involved in this phase, marking a point of continuity for the project.



The puppets of the historic Compagnia Carlo Colla e Figli.

An active and fruitful collaboration was then built up with an even different cultural environment that the project has encountered on several occasions, initiating different activities with schools and university students. We are talking about the historic Atelier Colla, a cultural organisation linked to the long tradition of the Carlo Colla e Figli marionette company, which is still active today, with periodic performances in various Milanese venues, including the Piccolo Teatro. The Atelier, located in the heart of the ScAR project area, in the Stadera neighbourhood, was established as the company's fixed headquarters and, in addition to being a venue for performances, has for a long time housed the archives and the precious handicraft workshops for the production and restoration of puppets, in which tailoring, sculpture, set design, carpentry and more are carried out. The archives, now moved to another location, contain over 30,000 items including puppets, costumes, sets, props

and other items, dating from the end of the 17th century to the present day. The production is still active, with a repertoire of over three hundred titles and new shows regularly staged in Italy and abroad in theatres and festivals.⁷ The company opened its doors to students, offering valuable opportunities for direct encounters with the various expressions of this unusual world, from the management and communication apparatus, to the various figures who contribute to the preparation and staging of the shows, to the material evidence of the sets and the puppets themselves. The theme was addressed by the educational projects of several school levels, from primary to secondary school and university students, and was covered and returned to with different representation and communication tools, including the use of innovative technological approaches (mapping, construction of multimedia guides and urban gaming applications).

Schools

At the heart of the ScAR project are five schools covering three levels of education, from primary to upper secondary school level, operating in the area and addressing the current difficulties of public education in a situation where demotivation, isolation and early school leaving have a significant impact. Located at different points in the project area, the institutes differ in terms of their fields of study – ranging from upper secondary school education to technical and vocational education – and the social composition of their students. The close collaboration with schools allowed the project team and partners to work directly in the field, involving a very wide age range of students from early years to nineteen years old. In addition to the children and young people from three schools in the Vigentino, Stadera and Gratosoglio districts, students from different types of secondary school took an active role in the project: a linguistic upper secondary school, a technical institute for tourism and a professional institute for commercial services specialising in graphics and communication. Two other technical schools joined in the start-up phase, but did not participate actively in the project. The complex configuration of

7. This heritage, which is of great interest for the project, is registered in the *Registro delle eredità immateriali* [Registry of Intangible Heritage of Lombardy] (REIL), coordinated and managed by the *Archivio di etnografia e storia sociale* [Archives of Ethnography and Social History] of the Lombardy Region (AESS), which studies and enhances the heritage of traditional culture of the Lombardy communities, with particular attention to its intangible expressions.

classes in terms of demographic, social, territorial, orientation and direction required a process of fine-tuning the interventions and designing differentiated activities, for which the working groups with principals and teachers were fundamental. This effort enabled the project to develop multiple working paths and to test methodologies in different contexts, with positive effects on the enrichment of the educational offer and methodological experimentation for research. In fact, the project's target audience is not only the students directly involved; a fundamental role is played by the teachers, those who have participated, but also those potentially interested in further developments and the replication of methodologies.

Thanks to collaboration with other projects that have expanded ScAR's range of action, some of the proposed methodologies, as will be seen, have been tested in dozens of other schools throughout Italy and also in international contexts.

Universities in Italy and abroad

In order to expand and strengthen the interdisciplinary and intercultural exchange, the project interacted, in different ways, with five other universities in addition to the lead institution.

The Department of Educational Sciences of the Alma Mater Studiorum – Università di Bologna was invited to contribute to the research during a discussion on project evaluation. The development of actions to verify the results and measure the impact of the activities in the pedagogical direction, in fact, required specific skills that are not present at the Politecnico, for which ScAR availed itself of the collaboration of experts in special pedagogy and inclusive teaching at the university of Bologna.⁸

Again at national level, in the context of the activities carried out with the MUMI Ecomuseum, the project team also collaborated with the Fondazione Rete Civica di Milano, which was created in the wake of the research carried out by the Department of Informatics of the Università degli Studi di Milano.

The collaboration with the Faculdade de Arquitetura e Engenharia of the Universidade do Estado de Mato Grosso is based on methodologies for

8. The results of this collaboration were summarised in the publication: C. Casonato, N. Di Blas, M. Fabbri, F. Ferrari, Little-known heritage and digital story-telling. Schools as protagonists in the rediscovery of the locality, in E. Taricani (ed.), *Design Thinking and Innovation in Learning*. Bingley, Emerald Publishing, 2021, pp. 5-25.

involving schools in participatory practices for interpreting and planning the city, focusing on citizenship and environmental issues. The partnership, which was initiated with a view to exchanging good practices between the Italian and Brazilian research groups, has since resulted in the launch of a joint project focusing on interactions between public schools, universities and local communities in the Mato Grosso region.⁹ Finally, exchanges and discussions on research and collaborations on joint publications on ScAR topics were also initiated with Pennsylvania State University and the Università della Svizzera Italiana.

Associations and Libraries

The project was created with the endorsement of local organisations operating in social and cultural spheres, such as associations, social cooperatives, educational centres and community centres active in the neighbourhood and the Coordinamento biblioteche rionali [Coordination Office of District Libraries] of the Municipality of Milan. Thanks to their knowledge of the local area, these organisations not only acted as a bridge between the project and the schools during the start-up phase, but were also called upon to provide meeting and working spaces in the neighbourhoods outside the school buildings and to make the project activities known to the local population.

A significant role in this was played by the city's library system, in particular the library located within the historic Chiesa Rossa complex and park of the same name in the heart of the project area. The library made its premises available and collaborated on a number of occasions for activities with children, young people and university students and for dissemination events organised in conjunction with the administration of Municipality 5.

Among the cultural organisations that have come into contact with the project, the Bei Navigli association in particular has actively collaborated with the research team and the partners, contributing to the initial co-design phases, taking part in teacher training and offering its knowledge of the area. The association, which is particularly committed to the promotion of Milan's historical *navigli* (canals) and to conducting participatory practices for enhancing the urban areas connected to them, is also a vital component of the MUMI Ecomuseum. Through working groups, consultations and joint

9. The project, entitled "*Oficina Comunitária de Arquitetura (OCA)*", will apply the methodologies developed by ScAR in the Brazilian region. See chapter five for a description of the project.



Primary school children visiting (LaborA) the Modeling Lab at Politecnico di Milano. After having had their first experience of creating a model at school, the children visited the laboratory to learn the techniques of professional model making.

interventions in teacher training, this association has contributed to ScAR with a methodologically interesting and practically effective dynamic.

University laboratories and orientation services

In an effort to bring together organisations working in different fields within the university, and to link them to the work being done with external partners and schools, the working group also involved organisations from the service area and technical laboratories.

The offices of the *Servizi di promozione e orientamento* [Promotion and Orientation Service] were first contacted for participation in the start-up groups and then at specific and strategic moments of the work process. The interaction between researchers and staff was significant in terms of exchanging views on the potential of the project beyond its end date and jointly devising strategies for involving schools in a broader horizon than that of direct partnership, widening the scope of action. This collaboration has enabled ScAR

to reach schools all over Lombardy in offering teacher training. Thanks to the communication measures carried out by the offices, schools that would have been unlikely to be reached by the project came into contact with ScAR and these contacts led to partnerships and related research activities.¹⁰

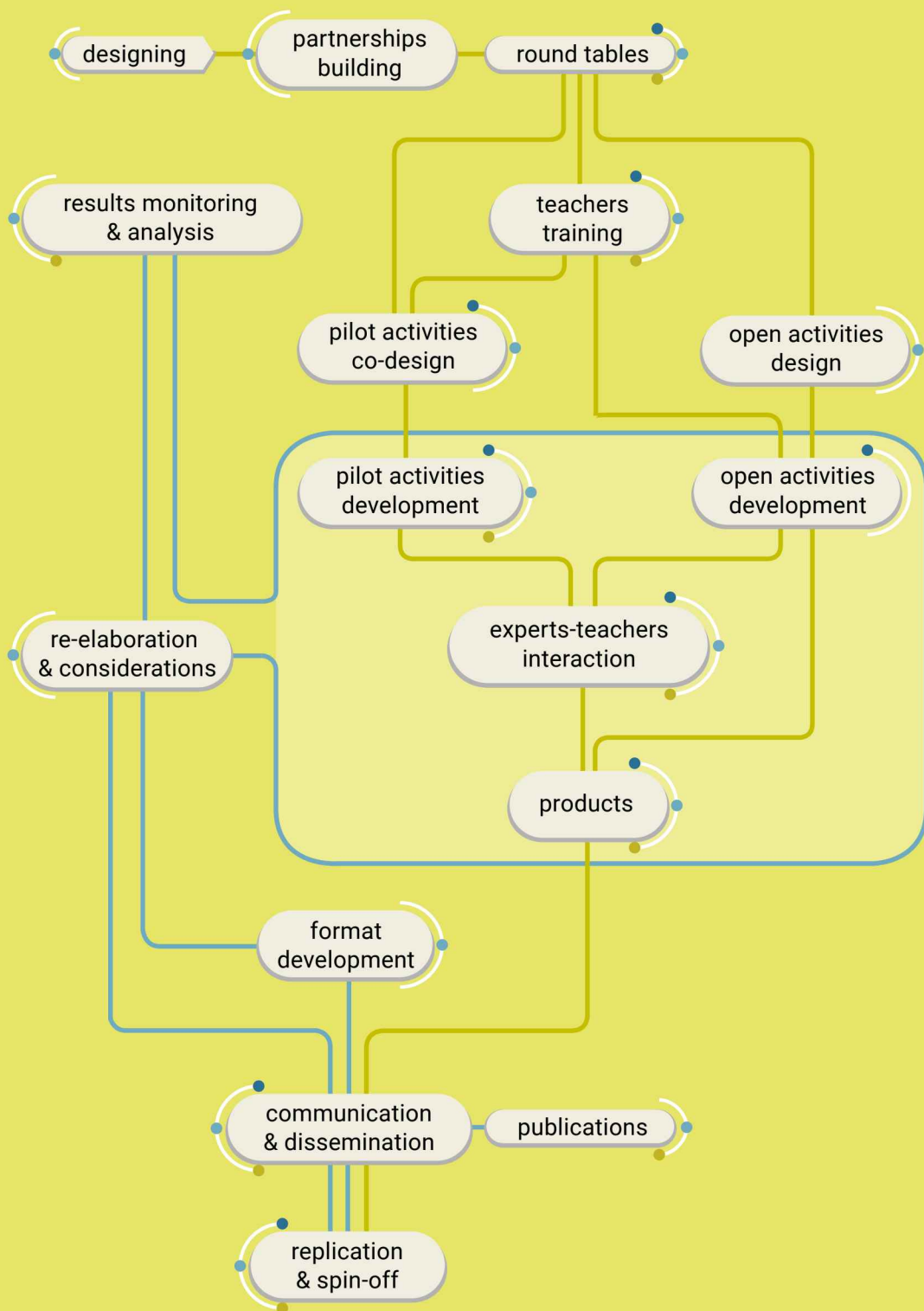
The collaboration with the physical and virtual architectural modelling laboratory (former MOA today known as LaborA) at the Politecnico was also significant. As will be described in more detail below, it allowed young people of different ages, from those in alternating school and work programmes to children in the early years of primary school, to experience specialised knowledge and craftsmanship, putting themselves to the test in the practical translation of design ideas, working side by side with specialised technicians, university students and undergraduates.

The meeting with the laboratories of the Department of Electronics, Information and Bioengineering (DEIB) was also characterised by an experiential approach, welcoming upper secondary school students for a presentation of their research and involving them in simple experimental activities. The youngsters were introduced to topics such as artificial intelligence, machine learning, robotics and machine perception, the development of innovative applications for the therapy of people with intellectual disabilities (Virtual, Augmented and Mixed Reality, Smart Objects) and others. The experience enabled students with different, often professional, curricula to gain an insight into the higher education and scientific research environment, towards which they had shown curiosity during the project activities. The visits to the laboratories were also organised in response to explicit requests from the students, who had met the academic team always at school or in the project area and wanted to get to know their interlocutor more closely, a technical university of which they had little idea and most of which they had never considered. Once the project was underway, these youngsters felt the desire to learn more about the environment they had come into contact with, visiting the premises, facilities and laboratories, and learning more about engineering and architecture¹¹.

10. For example, a project on the historical toponyms of the rural landscape launched with a network of schools in the province of Cremona.

11. On the school orientation topic as an unexpected 'impact' see chapter five.

ScAR - RESEARCH STRUCTURE



research team

partners

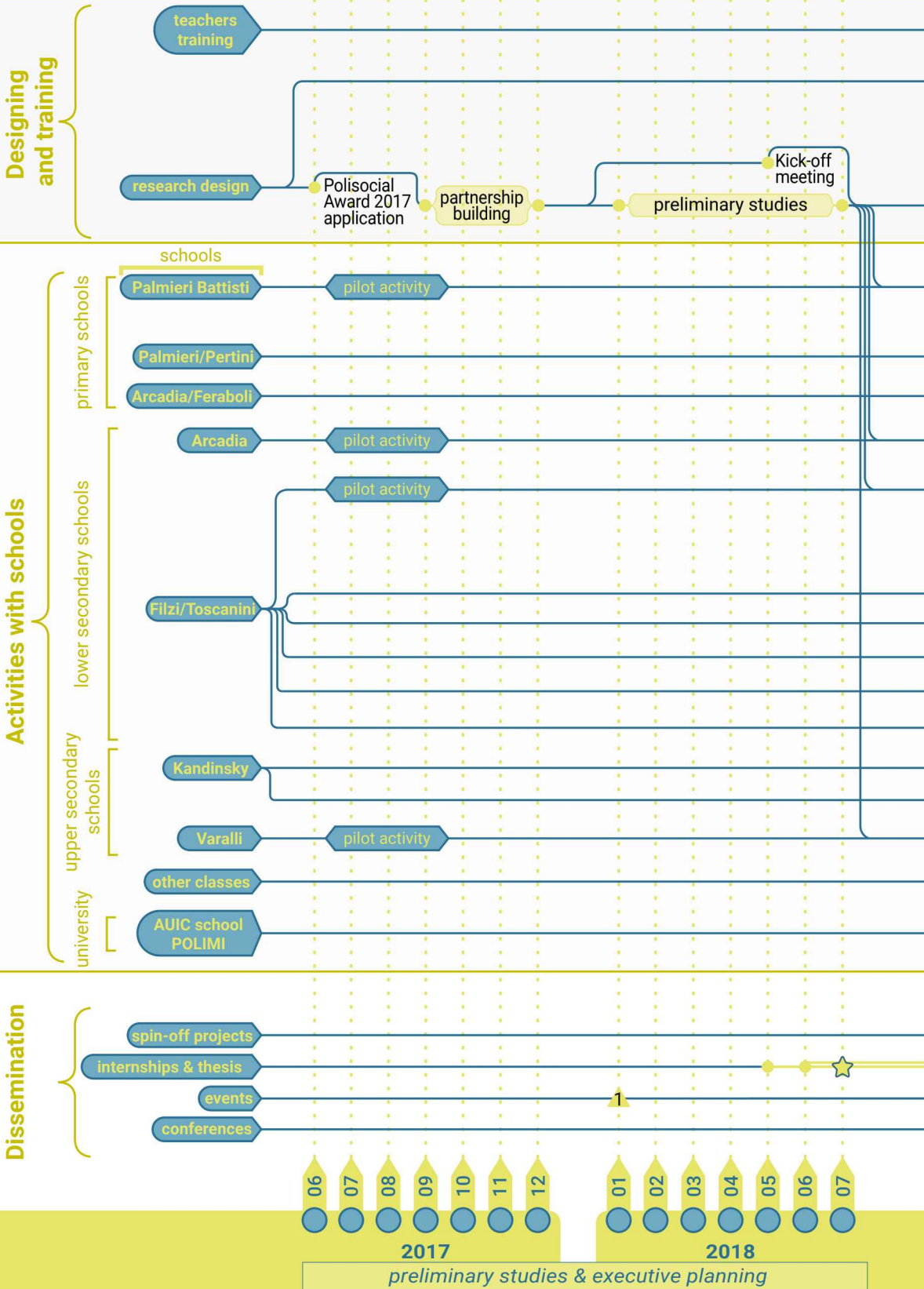
schools

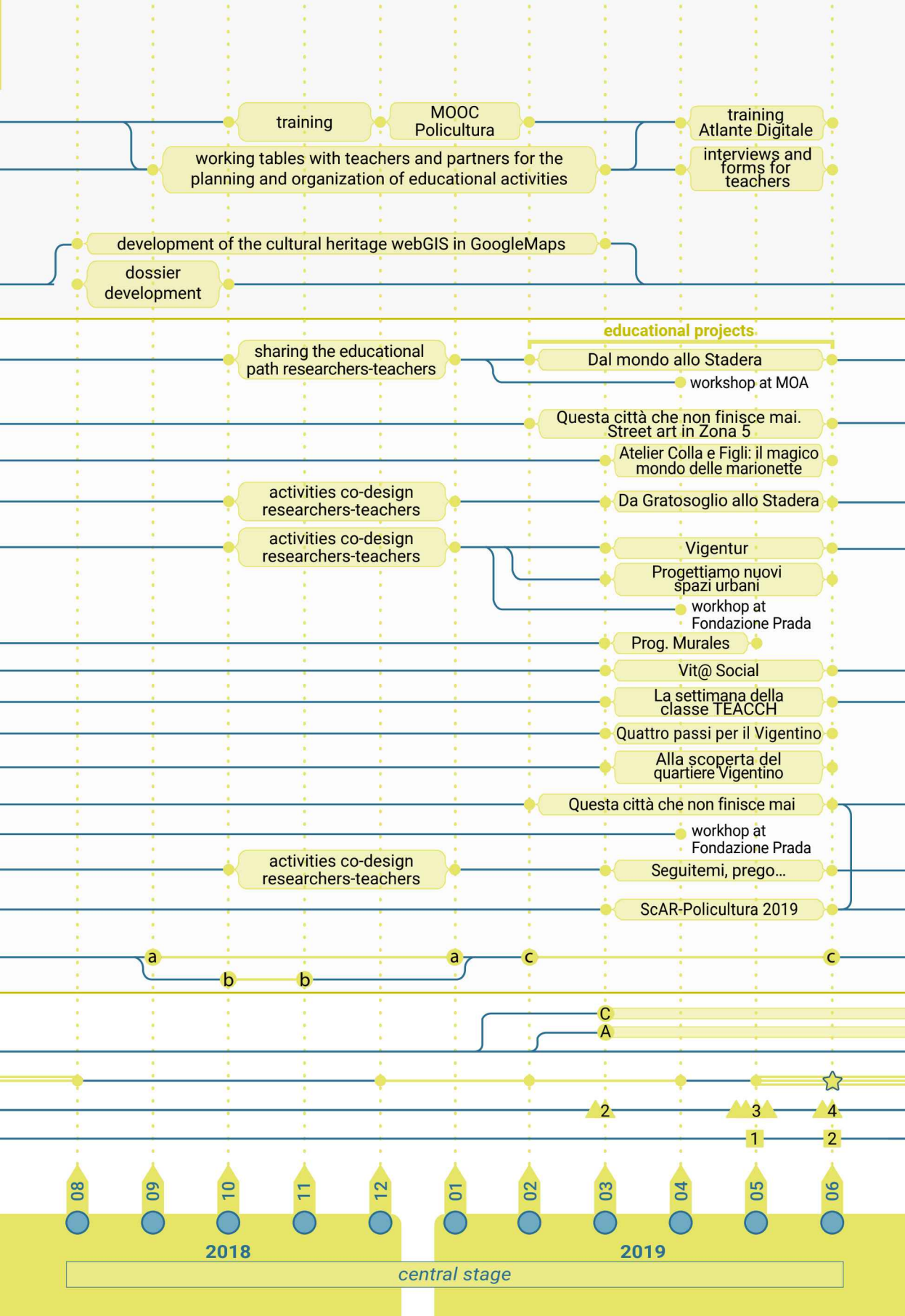
Design and co-design

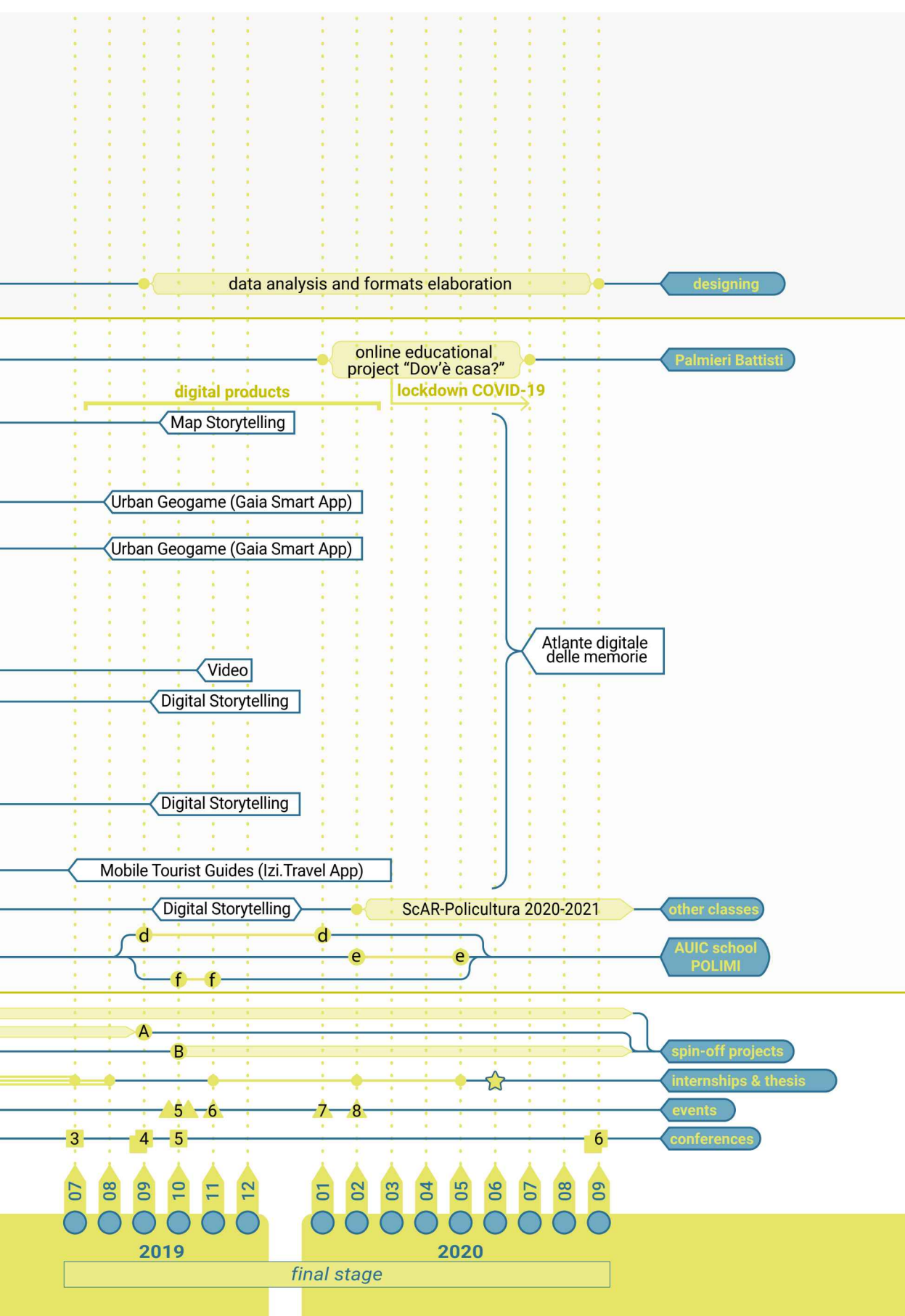
The work process started with an internal conceptualisation phase within the academic working group, which led to the formulation of the project and funding through a competitive call for proposals in the context of the Polisocial programme. This led to the development of a process with a strong participatory component, in which the actions were shared between the research team, partners and schools, according to a structure that alternated between action in the field and opportunities for reflection, consultation, discussion and reshaping of subsequent actions. From the diagram “ScAR the research structure” it can be seen that the four main operational phases – design, consultation, field-work and dissemination – do not come down to circumscribed moments assigned to a specific actor and placed in a temporal sequence. While necessarily following the development of the process from an initial design time to a final communication time, the four operational phases were in fact divided into a series of back-and-forth micro-processes between design, action, consultation and re-design. The activities were carried out in the form of workshops, initially involving experts, educators and teachers, then the students themselves and later, depending on the phases, various local, social and cultural actors. The backbone of the process were the working groups with partners, organised on several occasions and with varying compositions. These discussions represented a constant methodological reference and allowed for a continuous enrichment and refinement of the project actions. Specifically, as can be seen from the project timeline, the first consultation phases served to consolidate and broaden the partnership and to bring together the different stakeholders, immediately subjecting the project structure to a common reflection. Subsequent meetings were aimed at planning activities, verifying processes and results, sharing and internal dissemination actions, and organising external dissemination actions.

This way of working, while maintaining the initial work structure, the general objectives and the methodological approach defined beforehand, made it possible to effectively co-design the actions between the academic team and external parties, between the proposers and the participants. It made it possible to enrich the methodological output format with the contributions deriving from the proposals and experiences of all those involved and their feedback, as well as from the planning capacity of the partners, first and foremost the teachers.

ScAR TIMELINE







Educational activities at AUIC school Politecnico di Milano

- a "Milano 2030 ideas for the changing city", Representation and Urban Planning course
- b Live sketching workshops at Fondazione Prada, Fundamental of Representation course
- c Restoration and reuse projects for Chiesa di San Vittore, Architecture Restoration Workshop
- d Seminars and activities within the area ScAR, Representation and Urban Planning course
- e Puppetry research centre projects, Architectural Design Studio 1
- f Workshop "Drawing together, sharing landscape", Fundamental of Representation course

Reasearch spin-off

- A Mapping the rural landscape and toponyms of Offanengo, Offanengo (CR) and nearby municipalities
- B Oficina Comunitária de Arquitetura (OCA), Mato Grosso, Brasil
- C Murales Project, Milano, Municipio 5

Internships and graduation thesis

- ★ Graduation thesis
- One active internship
- More than one active internship

Events

- 1 Polisocial Award 2017. "Politecnico di Milano per le periferie" [Politecnico di Milano for Peripheries]
- 2 Milano Digital Week. "Percorsi virtuali nel paesaggio culturale"[Virtual tours in the Cultural Landscape]
- 2 ScAR Presentation at Falcone e Borsellino school in Offanengo (CR)
- 3 "Vigentour. Il primo geogame sul Vigentino" [Vigentour, the first geogame of Vigentino], inauguration event of the mobile urban geogame developed by A. Toscanini school students
- 3 "Seguitemi, prego..." [Follow me, please...], presentation of alternanza scuola-lavoro activities at I.I.S. C. Varalli
- 3 "ScAR al Poli. Scuole per il paesaggio culturale urbano" [ScAR at Poli. Schools for the Urban Cultural Landscape], closing event of the year 2018-19
- 3 Presentation at the Municipio 5 Council
- 4 Festa delle Scuole del Municipio 5 [Festival of Municipio 5 schools]
- 4 "Il progetto ScAR all'Istituto Palmieri" [The ScAR project at Palmieri School], ScAR activities presentation
- 5 "R.S.V.P. Riapre San Vittore al Pubblico" [R.S.V.P. San Vittore Reopens to Public] exhibition opening
- 5 Best Practices Sharing Workshop with Universidade do Estado de Mato Grosso
- 5 "Lavorare sul tema delle periferie" [Working on Peripheries], Polisocial 2017 projects presentation at Off Campus San Siro
- 6 Milano Partecipa 2019. "Esplorare i quartieri con i giovani cittadini. Virtual Reality, Gamification, Digital Mapping" [Exploring Neighbourhoods with Young Citizens. Virtual Reality, Gamification, Digital Mapping]
- 7 "Percorsi virtuali nel paesaggio culturale: la nostra scuola e il territorio" [Virtual Tours in the Cultural Landscape, Our School and Landscape], presentation at I.C. F. Filzi
- 8 "ScAR va in Piemonte", presentation of ScAR project in schools in Piedmont

Conferences

- 1 GEORES 2019. International Conference of Geomatics and Restoration
- 2 ED-MEDIA 2019. World Conference on Educational Multimedia, Hypermedia & Telecommunications
- 3 IMG 2019. "Graphics/Grafiche"
- 4 AISU 2019 "The global city. The urban condition as a pervasive phenomenon". International Conference of Associazione Italiana di Storia Urbana
- 4 ATLAS Annual Conference 2019 of the Association for Tourism Leisure Education and Research on Tourism Transformation
- 5 Brainstorming BIM, VR, AR, MR. 2019
- 6 42° Conference of Unione Italiana Disegno (UID) 2020. "Drawing for weaving relationships".
- 6 XVIII EGA "The graphic heritage. The graphics of heritage". Expresión Gráfica Arquitectónica (EGA) International Conference

Training teachers

The start of the activities was preceded by a free teacher training phase which was open to all interested teachers, both internal and external to the project. The aim of this training initiative was twofold: on the one hand to provide teachers with a framework of reference on current issues in heritage education, in the direction of a cross-curricular update and with a workshop structure; on the other hand to provide some operational tools, especially of a technological nature, useful for carrying out the project or applying it in other contexts. The Politecnico di Milano took charge of the training programme as a body accredited by the Ministero dell'Istruzione, Università e Ricerca (MIUR) [Ministry of Education, University, Research] for the development of school staff and provided experts, IT equipment and space. The initiative, sponsored and carried out by ScAR, was, as mentioned above, part of the broader training offer managed by the University's guidance services. This made it possible to also offer the courses to teachers outside the project and to make them accessible to teachers in all schools in Lombardy, marking a further step towards the dissemination and replicability of the processes.

The course began with an overview of heritage education in current scenarios, with references to Italian legislation and European policies, and a discussion of the concepts of cultural landscape and cultural heritage of proximity and the challenges of landscape education in everyday situations, particularly in fragile areas such as urban peripheries. Teachers were then presented with national and international experiences as a repertoire of good practice and provided with materials developed to ensure that participants had a documented basis for starting and working on the project area.

The second phase of the training investigated the theme of advanced tools and methodologies for the teaching of cultural heritage, providing a framework of the potential of new technologies in heritage education and introducing, through operational workshops, freeware techniques and tools for the knowledge and representation of the landscape and cultural heritage that would then be applied during the project activities.

A MOOC (Massive Online Open Course) dedicated to the use of digital storytelling in teaching activities was added to the in-person training courses. The course was made available by the Policultura partner project of HOC-LAB (Hypermedia Open Center Laboratory), a research laboratory also created within the Politecnico di Milano and operating in the field of multimedia communication and technology-supported teaching. The course, preceded by an in-presence discussion on the teaching potential of the use of digital



Landscape reading and interpretation workshop with lower secondary school students at Fondazione Prada tower building.

narratives in education, supported teachers in learning how to use the authoring tool “*1001 Storia*” and offered distance tutoring to teachers who decided to launch projects in this area.¹²

Pilot actions and open activities

Following the project design phase, initial consultations with partners and teacher training, the actual design of activities for schools, divided into “open” and “pilot” activities, began.

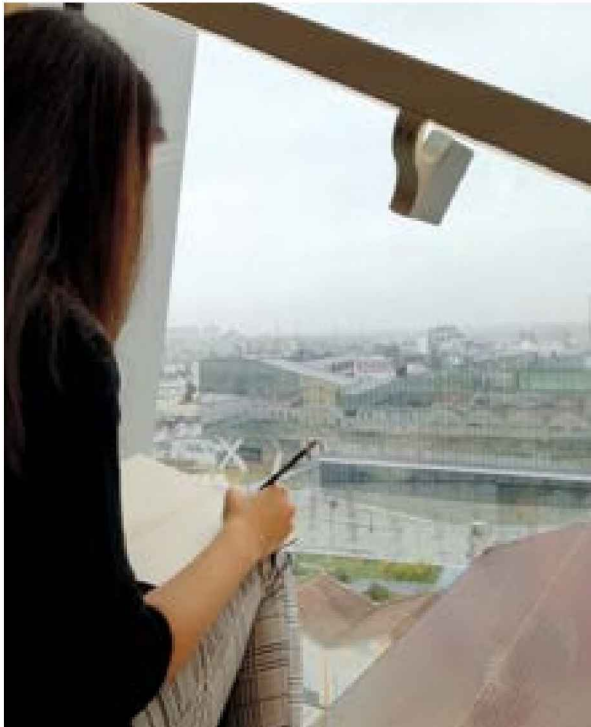
The open activities were specifically designed to be carried out by teachers on their own, without the help of experts. In order to assist and involve teachers, these activities were preceded by ad-hoc training sessions within

12. To deepen the collaboration with Policultura see chapter four.

teachers' courses and promoted by a communication campaign in schools. Starting from an initial idea, these teaching activities can be freely adapted by teachers to their working context (education level, location, age of students, subject area, subjects taught, internal teaching objectives, etc.). They were therefore defined as "open" also because they were designed as operational tools that could be modified by the user/teacher. These "tools" can then be shared via the project's communication channels, so that the results of individual planning and teaching experiments can be reworked and used again by other users/teachers, similar to the way open source IT tools are used. The reference could also be similar to the sharing principles of open knowledge and products applying creative commons licences. In this regard, the team proposed strategies for action and provided operational tools that teachers adopted, often adapting them to their own teaching needs and then sharing them through the channels provided by the project. Afterwards, these heritage education actions can in turn be replicated or reworked by new teachers outside the project term and perhaps shared again. In this way all participants take part in the construction of repeatable formats.

Pilot actions, on the other hand, are paths conducted jointly by the academic team and groups of teachers, with a co-design of the activities and a significant presence of experts (from the Politecnico or partner organisations) in the activities conducted in the classes and on the territory with the students. This working structure enabled researchers to develop more complex and structured pathways, with greater involvement of technology, and to test them themselves. The process also made it possible to select educational contexts of application that represented strategic targets in relation to the project objectives, distributing the experimental actions over the various school levels and in institutions with diversified users. The pilot actions were therefore functional to the in-depth and direct experimentation of the methodologies and to the refinement of the working hypotheses designed in theoretical form which, in this way, could be verified and refined in the field, through direct interaction with the students and the contribution of the teachers. However, the teaching formats are designed to be replicated by teachers on their own, and the technologies involved in the processes have been chosen with this in mind.

In most cases, the pilot actions were designed upstream and then adapted to the classes selected for experimentation. Along the way, however, some groups of teachers, inspired by the project and the training they had received, set up their own didactic paths which were then offered to the experts for collaboration and thus became pilot actions, further enriching the research.



A student from the Architectural Design Bachelor's Degree sketches the landscape in her notebook during the sketching workshop at Fondazione Prada.



A drawing produced during the sketching workshop at Fondazione Prada with the students of the "Fundamentals of Representation" course of the Bachelor's Degree in Architectural Design. (Drawing by Melani Watutantirige)

PRIMARY AND LOWER SECONDARY
SCHOOL ARCADIA

3B primary school Feraboli
"Atelier Colla e Figli: il mondo magico
delle marionette"

3D lower secondary school Arcadia
"Da Gratosoglio allo Stadera"

PRIMARY AND LOWER SECONDARY
SCHOOL F. FILZI

Class TEACCH lower secondary school
A. Toscanini
"La settimana della classe TEACCH"

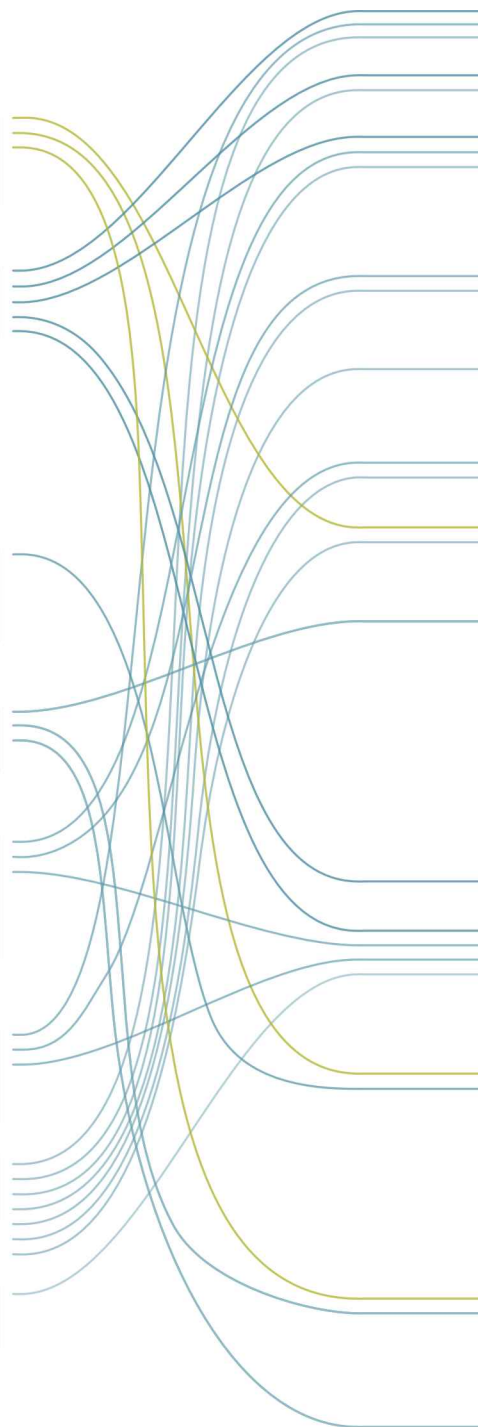
1D 3D lower secondary school A. Toscanini
"Vit@social"

3A 3B 3C 3D 3E lower secondary school
A. Toscanini
"Progetto murales" (selection of
students)

1E lower secondary school A. Toscanini
"Quattro Passi per il Vigentino e dintorni"

2B lower secondary school A. Toscanini
"Vigentour"

3C lower secondary school A. Toscanini
"Alla scoperta del quartiere Vicentino"



ANALOGIC ACTIVITIES

JOURNEYS IN THE NEIGHBOURHOOD

MIND MAPPING

LANDSCAPE DRAWING

NEIGHBOURHOOD MODELS

URBAN REGENERATION
PROJECTS

LANDSCAPE READING WORKSHOPS
AT FONDAZIONE PRADA

PEER LEARNING

INTERVIEWS WITH WITNESSES
AND EXPERTS

THEATRE WORKSHOPS

DIGITAL ACTIVITIES

MOBILE TOURIST GUIDES

URBAN GEOGAMES

ATLANTE DIGITALE DELLE MEMORIE

DIGITAL MAPPING

DIGITAL STORYTELLING

MAP STORYTELLING

VIRTUAL TOUR IN
THE CULTURAL LANDSCAPE

VIDEO MAKING

DIGITAL IMAGE EDITING

SHARING VIA SOCIAL MEDIA

PRIMARY AND LOWER SECONDARY
SCHOOL VIA PALMIERI

2A primary school C. Battisti
"Dal mondo allo Stadera: tutti i colori
dell'artigianato"

3E 3F lower secondary school S. Pertini
"Zona 5.0!! La periferia capovolta"

UPPER SECONDARY SCHOOL
W. KANDINSKY ISTITUTO PROFESSIONALE
PER I SERVIZI COMMERCIALI

3B (in collaboration with 3A)
"Questa città che non finisce mai. La
street art racconta Zona 5"

2A
"Leggere il paesaggio urbano con il
disegno dal vero"

UPPER SECONDARY SCHOOL C.VARALLI
TECNICO TURISTICO E LICEO LINGUISTICO

3CT 3DT 3ET 3CL 4CL
"Seguitemi prego.."

ALTERNANZA

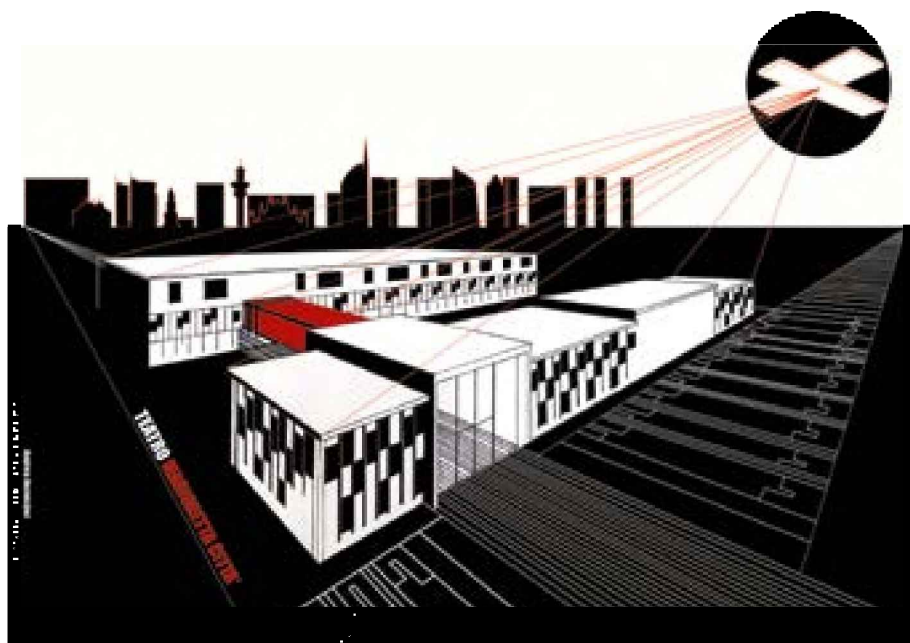
Teaching paradigms

From the point of view of teaching paradigms, the project is based on a number of fundamental methodological assumptions: project-based learning, peer education, authentic learning, multiculturalism and inclusion. The specific breakdown of these approaches will emerge more clearly from the description of the activities carried out, but it can be said in general that the process was based on the planning capacity of all parties at all scales, from partners to teachers to young learners, all committed to pursuing tangible objectives in a collaborative and efficient way. Because of its participatory nature and its bottom-up structure of knowledge construction and methodological development, the project aimed at valuing everyone's contribution and encouraging the exchange of knowledge, the synergy of skills and the sharing of results, with a view to peer education.

The opportunity to work in groups, within and across classes, to organise activities in a variety of ways and to divide up tasks, has also made it possible to enhance different abilities, including students with no motivation to study, specific learning disorders, disabilities or linguistic-cultural difficulties. The cultural exchange approach has also been the focus of specific actions, particularly in educational contexts that are especially challenging in this respect, such as classes composed mainly of pupils from different cultures and native languages. Finally, for all of them, the actions were set in specific contexts that put the school in contact with the outside world, first and foremost with families but also with administrative and cultural institutions, productive activities and the community, and led to the creation of products that could be used by the public, in the spirit of authentic learning.

From primary schools to university courses (and back)

By partnering with both primary and secondary schools, ScAR catered for a wide range of students from six to nineteen years old. Working with classes spread over three grades certainly made the process more complex from both a methodological and organisational standpoint. This choice (rather rare in the context of actions in collaboration with schools) offered some significant advantages to the project, first of all making it possible to address the issue in a structured manner, exploring the work opportunities that the different age groups, the different educational structures and the training courses allowed. Secondly, the structuring of the target group led to a step-by-step planning



Presentation poster of the project for a puppet theatre research centre in the Stadera neighbourhood realized by a student of the "Architectural Design Studio 1" of the Bachelor's Degree in Architectural Design. During the course, carried out remotely during the COVID-19 emergency, Atelier Carlo Colla e Figli simulated the commission. (Drawing by Andrea Deimichei)



A drawing produced during the sketching workshop at Fondazione Prada with the students of the "Fundamentals of Representation" course of the Bachelor's Degree in Architectural Design. (Drawing by Jiaqi Yang)

process, starting with a general plan of activities and broad methodological guidelines, and ending with detailed planning in specific situations. This made it possible to produce, downstream of the processes, basic operational indications and more flexible methodological guidelines, easily adaptable by teachers to a variety of situations. At the same time, the variety of contexts made it possible to develop structured and distinct case studies that can serve as good reference and/or comparison practices for new actions.

In addition to schoolchildren, numerous university students were also involved in the research at various levels: firstly, as interns directly involved in the project actions alongside researchers and teachers¹³; secondly, as thesis writers to develop thoughts on specific aspects of the project; and finally, through the implementation of ad hoc didactic contexts within the curricular courses, such as workshops and exercises designed to fit into the framework of the project activities.

Among the areas of action of the trainees are the preliminary mapping of areas, the construction of the territorial database, the support of activities with classes, the support of teachers in the use of IT tools and the archiving of materials, the participation in the organisation and management of events, the digitisation of contents, the carrying out of documentary research and the development of communication products. The thesis focused, in particular, on methodological aspects and on the analysis of the case study represented by the project in relation to some of its specific aspects, as well as on the experimentation of ScAR methodologies in new teaching contexts.¹⁴

As anticipated, during the two-year period 2018-2020, several courses and laboratories of the School of Architecture, Urban Planning and Construction Engineering (AUIC) of the Politecnico di Milano worked together engaging students in workshops and exercises dedicated to the themes and areas of the project.

The students of the degree course in urban planning conducted a survey of the status and modifications of the urban territory and of the local cultural heritage of Municipalities 4 and 5 in relation to the planning instruments

13. The school of Architecture, Urban Planning and Engineering (AUIC) of Politecnico di Milano asks students to attend an internship period during their Bachelor's and Master's Degree that could be attended in the research laboratories of the university.

14. The theses currently completed are: *"Educating children and young people about the urban landscape. The ScAR project as a participatory model"* by Giorgia Concato for the three-year degree course in Architectural Design, supervisor Daniele Villa and *"Dov'è casa: un percorso educativo sul paesaggio del quotidiano"* by Maria Stella Buoncompagno for the three-year degree course in Urban Planning, supervisor Camilla Casonato.

in force.¹⁵ The didactic experience was part of the “Re-forming Peripheries of Metropolitan Milan” project, which since 2018 has seen AUIC students delving into lines of research and design exploration in order to address the complexity, articulation and potential of the most problematic and unresolved areas of the peripheries in the Milanese metropolitan area. At the end of the course, students developed proposals for the transformation of areas in response to the call for ideas of the Municipality of Milan “*Milano 2030 Idee per la città che cambia*” [“Milan 2030 Ideas for the changing city”] and three projects were selected for the final presentation on 10 April 2019 at the Sala d’onore of the Triennale di Milano.

Two workshops were also organised for students of the degree course in architectural design.¹⁶ The first one was held at the Fondazione Prada headquarters, where the students were invited to examine the Foundation’s buildings and their context by means of graphic surveys, diagrams, sketches and views. This urban sketching activity allowed the students to reflect on a variety of themes, such as the design by Studio OMA, the relationship with the existing buildings and open spaces, and the relationship between the intervention and the neighbourhood. The recently built high tower housing the museum spaces was then taken as an observatory on the urban transformations of the Porta Romana terminal area, initiating a discussion on design as an element of knowledge and interpretation of the landscape.

The second workshop, entitled “*Disegnare insieme, condividere il paesaggio*” [“Drawing Together, Sharing the Landscape”], was conducted by bringing together a group of first-year international students and a multicultural primary school class.¹⁷ Eight to nine year old children and university students from a variety of backgrounds, languages and cultures shared a day of urban sketching and peer education on peripheral landscape issues. The activities took place in the heart of the Stadera neighbourhood, where the primary school is located, at a farmstead in an urban park.¹⁸ The bachelor students drew side by side with the pupils, who were tackling architecture and landscape drawing in a structured way for the first time. The younger ones brought to the experience their

15. Course in Urban Design and Representation, professor Daniele Villa (Course of studies in Urban Design, City, Environment and Landscape, three-year degree, first year A.Y. 2018-19).

16. Both workshops, in different years, concerned the Fundamentals of Representation course, taught by professor Camilla Casonato (Architectural Design course, three-year degree, first year, A.Y. 2018-19 and A.Y. 2019-20).

17. Primary school C. Battisti part of the Istituto Comprensivo Palmieri (primary and lower secondary school), third class.

18. Cascina di Chiesa Rossa.



Landscape reading and interpretation activity from the top of the Tower building of Fondazione Prada. Lower secondary students compare the observed landscape with the topographic map. The panorama is visible from the tower, located in the project area (Scalo di Porta Romana), towards the city centre. The workshop becomes a way to connect the knowledge of the neighbourhoods with a broader view of the entire city.

knowledge of the places and their curiosity for the work of the older ones, and the university students, stimulated by their role as guides, were an example for a careful observation of the buildings and the context, facilitating the approach to a specialised and unusual theme for the primary school.

Other bachelor students in the same year¹⁹, engaged in their first design experience, were asked to reflect on an unused area in the heart of the Stadera district, to interpret its relations with the urban surroundings and to design a research centre for puppetry inside it, in connection with the nearby headquarters of the historic Atelier Fratelli Colla company, a project partner, which collaborated in developing the exercise. Although the activity took place in spring 2020, during the COVID-19 health emergency, the students, who were unable to visit the sites, carried out documentary readings and virtual inspections of the areas thanks to the digital products previously produced by upper secondary school students and trainees in the ScAR project.

More mature students attending Master's degree restoration courses²⁰ also participated by designing conservation interventions and solutions for the reuse of a building at risk of abandonment located in the ScAR area.²¹ The results of the workshop were then shared with the public through an exhibition set up in the building itself, also with the aim of raising public awareness and encouraging debate on the fate of this space.

This overview of experiences illustrates an important aspect of the project, namely the drive to create synergies between schools, universities and civil society. All the students involved, from the very youngest to young people on university courses, were encouraged to get to know the area, its cultural values and its potential as citizens with experience and opinions and to act, within the processes, as "experts" to bring their own contribution to the reflection on the city and the enhancement of the cultural heritage, cooperating with each other and with the different stakeholders involved. Inviting the collaboration of different educational orders also made it possible to bring together different perspectives on the areas: that of the inhabitants of the neighbourhoods (primary and lower secondary school pupils and their families), that of students

19. Architectural Design Studio 1, professors. Francesca Serrazanetti, Vitaliano Tosoni, Camilla Casonato (Bachelor of Science in Architectural Design, three year degree course, first year, A.Y. 2019-20).

20. Architectural Restoration Studio, professors Valeria Pracchi and Luigi Barazzetti (Courses of Studies in Architecture, Interior Built Environment (ACI) and in Architecture and Urban Design (ADU), Master's Degree, first year).

21. The building is the deconsecrated church of San Vittore e 40 Martiri in viale Lucania. The exhibition, entitled "*R.S.V.P. Riapre San Vittore al Pubblico*" was held from 12 to 19 October 2019 (see chapter 5).



Students in "*alternanza scuola-lavoro*" programme visit the modeling laboratory of the Politecnico di Milano. The laboratory manager shows them how to use professional modelling machines.

who gravitate towards the area but come from short to medium distances (upper secondary school pupils) and that of university students from other Italian cities and regions and from countries all over the world.

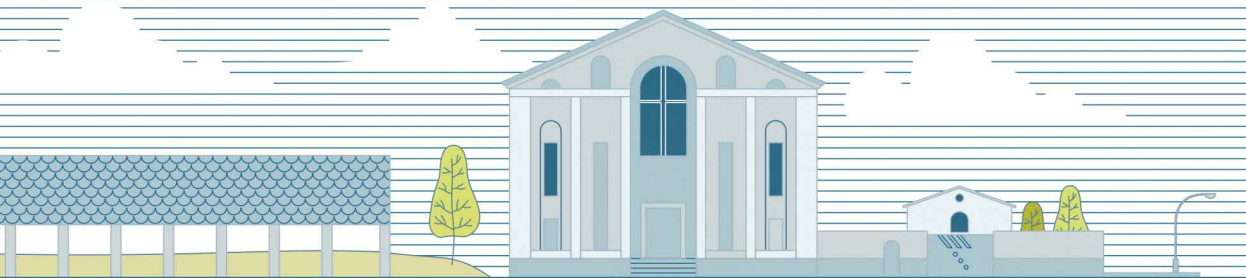
Alternating school and work

Within the framework outlined above, a specific consideration should be given to students at the end of the second cycle of secondary education (14 – 19 years old) who find themselves in the unique condition of transition from students to adult citizens, university attendees or workers. The alternation paths provided for by national legislation (L. 107/2015) are designed to offer young people the opportunity to experience the world of work, to gain useful experience for orientation purposes, but also, more generally, to experience the relational and operational methods and the assumption of responsibility involved in operating in an adult context, be it work or study. As part of the University's orientation services, the Politecnico actively collaborates with schools in Lombardy to create training courses of various kinds. In the context of the ScAR project, alternating school and work programme experiences have been set up to introduce people to the professions of management, protection, communication and enhancement of the cultural heritage and, more generally, to civic participation on issues of landscape and public space. These initiatives had the special feature of reaching institutions which, in terms of the profile of their students and the direction of their training, did not have an obvious preference for polytechnic training or even, in some cases, for university training in general. Many of the young people involved were oriented towards work or vocational training, sometimes young people at risk of dropping out of school or entering the NEET (Not in Education, Employment, or Training) category. The students had the opportunity to become active participants in a research process, participating first-hand in a segment of the collective work and collaborating with an internationally renowned scientific and technical university. ScAR's experience shows how putting young people of various backgrounds in contact with universities can be a significant operation, over and above educational guidance in the strict sense of the term. Through the project, young citizens, regardless of their future paths, had the opportunity to encounter scientific research and recognise it as an element of their own lives, as a cultural fact and as a social opportunity.²²

22. See chapter five.



chapter 3





ACTIVITIES AIMED AT UNDERSTANDING AND INTERPRETING

Discovering the City

Travelling through the neighbourhoods

The landscapes of the peripheries, whilst considered “minor” – in part because they are often run-down – are nevertheless, upon closer inspection, filled with a wealth of phenomena, stories and values waiting to be discovered. As we have seen, the European Landscape Convention¹ defines a landscape as «an area, as perceived by people» (Art. 1), but how do we perceive a landscape? The speed of modern travel, especially for our everyday journeys, seems to prevent us from observing and therefore fully getting to know the area in which we live. The ScAR project therefore offered its participants, students and teachers alike, a chance to take part in an exercise in rediscovering their everyday landscape. An activity centred around critical observation that, leading the participants around slow and deliberate routes, gave them the opportunity to read and interpret the area and its phenomena, values and stories.

These learning tours, so named by the research group because they were geared towards learning how to observe and read the urban landscape, involved direct experience of the area through a series of experiential walking tours. Similar activities were carried out in various ways by several of the classes involved, but here we will describe the experience of a small group who worked in direct contact with the experts. Thanks to the preparatory documentation work carried out, in some cases in collaboration with the teachers, the research group established a series of routes, each about five kilometres long, leading from the

1. Council of Europe, *European Landscape Convention*, Florence 20 October 2000.



Students in “*alternanza scuola-lavoro*” programme visit the Morivione district during the learning tours. The students report their impressions on the maps and collaborate with the experts to record environmental sounds and perform the 360° photographic survey campaign. In the background are the Fondazione Prada buildings.

schools either out towards other schools or into the city centre, touching upon various locations and phenomena in the area – some well-known, others less so. In order to increase the participants’ sense of involvement and collect information about the students’ experiences, a treasure hunt of sorts was part of the outing. The research team provided a series of photographs of the landmarks located along the trail, as well as a “blank” map of the area on which they were to trace the route they had taken and indicate the phenomena encountered along the way. The participants were also asked to use the map to note down and mark any impressions, anecdotes and memories they had of the area. The participants for this activity comprised lower secondary school students (age 11 – 14) and students on alternating school and work programme (age 16 – 19), for a total of approximately sixty participants, including teachers.² This

2. Students from the lower secondary school Arcadia, lower secondary school F. Filzi and upper secondary school C. Varalli.



Lower secondary school students during the learning tour report observations on the map.

activity proved to be particularly effective because the students did not merely fill in the maps with the name and location of each landmark, but actually supplemented them with new locations that were significant to them because they were part of personal memories, or because members of their families had highlighted them as venues of particular events in their lives, inserting notes and drawings and casting a spotlight on even the “minimal landscapes” that were previously considered banal (Ferlinghetti 2009).

During this experience, the students were encouraged to use drawing as a means of observing and reading the area, thus giving it a fundamental role as a vehicle for comprehension and critical exercise for the interpretation of the cultural landscape with all its phenomena, values and changes. Over the course of the activity, various forms of written and graphic representation of the landscapes were used, within which the informative dimension (recognising the place seen in a photograph, noting down its name, writing down what the teacher or the expert says about it in order to remember it) was

complemented by the subjective and interpretative dimension, linked to the critical exercise and the personal memories overlaid onto the topographical drawing. The students also made use of the potential offered by new technologies – especially Google Maps and its Street View feature – as a way of orienting themselves along the way, as well as social networks as a means of sharing and talking about the experience even outside the classroom. In this respect, it is interesting to note the initiative – which we will discuss in more depth later – of a group of students who, under their own steam, decided to create an Instagram page to share their pictures and feelings during the tours.

The activity proved to be useful in several ways. From an educational point of view, the learning tours offered the students an opportunity to try out a new way of discovering the area and attempting to make critical observations about the everyday places that they may never have paid much attention to before. As such, the participants were offered a method of analysis and understanding that went beyond mere appearances – a superficial glance – to explore the places in greater depth. Walking was proposed as an active practice of learning and discovery (Careri 2006) aimed at understanding and truly seeing the landscape of everyday life – one which provided the students with a means of appreciating the values of the places in question and of bolstering their sense of belonging. The learning tours, as we shall see, also offered them the opportunity to acquire new, widely applicable techniques and skills, relying on the support of the research group and the teachers to help them experiment with the use of innovative technological tools and services. Finally, these experiments laid the foundations for the subsequent development of digital products used to highlight the value of the cultural landscape of the outlying areas.³

Interviewing artisans and experts

Data provided by the MIUR in the *Piano nazionale per la scuola digitale* [National Digital School Plan], published in 2015⁴, indicates that a majority of schools are already adequately technologically equipped: in addition to the electronic devices made available by the schools themselves, most students and teachers also have personal devices (tablets and smartphones) of their own. These devices play a central role in the Plan and, in particular, in “*Azione 6*:

3. See chapter four.

4. Ministry of Education, University and Research (MiUR), 2015. *Piano nazionale scuola digitale (PNSD)*.

Linee Guida per politiche attive BYOD (Bring Your Own Device)” [“Action 6: Guidelines for Active BYOD Policies”], which promotes the integrated use of personal electronic devices during educational activities.

In line with these provisions, the ScAR team – where made possible by the age of the students and the situation (availability of devices, permission from teachers) – made use of smartphones in order to carry out activities with the use of technology. Thanks to the ease of use and the students’ confident mastery of the devices, they allowed the participants to document their neighbourhoods, collect accounts and images and effectively process them, all with a certain immediacy and including by means of personal technical devices to supplement those provided by the schools.⁵

One example of the sorts of activities carried out using smartphones is video interviews, which take on different meanings within the project: we moved from collecting the accounts of those who continue to perform the traditional trades of their country of origin, bringing multicultural expertise to the streets of Milan’s peripheries, to using video interviews as a tool for discovering the area, recording the tales and experiences offered by its residents, who have been there through the many transformations of the landscape in which they live, before finally interviewing experts in activities that constitute an element of what we define as the city’s intangible cultural heritage.

Video interviews as a means of collecting accounts

Collecting accounts with interviews is an essential process of mutual exchange, allowing participants to know the landscape and the local communities. This process offers a meeting point for the different perspectives and provides the opportunity for summarising non-homologous points of view by producing a contact point since the first meeting. In this regard, Milan’s peripheries proved to be fertile ground for the project. Take the Stadera neighbourhood in the south of the city, for example: an urban area where many cultures rub shoulders and where the situations of its families and the students in its schools also vary considerably. The classes at the local primary school⁶ include children from families who come from Eastern Europe, Africa, Asia and

5. The chapter four deepens the different uses of technology in educational projects. The topic is here anticipated to introduce video as a documentation tool.

6. Primary school C. Battisti part of the Istituto Comprensivo Palmieri (primary and lower secondary school).

South America. With this in mind, the ScAR project was chosen by a number of teachers as the guiding thread for their entire curriculum, making education about cultural heritage the driving force that helps them to address all the topics contained in the many disciplines of the humanities and sciences.

The educational project proposed by a class focuses on the theme of crafts, which is a common element shared by all cultures; this allows the children to explore the many different expressions of crafts, working in a local dimension in the area surrounding the school.⁷ This is an area which, as previously mentioned, is a historical neighbourhood on the outskirts of Milan which is undergoing a significant social transformation, where “traditional” artisanal and commercial businesses, passed down through generations of families, co-exist with workshops run by artisans from all over the world. Taking this as a springboard for ideas, the teachers started a process of reading and interpreting the neighbourhood through video interviews with the artisans who work near the school. The questions that the interviewees were to be asked were prepared in class with the children according to the question-and-answer method, using a way of interacting that differs from those commonly used in the classroom during lessons (as per the teachers’ report). The interviews were conducted in the workshops of the artisans, who told the children about how they learned their trade, the importance it holds in their home country, and how elements of local cultures have been incorporated into it.

In this project, diversity has been translated into an opportunity for exchange and dialogue. The mutual engagement encouraged the transmission of traditions, customs and habits, to the extent that even the children’s families became involved; they were invited to the school to talk about the culture of artisanal crafts in their home countries and to offer workshops in which the students were given the opportunity to learn about and experiment with the different materials and techniques specific to each culture. A mother from Santo Domingo, for example, taught the children how to weave natural raffia into baskets, taking care to explain to them the importance of raffia in the Dominican Republic as a material for making furniture and objects of all kinds.

7. The project was developed by a lower secondary class from C. Battisti school in Milan and called “*Dal Mondo allo Stadera, tutti i colori dell’artigianato*” [“From the world to Stadera: all the colours of craftsmanship”]. The project was developed in collaboration with teachers is widely described in the reports and interviews the research team performed with teachers and students. The book deepens this project in the next chapters.

Another traditional use of video interviews adopted in the project was the collection and documentation of the experiences of experts from various sectors. One such interview was carried out with the Atelier Colla, a historical and cultural company closely tied to the long tradition of puppetry, founded in the early 19th century by Carlo Colla and his family. The company is still active, and occasionally puts on performances at various venues in Milan, including the prestigious Piccolo Teatro.⁸ What is exceptional about the Atelier Colla – which is still based where it was founded over 200 years ago in the Stadera neighbourhood, one of the nerve centres of the ScAR project – is the fact that it crafts all the material for its performances in-house. Indeed, the building has long been home to the artisanal workshops that support the company's production activities, which have now been moved elsewhere. The company opened its doors to the students, offering them the opportunity to become familiar with the various expressions of this cultural organisation. The topic fit in with the curricula of three different school years – from primary school to upper secondary school – which all conducted and made use of the video interviews in different ways.

The pupils of a year three class from the primary school⁹ participated in an educational path entitled “*Colla e Figli Atelier: Il magico mondo dei burattini*” [“Colla e Figli Atelier: the Magical World of Puppets”], which gave them an insight into the inner workings of the company. The interviews carried out by the children with the team from the company, documented through both videos and photos, helped them to discover its history, the techniques used to make the puppets and costumes, and the secrets of bringing them to life. The students' reflection on their experience then segued into an activity involving writing scripts for a show set in the neighbourhood where the school is located. By reworking their experience and the knowledge they had acquired in their time with the company and bringing it to the stage, the children actively engaged with the intangible cultural heritage that they had encountered, incorporating it into their daily lives and transforming it into a tool for reinterpreting their own real-life situation.

Moving on to the secondary schools, some classes had the opportunity to watch rehearsals of the show “The Treasure Island” and meet the cast and crew behind it. On this occasion, a group of students from the linguistic upper

8. See chapter two.

9. Primary school Feraboli part of the Istituto Comprensivo Arcadia (primary and lower secondary school) in Milan.



Primary school students interview the artisans of Carlo Colla e Figli Puppet Company.

secondary school and the technical institute for tourism visited the Atelier and interviewed several professionals, such as the communications manager, the director, the soundtrack composer and the puppeteers themselves.¹⁰ These interviews painted an interesting and comprehensive picture of the specific

10. They are the students of the upper secondary school C. Varalli (technical school for tourism and foreign languages and literature high-school). This alternating school and work programme project, entitled “*Seguitemi, prego...*” “Follow me, please...”, configured as a pilot action and focused on the reading and communication of the cultural landscape with the use of advanced technologies, was particularly long and articulated. After a first phase of reflection on the themes of the project and the construction of mental maps of the most familiar places, the students explored the neighbourhoods, first around the school, then gradually further away, meeting with experts, building maps, collecting observations and integrating them with documentary research on the cultural landscape. Working on a long itinerary that crosses the project area connecting the school to a landmark known to the public (represented by the Fondazione Prada headquarters), the students built a cultural landscape communication campaign that included public presentations, construction of multimedia tourist guides, creation of digital collections for the Digital Atlas of the South Milan Ecomuseum and more. We will return to the activities carried out in this articulated educational journey at various times in this and in the next chapters.

skills and expertise involved, a blend of age-old techniques and modern methods. This opened the students' eyes to the complexity of the skills and amount of work that goes into staging a performance of this kind. These video interviews fostered a process of discovery and exploration of their intangible heritage, whilst also serving as material for the students to construct an in-depth account of the Atelier and its work. Following their visit, the group reworked the information collected on this piece of intangible culture in the form of interactive multimedia guides for mobile devices, constructing itineraries that differed from the established mainstream ones and offering them to the public¹¹. The appreciation and promotion of little-known areas is also an excellent starting point for stimulating interest and curiosity about our heritage, helping to regulate tourist traffic and, above all, encouraging responsible and sustainable forms of tourism (Primo piano nazionale per l'educazione al patrimonio culturale 2015, p. 14).

Video interviews as a means of recording observations

A class from the lower secondary school¹² used the tool of video interviews in a particularly effective way during their outing to discover the neighbourhood in which their school is located. The purpose of the trips was to take notes on the experience of passing through the outskirts of the city. As the students moved through the landscape, they used video interviews to record

11. See chapter four.

12. It refers to the lower secondary school A. Toscanini part of the Istituto Comprensivo F. Filzi (primary and lower secondary school). The didactic path in which this activity is inserted is among the most substantial of the research and was configured as a pilot action. The project, collected under the title "Vigentour" – from the name of the neighbourhood in which the school is located (Vigentino) – involved an articulated sequence of activities to read the urban landscape, its cultural contents and its transformations, along an itinerary that, crossing the area of action of the research, connects the school to the headquarters of Fondazione Prada. Among the highlights of the work there are mental mapping, exploration and mapping of neighbourhoods, a campaign of consultation of witnesses and citizens through video interviews, landscape reading and drawing workshops at the Fondazione Prada, the development of a serious mobile game based on geolocalised itineraries intended for peers, digital mapping and creation of collections for the "Atlante digitale delle memorie" [Digital Atlas of Memories] of the Ecomuseo Milano Sud and finally a workshop on urban design. The entire school has participated intensely in ScAR, creating many other educational paths across classes and collecting them all in a single project dedicated to the neighbourhood, opening new partnerships and proposing spin-off projects in continuity with research ("Murales Project"), finally organizing a communication campaign for the launch of the geogame and the return of the activities of the institute to the families in the presence of partners and representatives of the institutions.

Elementary school students engaged in a sketching exercise at Parco Cascina Chiesa Rossa during the *"Disegnare insieme, condividere il paesaggio"* ["Drawing together, sharing the landscape"] workshop.



their impressions, initial reflections, feelings and any memories that cropped up along the way, filming and interviewing each other. As they took down these observations, some students realised that they could not even remember the details or appearance of some of the places that they distractedly – automatically, even – walked past every day on their way to school. For example, many of them were surprised to discover buildings and bridges that they had never seen before; they stopped several times along the way to describe the landscape as if they were truly seeing it for the first time. In addition to recording each other and their own points of view, the pupils also carried out video interviews with the local residents they met on the streets – people who, unlike them, know these spaces very well – resulting in them learning about transformations in the neighbourhood of which they had found no mention in the historical documentation used as their research sources. As such, in this case the video interviews offered an extra dimension to the information available to the students, sparking new reflections. In taking a more critical and informed look at the places that populate their everyday lives, the students also

identified several critical issues and points of deterioration and decline. These, as we will explore in greater depth later on, resulted in their developing design proposals for the redevelopment of these urban spaces, imagining different ways of using them and numerous ideas for improving them.

Depicting the heritage and the landscape through drawing

As already mentioned on several occasions, the activities designed and proposed by ScAR for education on the landscape are geared towards equipping students with the basic tools required for reading and understanding the landscape, as well as learning to grasp the dynamics and values contained within it. It is no coincidence, then, that most of the activities make use of different variations of drawing of the landscape or the heritage as part of the various exercises. Drawing is the practice best suited to simultaneously considering the different elements of the environment being observed (both natural and man-made) and the relationships that exist between them, whilst at the same time focusing on the emotional aspects, sensations and, consequently, the meanings and values attributed to any given place.

One of the most useful exercises for this purpose is that of drawing the landscape in the field, when you are immersed in it. An interesting experiment conducted by the ScAR team involved proposing this activity to two groups of students of very different ages: a year two class from a primary school and first-year students from the School of Architecture Urban Planning Construction Engineering at the Politecnico di Milano.¹³ The Parco Chiesa Rossa – named for the old Cascina Chiesa Rossa within it, a farmstead boasting recently restored 12th-century architecture – proved to be the perfect subject for the exercise. For the older students, the activity was an opportunity to consolidate their graphic skills in reading the formal and perceptual values of space as preparation for a hypothetical project in the urban area. The way in which they framed a view and defined its boundaries are critical dimensions in drawing, representing a unique reconstruction of their individual perceptions of the space: a critical aspect that informs the process of visual research (Lavoie 2005). For the younger ones, meanwhile, the technical and communicative component of drawing constitutes a spontaneous language, free of any shame associated with limitations or gaps in any techniques or knowledge acquired

13. This experiment was mentioned in chapter two, which describes the methodological approaches used for the project.

Drawing of a farmhouse in Chiesa Rossa Park made by an elementary school child during the workshop “Disegnare insieme, condividere il paesaggio” [“Drawing together, sharing the landscape”] workshop.



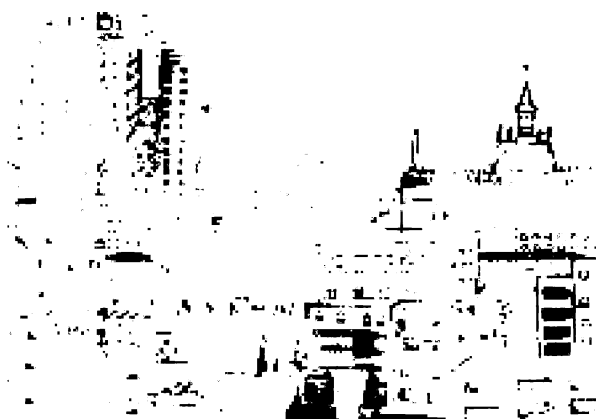
previously. With their coloured pencils, the children depict their reality – one that is no different to that perceived by their university-aged co-participants, of course, but summarised on the sheet of paper with unintentional symbolism and schematisation, the result of a lack of adequate technique and full manual dexterity. Looking at the children’s drawings, an unconscious symbolic dimension emerges clearly – even to an untrained eye – which makes it possible, in this specific case, to identify the primary elements and rework them graphically. Often in the drawings, the buildings which the children have focused on are translated into a two-dimensional representation similar to an elevation, in architectural terms. In some cases, however, attempts have been made to represent depth: a road has been drawn on the roof of the library, for example, in an attempt to provide an indication as to the difference in height between the level of the park and that of the road that runs behind the building.

Another example of landscape drawing through direct observation is the activity carried out at the Torre Fondazione Prada (figs. p. 77, 104 and 105). Peering out of the vast windows on the eighth floor of the building, following a few exercises involving the analysis and identification of the architectural features described in the next section, students from both the upper and lower secondary schools¹⁴ compared their drawings with a sketching of the dense urban landscape itself. In this area, the imposing Porta Romana rail yard is the main

14. A second-year class of the lower secondary school A. Toscanini of the Istituto Comprensivo F. Filzi (primary and lower secondary school) and a second-year class of the upper secondary school Istituto Professionale per i Servizi Commerciali W. Kandinsky [Professional school for Commercial Services].

feature in the foreground of the scene, with a succession of courtyard, linear and tower buildings behind it, as well as patches of half-hidden trees, in a sequence that leads the eye through the city and beyond, all the way to the Alps. To carry out this exercise, the ScAR team used a roll of sketch paper laid out over the window overlooking the landscape. On both occasions, the result was a long drawing created by all the students together combining different perspectives and visions, in part due to comparison, mutual observation and spontaneous collaboration. The choice of this type of medium thus proved to be significant in terms of the unexpected results produced: some students, for example, decided not to draw their own vision of the landscape independently, instead merging theirs with their classmates', ultimately creating a more extensive and complex representation of what they perceived. As Marinelli reminds us: «the landscape is necessarily something abstract and personal that depends upon our faculty of representation, as well as on the external appearance of things» (Marinelli 1917, p. 136); in light of this, each student expressed their own point of view, vision and interpretation of the landscape. Everyone sees through the lens of their own expectations, their own experiences – what they know and what they can recognise. Indeed, the students' drawings – despite the fact that in many cases, they represent the same stretch of the city or have even been explicitly created in continuity, thus running seamlessly into one another – reflect not only the different levels of manual skill shown by the artists, but also the personal filter through which each of them views reality. In some drawings, the urban area is packed with detail, whilst in others, it has been rendered in just a few lines: one girl, for example, depicted what she imagined seeing through the windows of the buildings, drawing curtains, dancing ballerinas, balconies adorned with flowers, and cats on the rooftops; conversely, other sections of the long drawing show an essentiality of the architectural elements geared towards a focus on the volumetric and spatial aspect of the buildings, represented as geometric solids to which a chiaroscuro effect has been applied to convey an idea of three-dimensionality. The relationship between representation and reality, far from being merely imitative, is based on a complex relationship made up of a great deal of back and forth, reading, interpretation and transformation.

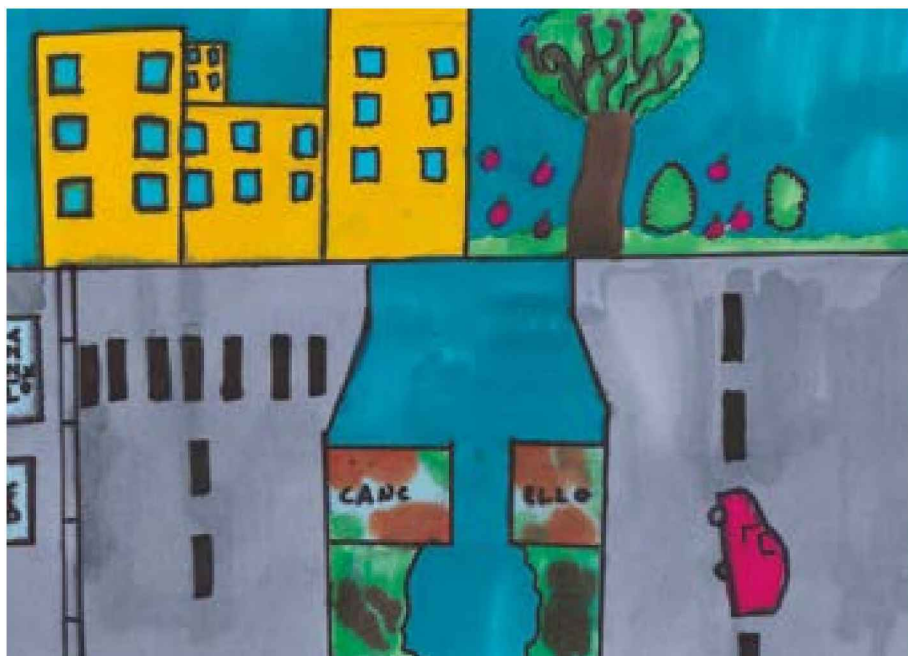
All of the experiments described resulted in engaging final products, and the drawings produced are ripe for consideration in countless ways and from multiple perspectives. What is most important in this context, however, is the process that saw a range of young people – both enthusiastic (the younger ones) and wary and reluctant (many of the older ones) – get involved themselves through direct action, working hard on a graphic expression that became meaningful through the process of making it – both the experiment



Above and to the right the collective sketching workshop of the urban landscape from the Tower building of Fondazione Prada.

Details of the collective sketch produced by the lower secondary school students during one of the workshops on reading and interpreting the landscape from the top of Fondazione Prada's Tower building. The drawing, made by the class on a strip of paper several meters long, is a collective representation of the landscape visible beyond Scalo di Porta Romana.





Drawing of the landscape made by a student from the Gratosoglio lower secondary school.

itself and how it has been shared. Drawing the landscape, in the activities involved in this project as well as many others, has thus become a way of stimulating and fostering a propensity for observation, reflection and comparison.

Reading the landscape from the towers of the contemporary city

In the experiment described above, the Torre Fondazione Prada – towering above the city at sixty metres high – represented an opportunity to observe the area from a different and unusual point of view. Thanks to its vast windows, the eighth floor of the tower is well-suited to being used as an extraordinary observatory providing a view of the entire city Northward, offering the opportunity to look at the neighbourhood both in itself, as a whole, and in relation to the rest of the city, and to pick up on the differences and particular features of each. In this context, the working group developed activities to do with the students aimed at helping them to interpret and understand the signs of change, architectural phenomena, and the relationships between spaces. The workshop was offered to different age groups: a second-year class of a lower secondary

school and a second-year class of an upper secondary school.¹⁵ The first exercise put to the students involved identifying the main landmarks that characterise Milan's skyline, finding their location first within two-dimensional panoramic photographs taken by the ScAR team from the same position, and then in the real landscape that they were observing (figg. p. 40, 75 and 84). The first architectural elements that they identified were those belonging to the historical fabric of the city; after the Cathedral and the Velasca Tower, they moved on to the buildings in the new Porta Nuova business centre that many students had already heard of and seen images of. The last to be recognised was the new City Life complex, which is yet to be completed. Engaging in this activity in small groups facilitated discussion and exchange between the students, allowing those who were less informed about the new architectural features of the city to find out more about them thanks to their classmates.

The next step asked the students to locate the identified landmarks on a map of the area of the city visible from the tower. Comparing the real urban space with a topographical representation was unquestionably the most complex task for the students, who had to learn to recognise what they observed within an abstract, symbolic translation of reality. To complete the exercise, the students were split into groups and had to attempt to exchange information on the location of the various elements, trying to deduce where they were based on their proximity to the buildings that they had already identified on the map. This kind of direct comparison between the real-life view of the urban landscape and two-dimensional representations thereof forced the students to make an analytical observation of the landscape, which also proved useful for the purposes of the last stage, in which they collected and translated their reflections into actual drawings of the city. This type of integrated learning – which stimulates visual thinking, data collection, problem solving, cooperative learning and the formulation of critical judgements – lays the groundwork for a rich and complex path of growth, moving towards the development of the awareness offered by a 'reality check' and, in broader terms, the process of building citizenship. Landscape education activities must therefore be interpreted first and foremost as a form of "landscape literacy" (Spirn 2005) geared towards helping students to acquire the basic tools for reading the landscape – "learning to see", as Turri so elegantly put it – recognising the underlying dynamics and values in the landscape (Turri 1998).

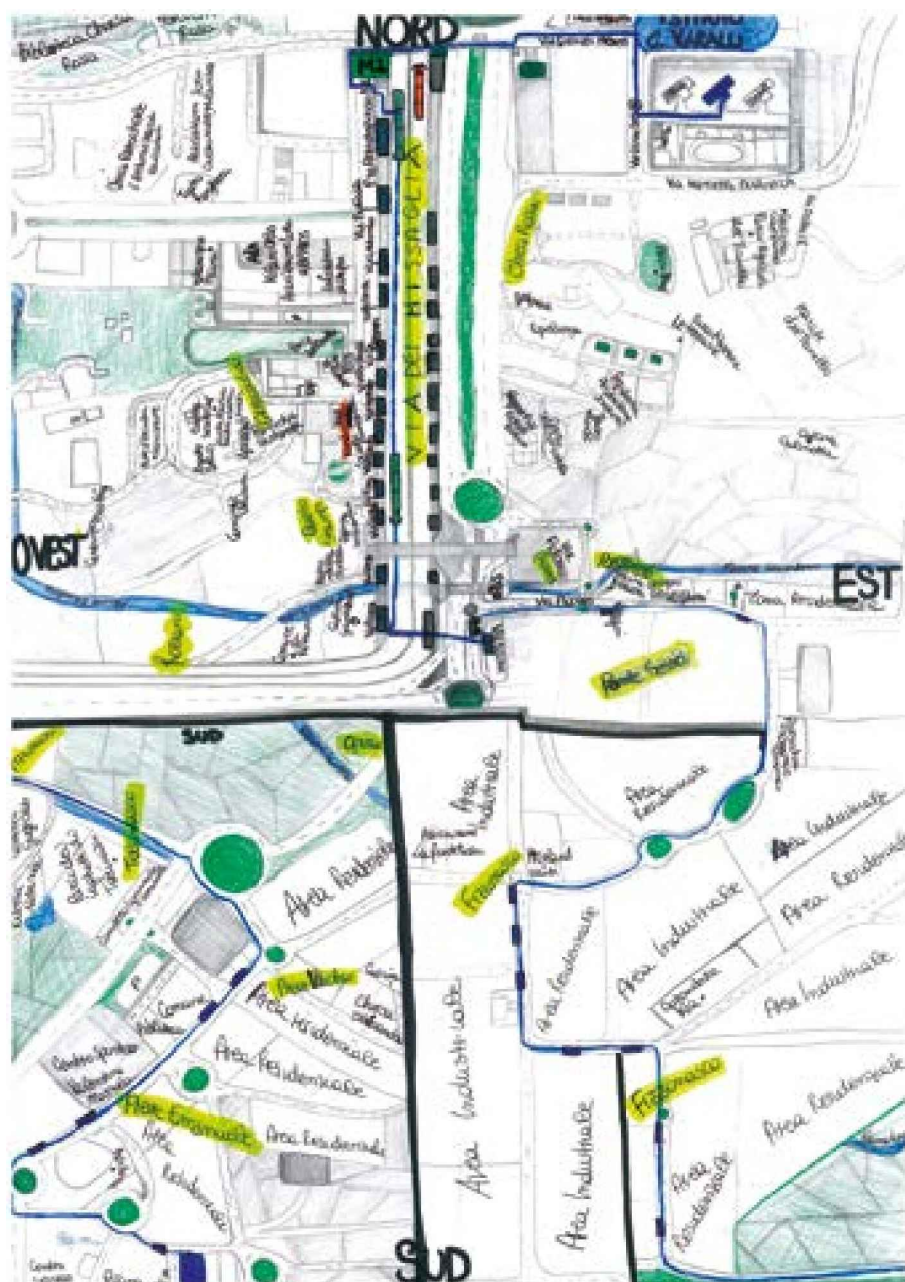
15. The institutions involved are the Istituto Comprensivo F. Filzi (primary and lower secondary school) and the Istituto Professionale per i Servizi Commerciali W. Kandinsky (upper secondary school).

Drawing mental maps

Young people's experiences in familiar places enable them to construct personal geographies from a very early age, drawing on their observations, explorations and everyday activities. According to Blaut, children are "natural mappers"; as they explore and discover new places, they acquire spatial awareness and use maps to assign meaning to their experience of the environment (Blaut 1991). Of the many route maps produced as part of the ScAR project, perhaps the most important are the mental maps that trace a subjective path, highlighting the young citizens' orientation along their journey; this is understood not only as the subjective ability to be aware of one's own location within an area – both in an absolute sense and in relation to the departure and arrival points – but also as a sensory experience of sorts, in that it involves both cognitive/perceptual aspects and emotional ones. «It is important for children to start making maps in the way that they start drawing; maps and drawings are representations of things that are emotionally important to them [...], they represent their experiences of beauty, secrecy, adventure and comfort» (Sobel 1998, p. 5).

As such, it is a process of collecting and processing information from the environment and from one's own body. The path starts from a sensory and perceptual approach to the "lived space" of the students, who form representations of personal geographies. Students of different ages (12-13 and 16-18 years old) were asked to draw the route that they take every day from home to school, translating it into a freehand-drawn map. The fact that they had to rely on their memory alone to piece together a map made it an entirely new experience for them, but once they had overcome their initial disorientation, they were able to develop representations that were incredibly rich in detail and information, capable of describing a personal vision of the urban landscape and conveying their experiences tied to the various places. The activity was run with students from both upper and lower secondary schools¹⁶, involving them in both more subjective paths – through the individual mapping of their personal route to school – and in collective representations, in which multiple students' experiences of travelling through the neighbourhood converged. The students started to draw the map with a view to making it a useful guide for those who did not know the places involved as well as they did. In terms of representation, in an attempt to overcome this obstacle and

16. Students from the following schools took part: Istituto Comprensivo Arcadia (primary and lower secondary school), Istituto Comprensivo F. Filzi (primary and lower secondary school), Istituto di Istruzione Superiore C. Varalli (upper secondary school).



Map of the area around the school made during mind mapping activities in an upper secondary school. The map depicts the border between the Stadera and Chiesa Rossa neighbourhoods.



Map of the home-school route created during the mind mapping activity conducted with a lower secondary school in the Vigentino neighbourhood. The author spontaneously portrayed herself inside the drawing with a small popup figure. By introducing a three-dimensional component into the two-dimensional representation, the student reinforced the subjective character of the map and the expression of her belonging to the neighbourhood.

help to provide a better understanding of the reader's position in space, the maps started to be populated with landmarks «which are particularly useful to children as a way of locating themselves or hidden objects on a map» (Blades, Spencer 1990, p. 151). Road signs, tram lines, the church, shop signs and indications of their preferred crossing points were then added in. As it is often useful to know where not to go in order to understand where to go, in these types of maps, students wishing to represent the route that they take to school draw both the streets that they take and those that they do not. Junctions or roundabouts serve as indicators of the direction they follow. In order to make the places even easier to recognise and identify, some maps have been labelled with the names of squares or roads, or even brief descriptions; this is notable in that it marks the use of the written word integrated into the drawing, together with the incorporation of iconic and symbolic codes either taken from cartographic representation or invented from scratch. This tool proved to be

particularly useful when the older students had to collaborate on a group drawing of their routes to school.

The maps had to be reduced in scale in order to fit in the routes taken by multiple students on the same sheet of paper, and in this context, the textual support of the names of the tram stops, the most significant architectural elements and the main roads became merged with their graphical representation. What can be seen in all the maps is a selective representation and a simplified or schematic depiction of the local and architectural elements; some of them opted for planimetric drawings or frontal projections laid on the ground, whilst others integrate two-dimensional “views” which intuitively apply orthogonal projections to representations which simultaneously render all three dimensions, such as axonometric and perspectival projections. In the case of a lower secondary school class, one student inserted her own silhouette in relief into her mental map, as if it were a playing piece from a board game, essentially including a three-dimensional component in the representation within the two dimensions of the sheet of paper, thus further reinforcing her expression of her intimate and personal sense of belonging to the neighbourhood. As these representations passed through the filter of memory, the drawings show significant variations in scale between the various elements of the landscape and distortions in the dimensional relationships, partly due to the instinct to convey the most significant elements as more important, and partly due to the absence of any kind of metric or topographical foundation.

These types of workshops provided us with a valuable insight into younger citizens’ perceptions of the area, but also an opportunity to trigger a shared reflection on the city, all whilst carrying out an exercise in cultural landscape education at the same time.

Rewriting spaces

“Constructing” the city: from map to maquette

The various processes of reading neighbourhoods that form part of the ScAR project began with a research stage, specifically involving direct observation of the area; the activities described thus far are examples of this. In the subsequent phases, however, each class chose to organise its activities in a different

way, in line with its own curriculum and with the direction it had taken within the project, often going in the direction of more extensive technological experimentation, as we shall see shortly.¹⁷ In some cases, the analytical reading phase described in the previous sections gave rise to reflections on the quality of the urban landscape, the emergence of a desire for transformation and, consequently, the start of a line of thinking geared towards design.

This is the case, for example, of the class mentioned previously, which decided to pursue a path investigating the culture of craftsmanship in the Stadera neighbourhood.¹⁸ The aim was to help the primary school children to become familiar the multicultural nature of the neighbourhood and to find ways for them to relate to it. The project not only worked on promoting the intangible culture of the small artisanal businesses operating in the area – a goal pursued through interviews with the craftsmen – but also combined this with efforts to introduce the children to the codified languages of cartography and architecture, with a particular focus on the route they take to school. The first step was to walk through the neighbourhood, paying careful attention to the landscape that they passed through and memorising the locations of the workshops. This phase of orientation and direct exploration of the places in question was fundamental to both the children's production, from scratch, of different representations of the places visited and their subsequent development of a comprehension of existing maps. Following this initial exploratory phase, the children reconstructed their route in a very simple way, making a concerted effort to draw up a map and then recall the sequence of the shops and a handful of other urban landmarks (starting with the school building), marking these down on a modular grid (fig. p. 39). In order to check that the information was represented correctly on the map, the children were assisted in using Google Earth, retracing their route from another perspective.

What emerged based on this reconstruction was the need to create a three-dimensional model of the area in order to better understand the relationships between the different elements that make up the landscape of the neighbourhood. The result was an interesting model which, despite being out of scale, juxtaposed the school and the various elements of the tangible and intangible heritage identified in a spatial relationship on a modular basis founded upon topological notions of continuity and contiguity (figs. p. 46 and 116).

17. See chapter four.

18. See note 7.

Drawing of the school façade made by a child from the Stadera neighbourhood primary school.

Drawing of the school plan made by a child of the primary school of the Stadera neighbourhood.



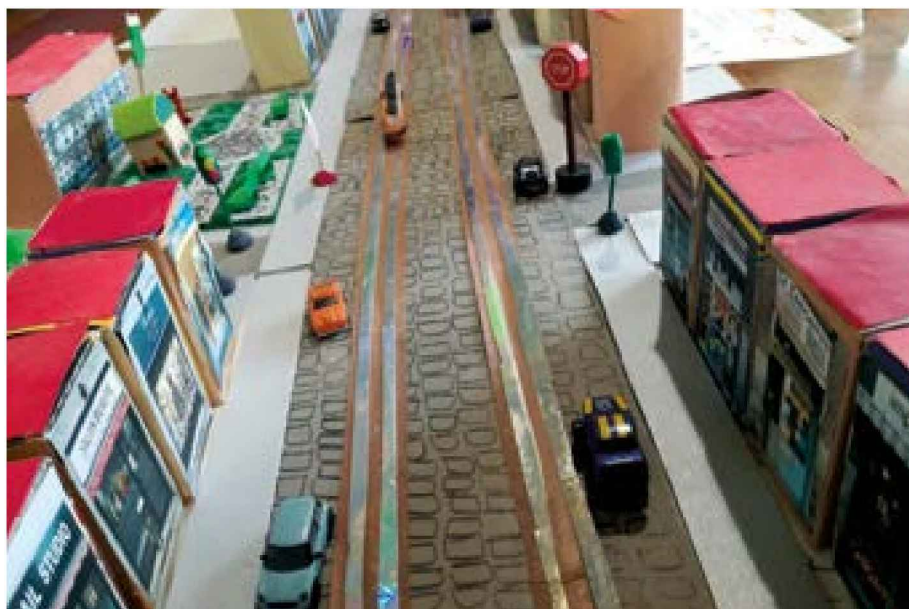
At the same time, the children were called upon to represent familiar objects and spaces – such as their school – from different perspectives (plan and elevation). The children then transposed these elements, which were familiar to them by this point, onto topographical maps, thus bringing them closer to being able to read and understand the codes of conventional cartographic representation. This series of operations laid the groundwork for the students to be introduced to the concepts of zenithal and frontal projections and, progressively, to the notion of scale, introducing the idea that in order to understand, represent and manipulate a space, one must be able to use certain signs and conventions.

The model was made using different materials corresponding to the various elements that make up the landscape of the street, with a preference for reclaimed and recycled materials as a means of introducing the young students to the ideas of sustainability and reuse. As such, old lightbulb boxes were used



A child from primary school becomes familiar with the topographic drawing of the area around his school. This activity marks the last step of a long path of experiential knowledge of the site, which was accompanied by the construction of increasingly abstract representations close to codified languages, from plastic, to topological, to intuitive zenithal, until the encounter with the standard topographic map.

for the buildings and shops, placed together according to the modular logic of the basic layout. Drawings of the building façades and photos of the shop windows were then glued onto the boxes, and the children's representation of the streets distinguished all the elements involved – such as the pavements, the lanes of the roads, and the tram lines – with the use of different colours of card. Mouldable materials such as modelling clay and putty were chosen for the trees and bushes, and the children decided to complete the scene with small toy cars. The teachers reported that the model did a great deal to foster the development of the children's critical thinking skills. Indeed, constructing the model allowed them to test out, in a hands-on way, whether or not what they were building actually worked, giving them the opportunity to correct any issues that arose and come up with new solutions, adapting their thinking to the situation. The model also served as a communication tool, helping the



The model of via Montegani in the Stadera district made by the primary school students. The model, made with recycled materials, is the result of the direct experience of the children who have surveyed the sequence of buildings and stores on the street. The model represents this sequence on a modular grid with topological logic; it returns the contiguity of the elements in real space and their relative position to the school building.

students to effectively recount and convey their experience, as also evidenced by the video recordings made by the research team.

In light of the children's incredible aptitude for manual activities in general and the enthusiasm for building the model shown by this group in particular, the project team came up with the idea of further stimulating their curiosity by setting up a collaboration with the Architectural Modelling Laboratory at the Politecnico di Milano (LaborA) to allow them to design play areas for the square near their school. The projects were brought to life directly in three dimensions in the form of models constructed with a wide range of repurposed and recycled materials provided by the laboratory. This allowed the children to freely apply the skills they had acquired in their previous experience of building models, also initiating an activity involving the redesign of open spaces in a way that reflected their desires in the use of the public space. This was done through the integration of volumes and shapes filled with their emotions, ultimately making for a personal and collective reflection on urban space and how it is transformed.



Primary school children participate in an activity at the Modelling Laboratory of the Politecnico di Milano (LaborA). Manipulating recycled materials, the children design three-dimensional play areas for the garden in front of their school.

Redesigning neighbourhoods: micro urban regeneration projects

As the case under examination here shows, and much as anticipated, the processes of discovery and promotion of the landscape also paved the way for reflection on the possible transformations of the public space, including by involving the students in urban design practices.

“Progettiamo nuovi spazi urbani” [“Let’s design new urban spaces”] is the title of the participatory design initiation course developed by the research team for a lower secondary school class which had already taken part in several activities focused on interpreting and communicating the landscape and cultural heritage as part of the overarching project.¹⁹

19. This is a second-year class from the lower secondary school A. Toscanini of the Istituto Comprensivo F. Filzi (primary and lower secondary school). The workshop was coordinated by Micaela Bordin, Professor of Architectural Composition at the Politecnico di Milano. The results of the work are documented in the final reports and the interviews with the teachers who were most closely involved with it.

The students immediately showed themselves to be active and interested in the activities, transforming the classroom into a fully-fledged creative workshop in which, through careful observation of the resources provided and identification of the critical issues in the area, they were able to formulate a design proposal for the revitalisation of the urban spaces in question. The first step was to collect written, oral and photographic documentation of information about the Vigentino neighbourhood, where the school is located. The children's curiosity and enthusiasm resulted in them involving their families, talking to their parents and grandparents, who contributed their accounts and memories of the places and events of the past that occurred in the neighbourhood. As such, by drawing upon different sources, the students garnered an in-depth knowledge of the history of their neighbourhood, something which – as noted by the teachers involved – altered their perception of the places that they once passed through absent-mindedly – unthinkingly, even – on a daily basis, making them more attentive and observant of their surroundings. The degree of interest and passion shown by the students in investigating the underlying reasons behind the changes and evolutions of the spaces familiar to them came as a pleasant surprise to both the ScAR team and the teachers themselves. Based on this, the decision was made to propose a task involving reconstructing the various transformations of the area over the centuries by means of a comparative reading of historical maps from regular intervals in time. On the basis of four topographical maps representing different periods in history, the students were able to observe the changes in the urban fabric from the end of the 19th century to the present day, ultimately producing a map that tells the story of a rural settlement established long ago and its subsequent incorporation into the city of Milan.

Armed with this new and interesting knowledge about their neighbourhood, the students went back out into the area, embarking on outings aimed at interpreting the elements of the open space and analysing the factors of discomfort, critical issues, deterioration or neglect which showed potential for the use of each and every urban space, large and small, with particular attention to open spaces such as parks and areas for small sporting facilities. All these observations were collected in a journal of sorts kept by each individual student and used as a tool for personal reflection and discussion with their classmates. The workshop activity then took the form of a process of dialogue and in-depth consideration of the meaning of living in and using spaces, leading to the formalisation of a project focused on fixing up and making use of certain urban voids and open-air public spaces in the neighbourhood.

The students split into groups to identify the areas on which they wished to work. One student, for example, opted to work on an area near the school



Students' logbooks developed during the "*Progettiamo nuovi spazi urbani*" ["Let's desing new urban spaces"] in the Vigentino neighbourhood.

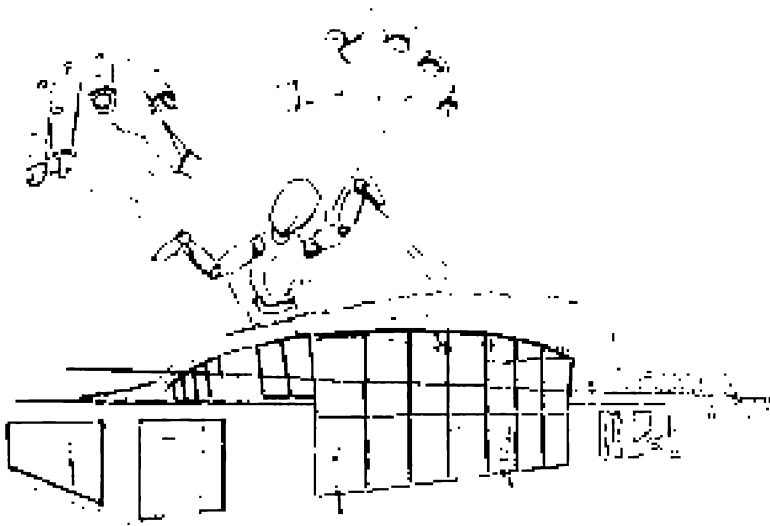
which they passed by every day, whilst others preferred to propose several micro-projects in the small interstitial spaces scattered around the neighbourhood. The resulting project proposals, designed by the students to improve the places that they frequent on a daily basis, offer simple solutions such as new urban furniture, establishing paths through green spaces, and inserting equipment to give disused spaces new functions and keep them cleaner. When it came to representing their ideas, after having studied the historical maps of the neighbourhood, it came naturally to the students to design a plan, drawing it up on tracing paper overlaid onto a topographical map of the area. They started by identifying and designating the areas to be worked on and then marked out the access points, connections and new paths. However, it was clear from the outset that a plan representation was not sufficient to properly show and describe all the details and functions that they intended to add to the existing services and street furniture. At this point, the detailed drawings of colourful fountains, ornamental hedges, park barbecues and musical benches became crucial additions, requiring full-colour axonometric representations to better describe the children's intention to make a place that had previously fallen into disuse more welcoming and pleasant.



One frame of the digital storytelling dedicated to the theme of street art in Gratosoglio created by students during the *"alternanza scuola-lavoro"* programme and winner of the PoliCultura 2019 Award. In the frame visionary graphic elaborations realized by the students starting with photographic images of local buildings.

Focusing their attention on their local area – in part thanks to the participation of the landscape drawing workshop at the Fondazione Prada described earlier – the students then brought up a particularly critical point that caught their attention: the perimeter wall of the now-disused Porta Romana rail yard, located opposite the entrance to the museum space. This consideration in turn sparked a new activity, designed by the teachers and involving multiple classes²⁰, based on the principle that “every place is a landscape”, and therefore even run-down places are included; indeed, these spaces in particular should represent opportunities for reflection, stimulating the observer to adopt an interpretative attitude and to come up with creative solutions for urban regeneration. In light of this, the students designed a series of murals depicting their own fantastical vision of the urban environment and to push for the improvement and promotion of a place in a state of neglect that is familiar to

20. Third grade students of the lower secondary school A. Toscanini. This activity triggered the micro urban regeneration project described in the chapter five.

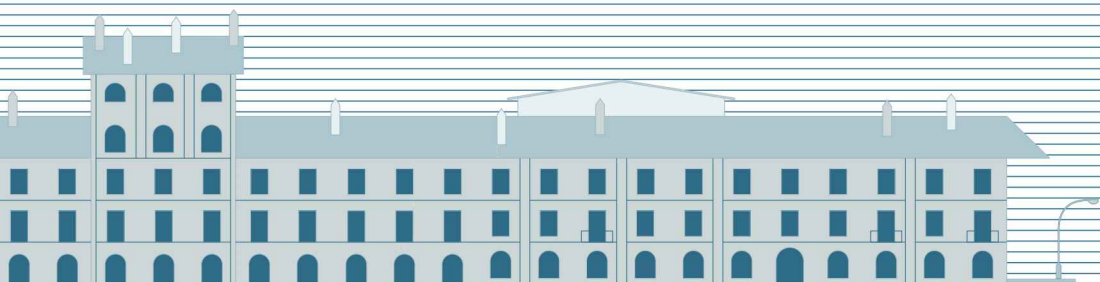


Presentation poster of the project for a research centre for puppetry in the Stadera district realized by a student from the "Architectural Design Studio 1" of the Bachelor's Degree in Architectural Design. During the course, carried out remotely during the COVID-19 emergency, Atelier Carlo Colla e Figli simulated the client. (Drawing by Daniel Donola).

them. The landscape is also, as Eugenio Turri argued, a theatre in which man is at once actor and spectator – the place of the actions of individuals, «the interface between doing and seeing what is done, between watching-representing and acting, between acting and re-watching» (Turri 2006, p. 16). In this sense, an experience such as the one described is capable of stimulating young citizens to relate to the landscape, observing it and modifying it, but always with careful attention to the «measure of their work, of their acting, of their being an actor who transforms and activates new scenarios: in other words, the conscience of their own action» (*ibidem*).



chapter 4





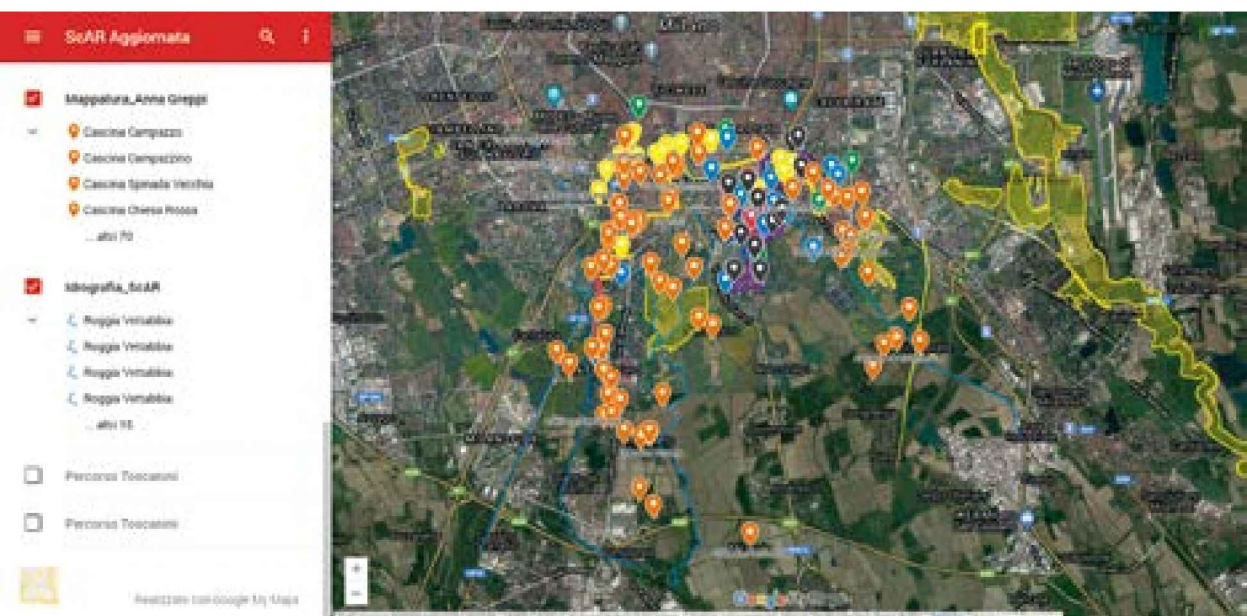
TECHNOLOGIES TO INTERPRET AND COMMUNICATE

Supporting processes

Digital tools as a means of starting down a path

The use and development of digital tools for the promotion and enhancement of the cultural landscape played an important part in the project, not only in terms of the activities offered to the schools, but also in the preparatory phases of documentation and planning. Indeed, the planning of the activities with the schools was supported by a preliminary phase of learning about the tangible and intangible cultural heritage of the area. Through bibliographical and documentary research, and subsequently through on-site surveys and interviews, the research team produced a series of open and free-to-use digital tools for teachers with the aim of offering support for the development of activities with classes and mapping out the less obvious elements of the cultural landscape. The documentation process was initially the work of the members and collaborators of the research project, who were later assisted by the interns for the on-site survey activities. Some teachers also gave their contributions by submitting phenomena and distinctive features that had escaped the notice of the project team.

This first stage allowed the team to put together an initial dossier of the tangible and intangible cultural heritage of the area, which was later offered to the teachers involved in the educational projects as a jumping-off point, providing ideas. All the material collected, such as historical images, documents, videos and maps, was then organised in an online database so that each element could have its own dedicated entry with a detailed documentation sheet. Each element was also catalogued (rural landscape, neighbourhoods expanded in the twentieth century, and parks) and labelled with keywords so that spatial and semantic relationships between the elements identified could be recognised and established.



Interactive map of the tangible and intangible cultural heritage of the project area.

In addition to the dossier, the research team also developed an interactive map, a cultural heritage GIS based on Google Maps which, in combination with the database, provides more in-depth information on the phenomena of the area. The map summarising the cultural landscape of the area was also incorporated into the official web portal for the project with a view to displaying the richness and complexity of the area and the elements that characterise it.

As further activities continued to be planned for schools – especially for the learning tours organised for the pilot classes – the research team also continued to add detail to the map and database, thanks to the collaboration of the teachers and interns who took part in the ScAR project.¹ The contribution provided by the teachers proved to be particularly important for bringing places and traditions not identified in the documentary research to the team's attention, but also for the identification of the most interesting routes and points for contemplating the landscape. Meanwhile, the involvement of the interns made it possible to organise widespread, detailed on-site surveys of the

1. See chapter three.

area which unearthed elements of the urban landscape that were previously undiscovered and only identifiable through direct experience. One example of this is the campaign to map instances of street art – a difficult task to achieve using online exploration tools alone – which demonstrated a significant presence of this form of art in the area; another is the mapping of local artisans and historical shops, and the inclusion in the map of areas undergoing urban redevelopment and regeneration as part of the Municipality of Milan's project "*Riformare le Periferie*" ["Reforming the Peripheries"]. With all of these features, the map played a central role in the definition and planning of the activities proposed by the team over the course of the project, whilst at the same time being the result of a participatory process aimed at helping those involved to discover and promote the cultural landscape of the area.

ICTs for bottom-up pathways of learning

In recent years, information and communication technologies (ICTs), as applied to cultural heritage, are becoming increasingly important in museum, archaeological and even naturalistic contexts. Digital tools such as interactive panels, mobile applications, online maps, virtual and augmented reality environments, and social networks are all offering people new opportunities to enjoy and promote cultural heritage in new and innovative ways (Ippoliti 2011; Settis 2012, pp. 282-304). At present, there are numerous examples of edutainment applications mainly targeted at younger people which aim to offer them an educational yet engaging experience of the elements of cultural heritage that they are visiting (Ott, Pozzi 2011; Sylaiou et al. 2017). Interactive games and applications, as well as virtual and augmented reality experiences, offer an immersive approach to cultural heritage which is capable of not only involving the users in a journey of discovery of a given place's history and culture, but also promoting the value that these assets represent for communities. In much the same vein, social networks – such as Facebook, Instagram and YouTube, in particular – are offering people the opportunity to expand the effective range of communication for the promotion of these assets and activities related to them, whilst at the same time proposing a subjective narrative of these places via the multimedia content and personal impressions being shared.

Heritage associations and institutions seem to consider ICTs as a means to support the promotion of their charge; however, the logic of use of these tools remains by and large tied to top-down dynamics (Gombault et al. 2016). Applications tend to be designed from a "product-user" perspective in

which administrations call upon the support of specialist professionals (educators, communications experts, historians and IT technicians) to propose an edutainment experience to the end user. Similarly, initiatives for the promotion and enhancement of the cultural landscape promoted by local non-profit organisations, such as ecomuseums, landscape observatories, and even spontaneous initiatives that have sprung up on social networks in recent years, all make use of ICTs as a means of popularising the heritage they protect, along with the associated activities. These organisations seem to operate with a view to promoting the area in an effort to encourage cultural tourism. However, the use of technology as a way of building and strengthening local communities, as well as for the promotion of the more hidden elements of both tangible and intangible cultural heritage, seems to still be in its infancy, perhaps precisely because of the top-down approach that is generally taken to the use of ICTs. Changing people's perspective on technology – i.e. from a medium as an end in itself to part of a process for fostering knowledge – can offer an opportunity for both the creation of innovative educational processes and the development of public awareness about the area and its values.

The schools on the outskirts of the city (from primary to university level) can provide a hotbed of ideas for this process and promote a more comprehensive use of ICTs, one capable of fully exploiting the opportunities that new technology has to offer. With this in mind, the ScAR project wanted to experiment with cultural landscape education activities in which the role of ICTs would not remain confined to its dimension as a mere medium for popularisation, but instead represented a powerful tool for education and the active improvement of the area. To kickstart this process, the research group proposed the use of a series of free-to-use web and desktop applications for the construction of interactive narratives of the cultural landscape. The pieces of software that will be presented were selected according to a criterion of inclusiveness based on their ease of use for even those with basic technological skills, thus allowing the participants as much autonomy as possible in the development of their narratives. The activities that will be presented involved the students working side by side with the research team on the technical development of the digital products, whilst the content creation aspect was entrusted to the students themselves, with the supervision of the teachers. In some cases, the activities presented here involved the research team working side by side with the students on the technical development of the digital products, whilst the content creation aspect was entrusted to the students themselves, with the supervision of the teachers. The students thus engaged as both protagonists and producers in the storytelling, tourist guide, online map

and virtual reality environment creation activities, taking full responsibility for developing and editing the content, as well as subsequently promoting the products.

Sharing representations

Building narratives: digital storytelling and map storytelling

In participatory knowledge communication processes, it is essential to seek out the strategies, tools and methodologies best suited to constructing a shared account of the places in question. This is why the construction of narratives – in all its various forms and facilitated by different tools on each occasion – constituted a central activity within the ScAR project, as emerges from the overall description of the process. Here, specifically, reference is made to the activities explicitly aimed at developing narratives, the process of which is supported to this end by the use of specific technologies.

As anticipated², since 2006, the HOC-LAB (Hypermedia Open Center Laboratory) at the Politecnico di Milano has been organising the PoliCultura³ contest, a competition based on sharing multimedia narratives that is open to classes from every year group, from kindergartens to primary schools, all the way up to upper and lower secondary schools. Since its first edition, the programme has seen the involvement of about 36,000 students and 3000 teachers, and aims to promote the use of digital tools in teaching that are capable of contributing to the innovation of teaching itself and offering its participants – students and teachers alike – a chance to acquire both digital and authorial skills. For the development of the narratives, the laboratory provides free use of “*1001Storia*”, an intuitive and easy-to-use online tool that allows teachers and students to create complex interactive stories, enriched with text, images, video and audio. In addition, Policultura also offers participating teachers access to a MOOC (Massive Open Online Course) dedicated to the use of the tool and methods for actively involving students in the activity. The contest

2. See chapter two.

3. See the web page www.policultura.it.

is structured according to school levels, and each class can decide whether to submit a story on a theme of their choice or participate in one of the special tracks, in which they must develop narratives relating to a specific theme defined by the HOC-LAB in collaboration with university departments, research projects or private actors.

Since the 2019 edition, ScAR has been a contributing organisation for one of these tracks, prompting the participants to develop narratives inspired by the landscape of everyday life in peripheral contexts. The aim of this track is to propose the lens of the notion of the cultural landscape which, beyond merely describing the natural and cultural heritage of a place, is also capable of conveying the area's identity, which is made up of stories, knowledge and values. Of the narratives submitted in the first edition, two of the most interesting examples were produced by a lower secondary school in Piedmont and a specialised secondary-level institution in the Gratosoglio neighbourhood of Milan.⁴ The two submissions offer two very different visions of the term "periphery", each telling the story of the area from the students' perspectives and conveying the relationship that they have with what they recognise as the "centre", namely the centre of Milan and the city of Turin.

The Piedmontese school presented a narrative entitled "*ScARamagna, la periferia dei talenti*" ["SCaRamagna, the Periphery of Talents"], in which the students, along with their teachers, question the very meaning of the term "periphery" itself, exploring the idea of whether their area is indeed peripheral and what sort of influence this context – which is at once rural and located within the social and economic fabric of Turin – can have on their lifestyle. Describing the history, cultural heritage and activities that define the area, the students expound on their relationship with the landscape of everyday life and the values that distinguish the identity of the area. The Milanese institute, meanwhile, submitted a narrative entitled "*Questa città che non finisce mai... La street art racconta la zona 5.0*" ["This City that Never Ends... Street art illustrates zone 5.0"].⁵ This piece describes the students' point of view on the city through a series of video clips made by them, telling the story of everyday life in the neighbourhood, reading its landscape through sounds, music,

4. The schools involved were: the lower secondary school of Caramagna in Piedmont, Italy, and the upper secondary school Istituto Professionale per I Servizi Commerciali W. Kandinsky in Milan.

5. This didactic project is an example of an open activity. It was conducted by the school starting from the stimuli provided by the research and with the tools made available to the teachers, without direct intervention of the experts. The activity, full of interesting ideas, is documented by concluding reports and by a video interview with the coordinating teacher, to whom reference will be made in these pages and then again in chapter five in a reflection on the impact of the project.



Two frames of the digital storytelling created by upper secondary students during the “*alternanza scuola-lavoro*” programme developed on the theme of street art in the Gratosoglio. The product won the first prize in PoliCultura 2019 Award.

images and interviews with local residents and business owners. A particular focus is given to the local street art and the Zona Autonoma Milano (ZAM) [Autonomous Zone Milan] social centre, located in an interesting example of 1930s industrial architecture which is a highly distinctive element of the urban fabric of the southern outskirts of Milan. The story concludes with a description of the mural painted inside the school itself and the visions proposed by the students for the future of the neighbourhood. Using collage and photomontage techniques, the students then created representations of their imagined transformations of some of their everyday places as well as new urban scenarios. From this perspective, it is interesting to note how digital storytelling, in addition to being adopted as a simple narrative tool, has also been adapted to the users’ needs, becoming a tool for imagining and envisaging new landscapes. The two examples do an impressive job of sensitively exploring two different meanings of “periphery”, sparking reflections on how, upon closer inspection, the physical and semantic boundary of this and other “peripheries” actually has blurred edges that are difficult to identify and define in a prescriptive way.

In addition to those involved in the Policultura contest, the ScAR project also offered the competing students and teachers other activities centred around developing digital narratives. More specifically, they were asked to develop interactive narratives about the everyday landscape through the use of the Knightlab educational software suite which, aside from providing innovative and easy-to-use applications, offers the option of sharing the results produced on a range of web platforms and social networks. Knightlab is an open-source project that offers digital storytelling tools especially for schools,

culture and journalism.⁶ The suite comprises a range of applications that can be used by students and teachers to create innovative educational paths that can even incorporate multiple subjects, such as geography, history, literature and art. Of this selection, the ScAR research team specifically recommended the JuxtaposeJS and StoryMapJS applications to the participants as, in addition to offering an easy-to-use interface, they also provide the option of creating interactive narratives of the everyday landscape through stories, images, videos and maps. To facilitate the use of these applications as part of landscape education activities, teacher training courses were organised, providing them with demonstrations of the potential of these tools and their possible uses, even outside the scope of ScAR activities.

Taking a closer look at the tools themselves, JuxtaposeJS is a service that allows the user to create an application that compares images by way of a slider. The tool gave the participants the opportunity to construct interactive narratives of the territory incorporating maps and photographs, allowing them to demonstrate the ways in which the urban landscape has evolved and transformed over time. StoryMapJS, meanwhile, is a storytelling tool that principally makes use of interactive maps. Users can create narratives in geo-localised stages, enriched with text and multimedia content such as photos, images, videos and audio. The software allowed the students and teachers to produce narratives of the everyday landscape that talk about the projects and stories of their neighbourhood in stages. One example of its use in this way is the teaching project submitted by two classes from a lower secondary school in the Chiesa Rossa neighbourhood.⁷ The teachers, with the involvement of the students, illustrated the features of the everyday landscape by presenting the historical phenomena and meeting places that define the neighbourhood. The participants interpreted and talked about the area and its history from their perspective, peppering the presentation with their own impressions and even linking it with topical cultural references. One group of students, for example, used the image comparison application to showcase the changes that had taken place in their neighbourhood following the creation of a vast mural by comparing photos from before and after it was painted (fig. p. 133). Meanwhile, a second group produced a narrative based on a map entitled “*Lo sbaglio della Conca*” [“The Mistake of the Lock”]: a journey through the

6. The project is promoted and developed by the U.S. Northwestern University in San Francisco and Chicago. For more information see the web page <https://knightlab.northwestern.edu>.

7. Lower secondary school S. Pertini part of Istituto Comprensivo Palmieri (primary and lower secondary school), in Milan.



Frame comparison application realized with JuxtaposeJS and developed by lower secondary school students. The interactive tool showed the evolution of the local landscape marked by the appearance of a mural and was shared by students through the "Atlante digitale delle memorie" ["Digital Atlas of Memories] created in collaboration with Ecomuseo Sud Milano (MUMI).

Stadera neighbourhood presenting the history of the most significant places and elements of its cultural heritage, with a particular focus on one of the most distinctive and memorable episodes to occur in the area, namely that of the "Conca Fallata" [Mistaken Lock]. There is an interesting backstory to this historical hydraulic system of Milan's waterways, the unusual name of which prompted the students to research its origins and etymology, reconstructing the history of the structure through documents and interviews all the way through to the present day. Other groups of students, also using the same tools, opted to concentrate on the route between home and school, presenting an interactive narrative of the everyday landscape including places significant to them, such as the sports centre, the park, their friend's house and even the supermarket.



Frame of a map-based interactive narration (map storytelling) created with StoryMapJS by lower secondary school students. The narration was shared on the “Atlante digitale delle memorie” [“Digital atlas of Memories] developed in collaboration with Ecomuseo Sud Milano (MUMI).

Constructing virtual tours of the neighbourhoods

Over the last ten years, the ever-growing range of free software dedicated to the construction of geo-localised narratives has offered a valuable contribution to education for schools at every level. There is both free proprietary software and FOSS (Free and Open-Source Software) available online, allowing users to experiment with and develop stories about an area, including through interactive maps and both virtual and augmented reality environments. The involvement of schools in the development of these narratives offers an innovative teaching approach with two main goals: on the one hand, to involve and train students and teachers in how to produce and share a digital application, and on the other, to offer end users a tool that can tell the story of the urban landscape from the perspective of the young residents of the neighbourhood.

During the learning tours mentioned earlier⁸, ScAR experimented with the use of spherical digital cameras with a view to documenting the experience and demonstrating the possibilities offered by such images to the participants. When connected to a smartphone, the camera made it possible to produce a sequence of geo-localised spherical photos taken at regular intervals, which were later uploaded to Mapillary, a platform for sharing street-level imagery.⁹ By reading the metadata of the images, which includes their geographical location and capture time, Mapillary was able to piece together the route taken on an open web map. The participants were then offered the opportunity to take part in a global Volunteered Geographical Information (VGI) project in which people around the world share the geographical information they have collected for the purpose of constructing digital maps that are more accurate and, above all, free for all to use.

The spherical photographs and materials collected and processed for other additional activities – such as the development of interactive tourist guides, which we shall come to shortly – gave the research team an opportunity to experiment with creating stories in virtual reality. These experiments were then translated into a prototype for a virtual tour which could then be followed autonomously by schools, using free online services specifically suited to the learning contexts of upper and lower secondary schools. Indeed, the tool is suitable for users with technical setups and IT skills comparable to those found in schools, aside from some small implementations.

8. See chapter three

9. See the platform of the application: www.mapillary.com.

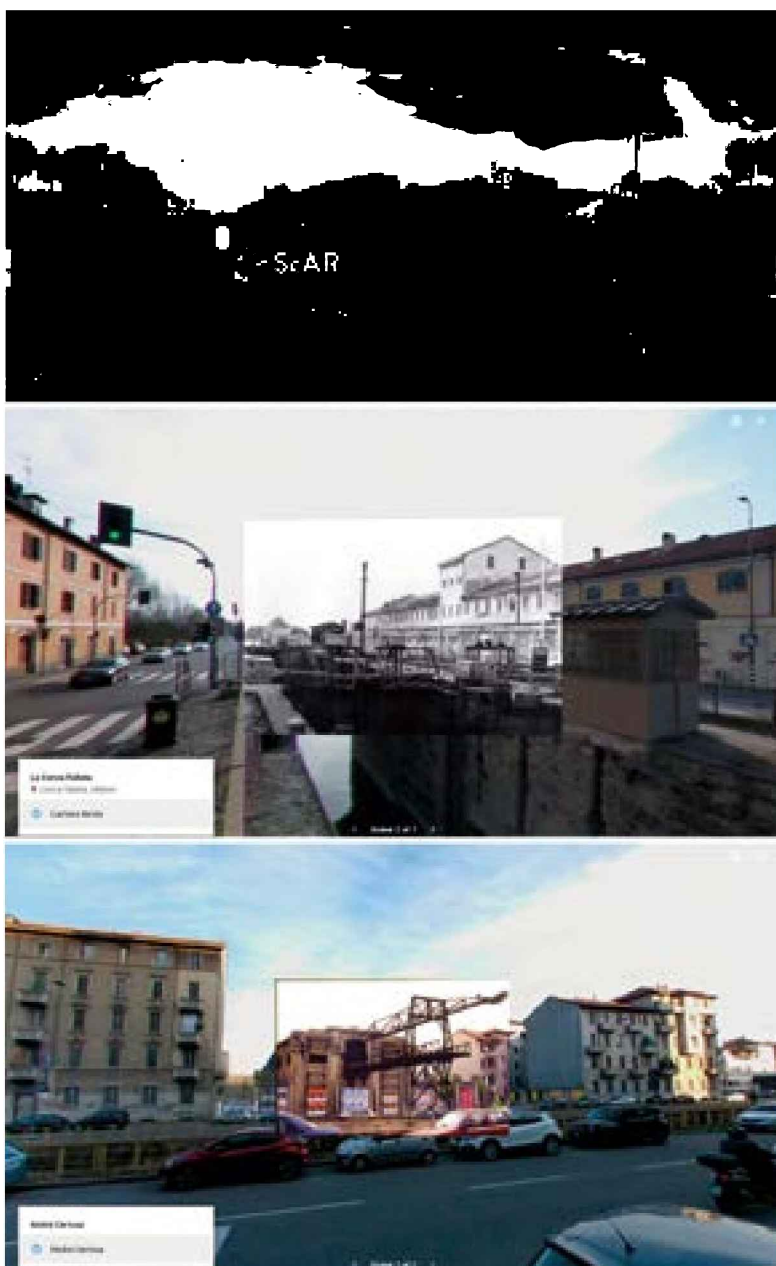
After having analysed several software for the development and sharing of virtual tours, all freely available online, the research group finally opted for the Google Tour Creator application, which appeared to be the most functional for the teaching activities in question. The web application has an intuitive back end which is suitable for even those with fairly basic IT skills, allowing them to create a sequence of immersive scenes using self-produced spherical images – such as those collected over the course of the learning tours – but there is also the option of using the images available on Google Street View. The software suite also offers another application, Cardboard Camera, which allows the user to capture spherical images complemented by ambient sounds, all with their smartphone. In addition, Google Tour Creator allows the user to customise the scene with interactive frames in order to incorporate multimedia content, such as images and audio files of ambient sounds or narrations, thus making for a more engaging experience tour overall.

The resulting prototype, entitled “*Experience tour del quartiere Stadera*” [“Experience tour of the Stadera Neighbourhood”], consists of six interactive scenes – as well as an initial one to guide the user on how to use the application – and passes through the various points of interest contributed by the students.¹⁰ By following the virtual route, the user can virtually visit the most significant places in the neighbourhood.¹¹ Within each scene, the user is guided by a narrator and can listen to the ambient sounds recorded during the on-site visits carried out with the students. Users can even interact with the scene: for example, they can activate the in-depth story behind the elements of cultural heritage being observed, or even superimpose historical photos over the modern-day images in view as a way of seeing and learning about the evolution of the landscape over time.

The prototype was then made available on Google Expedition, a sharing platform which allows users to view the tour in both desktop mode and through Cardboard virtual and augmented reality goggles. The option of freely sharing the final product offers a further educational tool for students and teachers, as it both allows a cultural landscape usually hidden from most people to be discovered and makes the platform a potential virtual meeting

10. In this case, the students from the upper secondary school C. Varalli.

11. Starting from the Conca Fallata and the historical building of the Cartiere Binda paper mill to the Park of the Cascina Chiesa Rossa, all the way to the historical social housing buildings. The tour then continues, entering the Church of Santa Maria Annunciata in Chiesa Rossa, designed by Giovanni Muzio in 1936, and showcasing the light installation by artist Dan Flavin, created in 1996. Finally the tour ends at the Molini Certosa flour mill, an important example of industrial architecture from the early 20th century.



Frame of the virtual reality tour "*Experience tour del quartiere Stadera*" ["Experience tour of Stadera neighbourhood"] developed by the academic team starting from the contents produced by the students. The tool was a prototype for a possible activity for schools. The application allows the user to explore the area by displaying information, listening to sounds and overlapping historical images over the current panorama.



A child tests the prototype of the virtual reality tour during the exhibition of the ScAR project during the event "*Festa delle scuole del Municipio 5*" ["Festival of Municipio 5 schools"] at Parco Cascina Chiesa Rossa.

place to be used by different schools. Indeed, it enables students and teachers from different places to share their cultural landscape education experiences and promote their everyday landscapes to a wider audience. The virtual tour was finally offered to students and teachers during meetings for the purpose of collecting their views on the potential of the tools, before being presented at the dissemination events for the ScAR project, where it was tested by a public composed of different age groups – including some very young people – through the use of low-cost virtual reality viewers which make it possible for users to try out the experience with just their own smartphones.

Sharing via social networks

Social networks, with their ever-growing ubiquity, have changed the way in which daily life, social interactions and even places are communicated and represented to the wider world (Van Dijck, Poell 2013). Beyond their implications in the commercial and advertising worlds, these platforms also allow for the construction of interesting narratives which deserve to be explored in greater depth. Facebook, Instagram and YouTube – the three social networks par excellence at the moment – not only offer a platform for sharing images, videos and other multimedia items, but also serve as a tool for creating first-person narratives with content enriched by a wealth of personal impressions, reflections and stories. Furthermore, if integrated into educational processes with students, social networks can become a virtual place for sharing and interaction between peers which allows for discussion and the subsequent formation of groups of people linked by common issues. As such, social networks can represent an ally in efforts to promote elements of both tangible and intangible cultural heritage, especially for the assets and places that are generally left out of the most popular tourist and cultural circuits. Telling the story of an everyday landscape through social networks thus becomes a way of conveying the distinctive features and values of the places in question, whilst at the same time bolstering the local inhabitants' sense of belonging to them, as well as having a positive influence on visitors' perceptions. From this point of view, social networks can play an important role in landscape education processes and be offered to young people as tools which allow them to talk about their daily lives and promote the places closest to their hearts. In this context, the sharing and interaction tools made available by Facebook and Instagram – such as creating pages, using hashtags and promoting posts, amongst others – give the participants an opportunity to develop brand-new stories about the everyday landscape that truly convey the user's personal point of view, values, perceptions and stories.¹²

In addition to using social media to broadcast its activities and events in the area, ScAR also promoted the use of the #scarpolimi hashtag in the schools involved in the project for all communications regarding project-related

12. The introduction and circulation of the hashtag for this project allowed the team to view and analyse all activities and events related to ScAR. In order to monitor the activity on the social media channels, the research team finally integrated a social wall into the project website (<http://www.scar.polimi.it/#socialwall>), an application which made it possible to view all posts tagged with the #scarpolimi hashtag in real time.

activities. The spread of the hashtag was useful for broadcasting the activities of the project through crossposting, i.e. referencing and directing users to the social media pages of other private and administrative bodies. The students were also asked to use the hashtag on any photos, images, videos and text to flag up elements of the everyday landscape with a certain significant to them, thus employing a new context and various dynamics to enrich and develop one of the most extensive bottom-up processes of collecting information and interpretations on places currently in existence. This proved to be useful not only for gauging the students' level of involvement in the project outside of the teaching activities themselves, but also as a way of promoting a more conscious use of social networks and their potential. In light of this, one example of particular interest is the initiative of a group of students on alternating school and work programme who created a shared Instagram account of their own volition as a place to document the project activities from their point of view. The students used the account to use both images and text to describe and share their impressions of the various outings, project activities, visits to cultural institutions and interviews with professionals, such as the interview with the project manager of a theatre company or their meeting with the director of an architectural modelling laboratory at a higher education institution.

Offering tools to the community

Playing and engaging others: landscape gamification

Gaming, especially as a medium for educational actions aimed at an audience of young people and families, is increasingly becoming a tool for spreading awareness of cultural heritage, with all the promotive effects this engagement tends to bring about. Gaming experiences allow users a way of being directly involved in the experience of the landscape and are an integral part of the development of an edutainment process capable of conveying the values of the area (Ippoliti 2011). Indeed, the educational entertainment scene has many examples of landscape gamification, both digital and otherwise, which give users the ability to interact with an area and its background through apps which communicate the local history or discovery paths which allow them to visit brand-new places or

find out more about interesting elements or features of cultural heritage. These devices are presented with an innovative educational approach which proves effectively engaging for not only the younger age groups – from six to fourteen – but also families. In most cases, these products are developed in institutional or professional contexts with a top-down logic, and as such, involving younger users in the design stages represents an innovative element in this scenario.

ScAR approached classes in a lower secondary school with an activity involving the development of an urban game for mobile devices. Directly involving students and teachers as early as the development and organisation phases of the game gave them the opportunity to truly play an active role in designing the technological tool and developing its content. With this, the participants became the creators of the game rather than merely the end users of the application. This activity encouraged the students to observe the everyday landscape in greater depth than ever before, seeking out new perspectives and recognising the values and hidden treasures of the area that they live in. They deemed the cultural landscape – the values and stories that make up the identity of the place – to be relevant and worthy of being communicated and represented, even to those who are not local to the neighbourhood. In this activity, the development of the narrative, the route and the stops along the way aims not only to present the elements of cultural heritage recognised as such by all, but also – perhaps more importantly – to paint a picture of the cultural landscape from the perspective of the community that lives in it. This translates to the end user being involved in an authentic and engaging experience of the area which offers both an innovative lens through which to view the neighbourhood and a peer-to-peer learning process which allows these young citizens to express their perceptions of their everyday landscape to other young people.

Specifically, the activity resulted in the development of two urban games based on GAIASmart, a mobile application (Carli 2017). The application allows even amateur developers to create a geo-referenced narrative, a journey consisting of multiple stages in which the users are required to perform tasks and solve quizzes in order to proceed to the next step and complete the story. The two areas selected within the wider area covered by the project were Vigentino and Gratosoglio, two districts on the outskirts of Milan which, whilst apparently close together – at least geographically and historically speaking – have some marked differences in terms of the composition of the social fabric of their residents. Indeed, Vigentino has a great deal of private housing and, on average, a high percentage of university graduates and employed people, whereas Gratosoglio has a high percentage of public housing built in the 1960s and 1970s, along with a low employment rate (PGT Milano 2019).

The choice of age group of the students (12 to 13 years old) was largely informed by their level of familiarity with IT tools and the fact that, still being relatively young, they would be more inclined to get involved in the game-oriented approach of the activity. Furthermore, lower secondary schools – unlike upper secondary schools – mostly gather students who have grown up and live in the neighbourhood, meaning that they are likely to have a sharper, more attentive eye for the ins and outs of the area.

The classes worked on developing a stage-based narrative for the area, starting from their school and travelling through their respective outlying neighbourhoods before each ending up at a place of widely-recognised cultural significance. The phases of creating both the route and the narrative involved an initial field visit led by the project team, which provided tools to stimulate the collection of the students' impressions and prompted them to carefully observe the neighbourhood and flag up its key locations.¹³ An initial route, drawn up by the experts, was then gradually added to, incorporating stops and landmarks suggested by both teachers and students who provided their expertise and knowledge of the area. This preparatory phase offered the students an important opportunity to discuss and reflect upon their everyday landscape. The participants were encouraged to exchange their opinions, stories and memories of the places they passed through and note them down so that they could later share them in class. For the next part of the activity, the students and teachers worked independently, collecting material to help them develop both the narrative and the stages of the game, using both documentary research in the local libraries and field research in the form of interviews with residents, business owners and significant figures from the neighbourhood community. This greatly encouraged the young citizens to interact with the residents – both new and old – of the neighbourhoods and to ask about their lives, their businesses, their memories, how and why they settled there and how their everyday landscape had changed over the years. This meant that the participants were taken through a process of intercultural and intergenerational dialogue.¹⁴ The narrative and the individual stages were developed following guided templates drawn up with a view to simplifying the subsequent creation of the final product. For each stage, the students and teachers provided the developers with the geographical location, the content and the task that the user would have to perform in order to move on to the

13. See chapter three.

14. Interviews as an educational mean is explained in the chapter three.

next one; these included questions on local history, exercises in recognising significant elements (e.g. identifying an architectural detail in a square or on a façade), or even collecting photographs of specific views that had to be recognised and identified in the field according to a given image. Finally, the development team adapted the narrative and the details of each stage – in some cases with the assistance of a professional storyteller – before developing the IT architecture and then publishing the game on the application platform.¹⁵

It is interesting to follow the narrative paths chosen by the individual classes to observe how communicating the experience of the area can translate into a collective process of building and sharing knowledge.

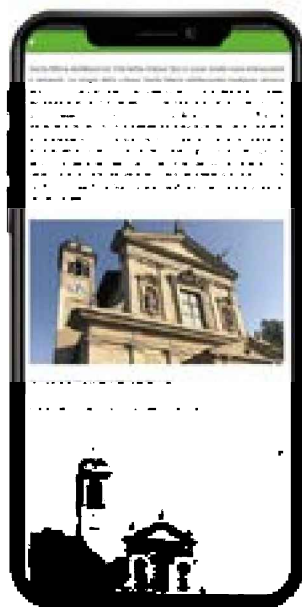
The first urban game, entitled “*Vigentour – Scopri il tuo futuro nel Vigentino*” [“Vigentour – Find Your Future in Vigentino”]¹⁶, tells the story of an imaginary young protagonist, Ambrogio, who has just finished his final exams at the end of lower secondary school and is trying to figure out what sort of future he would like to pursue. Ambrogio guides the user along the entire route, which starts from the school, passes through Vigentino, and ends at the Fondazione Prada headquarters, a landmark of the neighbourhood. Throughout each of the twelve stages, the user comes across historic buildings and locations in the neighbourhood, with Ambrogio explaining the stories behind them and their value for the local community, all whilst mulling over the possible career paths he could take in the future. This young “virtual guide” also prompts the user to answer questions on local history, to go to a certain location so as to take a closer look at it, or to take a photograph of a specific detail in order to move on to the next stage. The route finally ends in front of the entrance to the Fondazione Prada’s exhibition spaces, where Ambrogio discovers his passion for art. The young man envisages an urban redevelopment project for the surrounding area, imagining what it would look like to “improve” the perimeter wall of the Porta Romana rail yard with a series of murals designed by the students (fig. p. 144).

The second urban game to be created¹⁷ is entitled “*Alla scoperta del quartiere Stadera con una guida misteriosa*” [“Discovering the Stadera Neighbourhood with a Mysterious Guide”] and invites the user to discover the distinctive elements and stories of the urban landscape along the course of a river, the Lambro Meridionale, as well as the Gratosoglio and Stadera neighbourhoods.

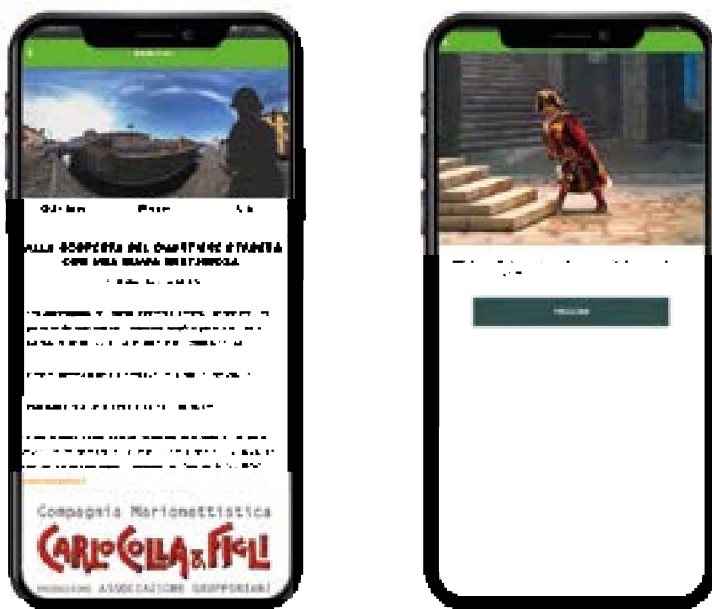
15. See the GaiaSmart platform, accessible at <http://www.gaiasmart.com/>

16. Developed in collaboration with a second-year class of the lower secondary school A. Toscanini in Milan.

17. Developed in collaboration with a third-year class of the lower secondary school Arcadia in Milan.



Screenshots of the geogame "*Vigentour – Cerca il tuo futuro nel Vigentino*" [*Vigentour – Find your future in Vigentino*]. The game drives participants to discover the neighbourhood and was developed by the students of the local lower secondary school in collaboration with the ScAR and GaiaSmart teams.



Screenshots of the geogame *“Dal Gratosoglio allo Stadera con una guida misteriosa”* [“Discovering the Stadera Neighbourhood with a Mysterious Guide”]. The game drives participants to discover the neighbourhood and was developed by the students of the Gratosoglio lower secondary school in collaboration with the ScAR and GaiaSmart teams.

The stated aim of the game is to find out the identity of the protagonist, who guides the player through the eleven stages with a variety of quizzes and activities. Along the way, the mysterious guide tells their story and that of the places visited over the course of the route. The game finally ends at the workshop of the Compagnia Carlo Colla & Figli, where the protagonist reveals himself to be Girolamo, one of the theatre’s historic puppets. The aforementioned puppet company – explored in more detail earlier on – supported and assisted ScAR and the students involved in the project by offering not only photographic and documentary material for the game, but also a prize for those who complete the entire route, namely a discount on a ticket for one of their shows.

In both the cases in question, the ultimate purpose of the gamified tours is to build and share the story of the neighbourhood as seen from the perspective of its younger citizens. The games intend to encourage people to explore the area, with all its stories and landmarks, whilst also teaching them the skills needed to critically observe the everyday landscape, even in cases where it

may appear, at first glance, to be devoid of any cultural significance. Both the routes start at a school – an “ordinary” place in the neighbourhood – moving through significant points in the local urban landscape along the way, and finally ending at a location that is widely recognised as culturally significant, in some cases even at an international level, such as Fondazione Prada.

Creating interactive guides for curious tourists

A collaboration with the students and teachers of a secondary school that includes both a technical institute for tourism and a linguistic school presented an opportunity to build a project for the promotion of the cultural landscape by developing interactive tourist guides which can be used on mobile devices. The project, entitled “*Seguitemi, prego...*” [“Follow me, please...”], was designed to fit within the framework of the alternating school and work programme.¹⁸

Developing the tourist guides involved a preparatory phase in which the students discovered the area through learning tours in the neighbourhood, engaging in a series of activities aimed at reading and interpreting the urban landscape. The participants were asked to trace the route they had taken on a map provided to them and to visually recognise and locate on the topographical outline certain landmarks in the area, as indicated by the research team. As part of the activity, the participants were also asked to keep a sort of travel diary, noting down their opinions as well as any points or locations that they found interesting.

In this case, as is often the case in secondary schools, most of the students did not actually live in the neighbourhood where the school is located, and thus had only a cursory knowledge and experience of the area, mostly relating to the journey between home and school and any school-related activities. As such, the initial learning tour represented, for many of the participants, a genuine journey of discovery of the urban landscape, highlighting the existence of interesting elements and unexpected stories in a landscape that they passed through on a daily basis but largely had no real knowledge of. The activity also offered the participants an opportunity for discussion and reflection on the area and the fact that even urban landscapes apparently devoid of any cultural significance whatsoever can be filled with hidden gems and a strong local identity.

18. Upper secondary school C. Varalli. The project involved twenty-four students, aged between fifteen and eighteen, from third and fourth-year classes of the technical school for tourism and the foreign languages and literature high-school (Liceo Linguistico).

The students then proceeded to collect documents and accounts about the locations involved and, in collaboration with the working group, carefully selected the stops to include in the guides for the tourist trails. It was at this stage that some rather interesting stories woven into the very fabric of the local landscape emerged, changing and enriching the routes that were initially proposed. This was the case, for example, of an urban farmstead that became the symbol of the local citizens in the neighbourhood who were active against the property speculation of the 1990s, with their story emerging from the accounts given by the residents and some teachers.¹⁹

The students then reworked and translated the materials collected to serve as the source for the texts of the interactive guides into two languages, finally developing a compelling narrative centred on the area and its history available for the use of Italian and foreign tourists alike. For the development of the guides themselves, the research group suggested that the participants use *izi. TRAVEL*: a free online service dedicated specifically to developing professional tourist guides for mobile devices such as smartphones and tablets. This tool allows the creator to put together themed trails enriched with hypertext content and audio narration tracks to guide the user as they follow the tours. For each point of interest, the tool allows the creator to indicate its location and establish a “trigger area” to send a push notification informing them of the presence of a point of interest for which they can then read (or listen to) the history and view historical images and videos. The application has a desktop-based back end which allows the creator to mark these points of interest and insert content, before linking them together to establish the final tourist trails. The use of the platform was proposed in *ad hoc* training meetings during which the students and teachers learned about how to insert text and multimedia content, establish the routes and “trigger areas”, and finally publish the guides and promote them on the service’s sharing platform. The guides are now available for free to the public in both Italian and English (figs. p. 150 and 151) and, departing from landmarks of international fame such as the Fondazione Prada headquarters, they take tourists on an exploratory journey through areas that are rarely – if ever – frequented by mainstream tourist

19. The farmstead referenced here is the historic Cascina Campazzo, now home to the Parco del Ticinello. The residents interviewed – some of whom were teachers – shed light on its history as a symbol against housing speculation in the neighbourhood. In the late 1980s, a real estate group intended to parcel out the agricultural area of the farmstead and build a series of residential buildings. However, the local residents formed an association and, over the years, they managed to block the expansion project, instead promoting the formation of the current agricultural park and the renovation of the historical farmhouse at its heart.

groups, venturing into long-established neighbourhoods and up-and-coming new locations to discover a wealth of historical buildings, contemporary art installations, ancient waterways and new urban configurations.²⁰

Upon completion of the project, the students and teachers organised an event to present their work to their fellow students from other classes, their families, and the general public, also offering visits of the local area as a means of testing out the applications.

Thanks to the usage statistics provided by the izi.TRAVEL platform, it was possible to verify that the tours did indeed reach a sizeable international audience, achieving a significant goal in terms of “authentic learning”, including as regards the vocational training scheme activities and the objectives of connecting school, society and the professional world that are central to this type of educational experience.²¹

The experience also shows how, within the processes of conveying the true value of the everyday landscape, schools can also play a role as bastions of local culture and promotion, even seeking out unlikely audiences such as, in this case, meandering tourists in search of unusual trails to discover the identity of places that may be off the beaten track.

20. The routes – which follow two sequential yet independent routes – connect the site of the school with the Fondazione Prada headquarters, which was chosen as a tourist attraction. The first of them, entitled “Exploratory Tour from the Chiesa Rossa Neighbourhood to Morivione”, is around six kilometres long and connects the upper secondary school C. Varalli to the historical Ricevitrice Elettrica AEM (an electrical substation), passing through twelve points of interest connected to local history along the way, such as the Conca Fallata, the historical Stadera neighbourhood, and Giovanni Muzio’s Chiesa Rossa, with a light installation by Dan Flavin inside. The second trail, entitled “Exploratory Tour from Morivione to the Fondazione Prada”, is around seven kilometres long, starting from the Ricevitrice Elettrica AEM and ending at the Fondazione Prada building. This route focuses on the urban transformations that the Morivione neighbourhood has undergone over the last two centuries. As such, the tour tells the story of the Morivione and Vigenzino neighbourhoods’ agricultural past, the transformation of the former into one of the most industrialised areas in the city at the turn of the 20th century, the process of deindustrialisation that began in the 1980s, and the “Symbiosis Project”, which is currently engaged in redeveloping the Morivione neighbourhood; indeed, the area is afflicted by many disused industrial spaces, within which the new Piazza A. Olivetti has been established, along with the Fondazione Prada headquarters, designed by renowned architectural firm OMA. Both trails are available on the izi.TRAVEL platform, accessible at <https://izi.travel/it>.

21. In the first seven months from publication (May 2019-February 2021), the two tours were viewed by approximately 2000 people and completed by 178, half of whom were not native speakers of Italian. This is an encouraging figure in light of the audience of the application which, based on the number of downloads, could reasonably be described as a ‘niche’ product.

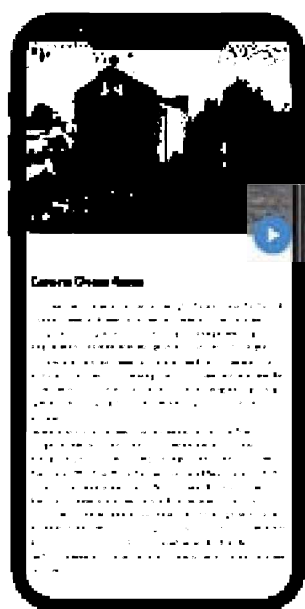
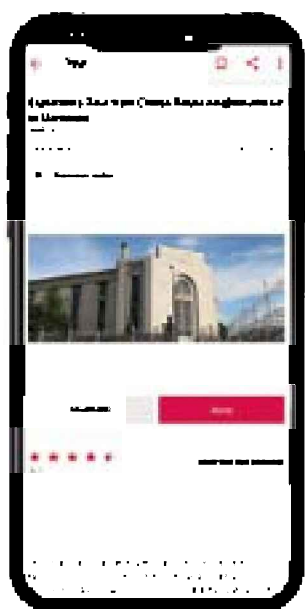


A student during the *"alternanza scuola-lavoro"* programme works on the backend of the Content Management System Izi.Travel to develop the interactive tourist guide.

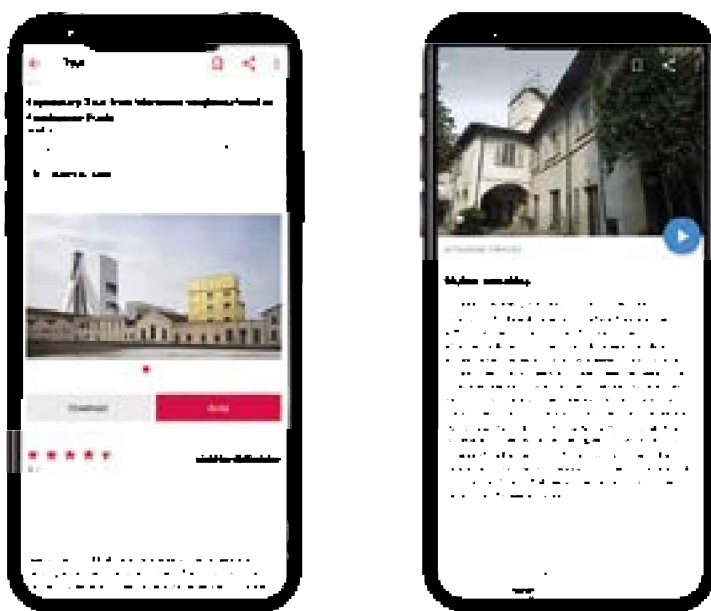
Sharing reflections, products, methodologies: the digital atlas of memories

As previously mentioned, one particularly important local actor involved is Ecomuseo Milano Sud (MUMI).²² A well-established practice throughout Europe, community museums or ecomuseums are set up by a community of citizens who work closely with institutions with a view to promoting the places where they live (Riva 2017). MUMI and its partners – including Municipalities 5 and 6 of Milan, the Fondazione Rete Civica Milano and other private and non-profit organisations – aim to promote and enhance the area not only by cataloguing its tangible and intangible cultural heritage, but also – perhaps most importantly – through actions which directly involve its citizens. To pursue its goals, the ecomuseum organises various initiatives in the area aimed at making the local community more aware and mindful of the values of the everyday landscape, especially in collaboration with schools. The MUMI

22. See chapter two.



Frame of the interactive tourist guide “Exploratory Tour from Chiesa Rossa to Morivione” developed by students with Izi.Travel during the “*alternanza scuola-lavoro*” programme.



Frame of the tourist guide for smartphones “Exploratory Tour from Morivione to Fondazione Prada” developed by students with Izi.Travel during the “*alternanza scuola-lavoro*” programme.

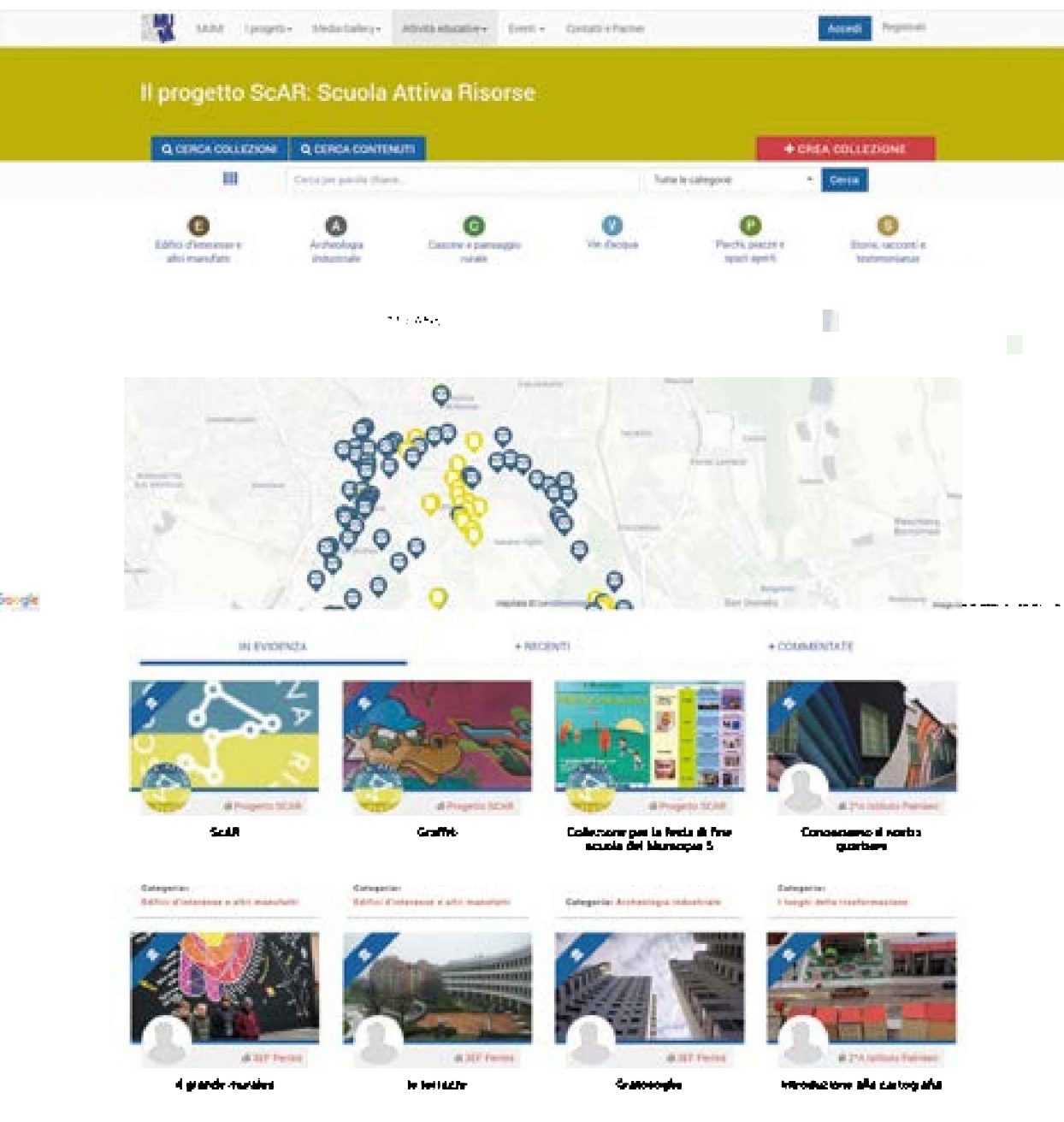
ecomuseum also boasts a significant digital component, with the website offering the implementation of ICTs tools specifically for the promotion and discovery of the local landscape, such as a geoblog and a web map. As such, the field activities that take place in the area are complemented by an array of open-access digital tools for communication and use of the museum’s content.

The collaboration between ScAR and the ecomuseum MUMI led to the development of the “*Atlante digitale delle memorie*” [“Digital Atlas of Memories”], a web application which provides somewhere for schools to share their impressions, thoughts and fragments of local history. The Atlas – developed by the technical team at MUMI – is in essence a geoblog which allows users to insert geo-localised multimedia content which tells the story of the local area. As well as being organised by type, the content submitted is also divided up into categories according to the characteristics of the local landscape that it pertains to: waterways, industrial archaeology, farmsteads and rural landscapes, parks, squares and open spaces, historical buildings, etc., whilst an additional category provides a dedicated place for stories, tales and accounts.

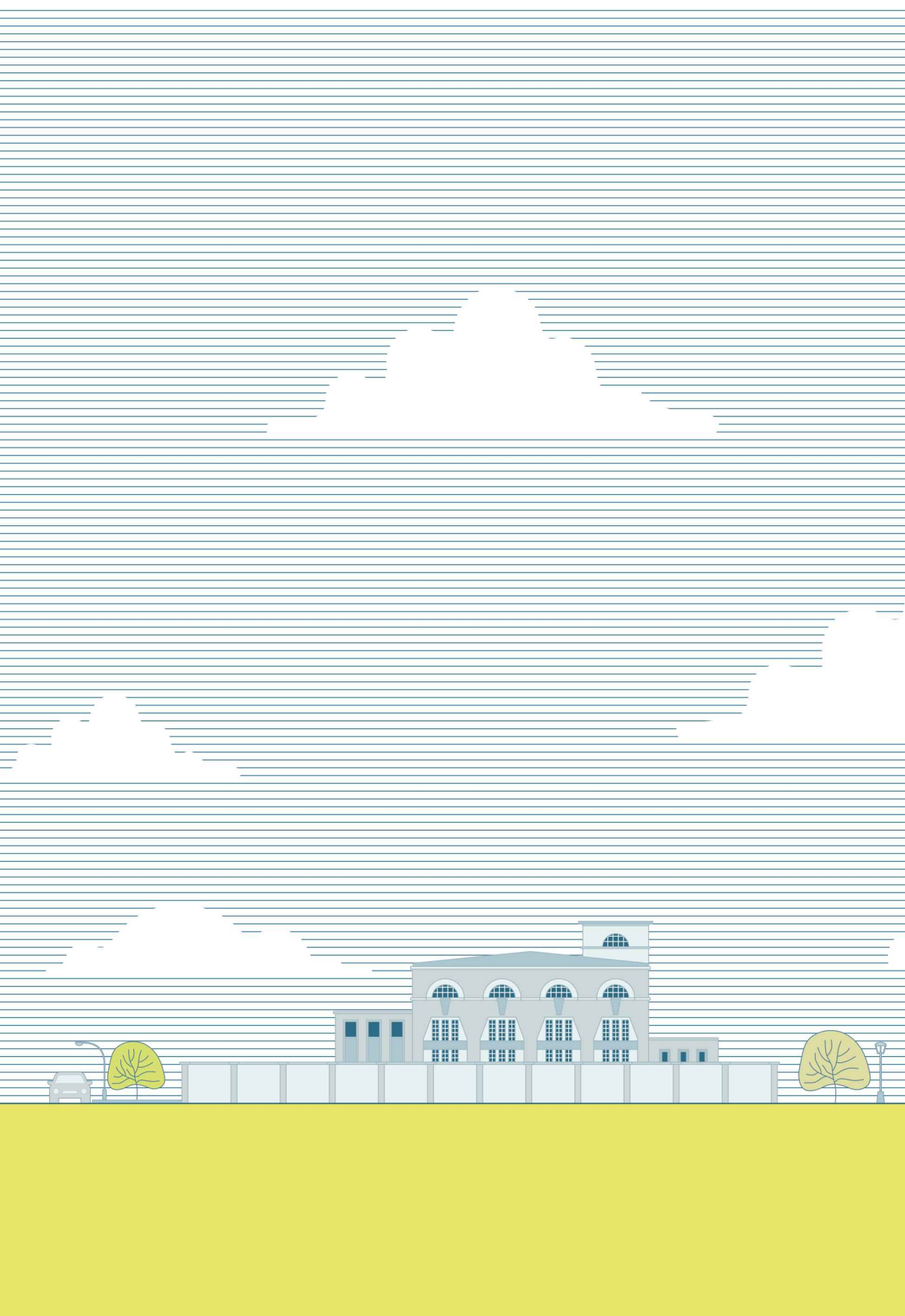
The main aim of the tool is to create a sort of virtual museum of the everyday landscape within the project area, drawing on the direct participation of those schools that are currently involved with the project, but also of any others that may wish to contribute in future. The implementation of the Atlas involved a preparatory training phase for the teachers and students in which they were shown how the tool itself works and, more broadly, its potential uses as part of the teaching programme. However, the tool also lends itself to independent use by schools, thanks to its ease of use and the support provided by the ecomuseum. The Atlas has been highly successful thus far, garnering participation from schools across the educational system, from primary to lower secondary schools, as well as groups in vocational training schemes.

The tool – which was primarily presented as an aggregator for the various pieces of documentation on the everyday landscape and the phenomena of the local area – also revealed many other important potential uses over the course of the project. Perhaps most notably, it was adopted by teachers as a tool for mapping out the many and varied landscape education projects developed within the framework of ScAR as a whole. Teachers worked with their students to upload the work they had done during the project – all dedicated to specific areas, objects and locations – to the web map. They also mapped out the digital products of the work they had done with the students, such as the applications developed with the KnightLab suite, the video interviews conducted with the local residents and business owners of the neighbourhood, the videos of the educational theatre workshops, the sketches of the landscape, and even the various narratives and presentations that the students had created. As of the end of the project, the Digital Atlas of Memories contains around 150 entries and is ripe for further use; indeed, it is an incredibly useful tool, not only in its capacity as a digital map of the tangible and intangible cultural heritage of the area, but also as a platform for sharing methodologies and disseminating the landscape education projects and experiments carried out by the students and teachers involved.²³

23. See chapter five.



The user interface of “Atlante digitale delle memorie” [“Digital Atlas of Memories”] developed by ScAR in collaboration with the Ecomuseo Milano Sud (MUMI). The page shows some of the contents uploaded by the schools and organized into digital collections.



chapter 5





THE ScAR MODEL

Actions for sharing

Communicate and spread knowledge

As part of the ScAR project, spreading knowledge played an important position from the very beginning and became an integral part of the process. The communication effort, which started during the first semester and was gradually intensified, also involved the partners and the students themselves.

Due to its multidisciplinary and cross-disciplinary nature, the project involves different areas of culture and society, from education, city administration, cultural and conservation institutions, to organisations dealing with civic participation and education for children and young people. As a result, the types of communicative action, contents, contexts and actors have been diversified in order to intercept different audiences. This also made it possible to collect articulate feedback on the progress of the project. The knowledge sharing events also represented important opportunities for the team to compare and review reactions, becoming not only occasions to present the project, but also occasions to discuss its methodologies and results with various stakeholders. There are three main contexts for these events: schools, scientific conferences and civic debates. The web portal and common communication channels via social media (Facebook, YouTube, Instagram) ensured timely and extended activities in progress.¹ The dissemination events also offered

1. In addition to providing basic information support, the portal, thanks to the activation of a “social media wall”, ensured dynamic and diversified communication for the project, even in the absence of dedicated staff. The content posted or shared by the team on the ScAR accounts, automatically delivered to the portal, enabled participants and visitors, even when not present or not



A moment of the award ceremony during the “ScAR al Poli” event.

significant opportunities to discuss the project methodologies and the results with stakeholders, offering to the research valuable opportunities for comparison and reading of reactions. There are three main contexts for these events: schools, scientific conferences and the public debate.

active on social media (because they were not interested in the medium, or, for example, because they were too young like many of the participating students) to access in-progress updates on activities, insights recommended by the team, content posted by teachers and older students on their profiles and shared through the project account, comments from participants and external stakeholders. Presentations and videos, also made in cooperation with partners, were also shared online to describe the project and, particular in the initial phase, to involve teachers. Lastly, radio and television interviews were useful in reaching audiences outside the process, as were the numerous Facebook live broadcasts of the events, which made it possible to increase the accessibility of the activities, expand the audience and build a digital archive of the communications, which could also be used at a later date (see the web page www.scar.polimi.it).

Schools as stakeholders in sharing: events

The events organised in the schools, which were also open to the public, were mainly aimed at publicising the project, the activities carried out and the products produced, to students and teachers not directly involved, to principals, families and the community. These initiatives are often the result of interaction between teachers and experts at different stages of the project, as part of co-participatory planning activities with institutions. This is why events have taken on different characteristics depending on the situation and time. However reflecting on the different experiences afterwards, it is possible to identify some common aspects of particular interest: the active position of the schools, which participated in the organisation of the events and often

Events in collaboration with schools

Vigentour. Il primo geogame sul Vigentino [Vigentour. The first geogame of Vigentino]

Inauguration of the mobile urban geogame for children and families "Vigentour – cerca il tuo futuro nel Vigentino" ["Vigentour – find your future in Vigentino"]. Participants: teachers.

Lower secondary school A. Toscanini in Milano, 25 May 2019.

Seguitemi, prego... [Follow me, please...]

Presentation of the results and activities developed during the alternating school and work programme project. The event was organized by students. Participants: the school director, the teacher in charge and the research team.

Upper secondary school C. Varalli, Milan, 28 May 2019 (Facebook Live).

ScAR al Poli. Scuole per il paesaggio culturale urbano [ScAR at Poli. Schools for the urban cultural landscape]

Final event to present the activities developed in collaboration with schools and award ceremony at Politecnico di Milano. Participants: Rectorate Delegate to Social Responsibility, Municipio 5 President, the Head of Fondazione Rete Civica Milano and coordinator of Ecomuseo Milano Sud (MUMI), the principal of Istituto Comprensivo Arcadia in Milan and the research team.

Politecnico di Milano, Campus Leonardo, 31 May 2019 (diretta facebook).

Festa delle Scuole del Municipio 5 [The Festival of Schools in Municipio 5]

ScAR workshops at Cascina Chiesa Rossa Park in Milan to test with families the virtual tour of the neighbourhood, sharing memories on the digital map, drawing home-school maps. Organisation by the research team in collaboration with Municipio 5 and Ecomuseo Milano Sud (MUMI).

Parco Chiesa Rossa, Milano, 1 June 2019.

Il progetto ScAR all'Istituto Palmieri [The ScAR Project at Istituto Palmieri]

Presentation event of the activities developed by the students of the school: "Dal mondo allo Stadera: tutti i colori dell'artigianato" (primary school C. Battisti) and "Zona 5.0. La periferia capovolta" (lower secondary school). Participants: the Principal, the teachers, students and the research team.

Primary and lower secondary school
Palmieri, Milan, 6 June 2019.

Percorsi virtuali nel paesaggio culturale: la nostra scuola e il territorio [Virtual Tours in the Cultural Landscape: our school and territory]

Presentation event of the works developed by the students from the lower secondary school A. Toscanini. Participants: the Counselor for Education of the Municipality of Milan, the President of Municipio 5, the Principal, the teachers and the students, the partner CEI Group and the research team.

Lower secondary school A. Toscanini,
Milan, 21 January 2020.

Presentazione del calendario ScAR-CEI Group 2020 [Presentation of the calendar ScAR-CEI Group 2020]

Presentation of the calendar that collects a selection of the drawings realised by the students of the lower secondary school A. Toscanini part of Istituto Comprensivo F. Filzi in Milan. The calendar was developed during the ScAR project and realised by the school in collaboration with CEI Group, a local energy company. The theme of the drawings was the union between city and nature, an interpretation with a series of metamorphosis between artificial and natural, mineral and organic, city and landscape. The presentation took place during the event "Percorsi virtuali nel paesaggio culturale: la nostra scuola e il territorio" [Virtual Paths in the Cultural Landscape. Our School and Place].

ScAR va in Piemonte [ScAR in Piedmont]

Presentation of ScAR project activities to teachers of upper secondary schools in Piedmont with the aim to replicate and ease the processes.

Upper secondary school Liceo
Classico Varallo Sesia, 19 February
2020

Upper secondary school Istituto
Tecnico Leardi Casale Monferrato, 21
February 2020.

promoted them, actively led the communication campaign for the event and in some cases managed it themselves; the importance assumed by the students, who were often personally involved in presenting their activities and products, acting in sometimes challenging communicative contexts, in the presence not only of their teachers and principals, but also of their families, the general public and sometimes people outside the school, such as representatives of the academic world and of political, cultural and administrative life; the fact, ultimately, that the school premises were open to curricular and extracurricular activities involving a variety of stakeholders interested in processes that cut across the sphere of education and learning, even if they did not necessarily belong to the school community.

These considerations show how the project enhances the school's potential position as a local hub and as a cultural and civic subject that is active, flexible and open to the external community in promoting and exercising democratic citizenship.

From the school to the international scientific community

In the course of its development and in parallel with its information events in schools, ScAR was presented on several occasions at international seminars and conferences. The reception given to the project in a variety of disciplinary contexts, ranging from education, geomatics, communication and tourism, shows that the issues addressed in the project are topical and relevant to the scientific debate.

The technological element of the project was discussed at conferences dedicated to innovative technologies, in particular in the field of sensory simulation and integration and the acquisition, modelling and interpretation of geo-referenced information in the field of cultural heritage.² The relationship between technology and educational innovation in the context of heritage education was the focus of the speech at an international conference on technological innovation for education.³ The project was then presented at an Italian conference dedicated to the theme of the global city as a pervasive

2. *Brainstorming BIM, VR, AR, MR, 2019*, Politecnico di Milano, 21 October 2019; *GEORES 2019 International Conference of Geomatics and Restoration*, Politecnico di Milano, 8-10 May 2019.

3. *ED-MEDIA 2019. World Conference on Educational Multimedia, Hypermedia & Telecommunications, International Conference of the Association of Computing in Education (AACE)*, 24-28 June, 2019. Amsterdam.

GEORES 2019. International Conference of Geomatics and Restoration.

Politecnico di Milano, 8-10 May 2019, Milan.

Panel: "Revealing the everyday landscape: innovative systems for heritage education in schools. The ScAR (School Activates Resources) project" (speakers: Nicoletta di Blas and Marco Vedoà).

ED-MEDIA 2019. World Conference on Educational Multimedia, Hypermedia & Telecommunications.

24-28 June, 2019. Amsterdam.

Panel: "Schools as Protagonists in the Valorization and Communication of their Local Cultural Heritage" (speakers: Camilla Casonato and Nicoletta di Blas).

AISU 2019. "The global city. The urban condition as a pervasive phenomenon". IX International Conference of Associazione Italiana di Storia Urbana.

Università di Bologna Alma Mater Studiorum, 11-14 September 2019, Bologna.

Panel: "Memories from the boundaries of the metropolis A participatory project for the enhancement of peripheries cultural heritage with schools" (speakers: Camilla Casonato and Anna Greppi).

ATLAS 2019. Annual Conference of the Association for Tourism Leisure Education and Research on Tourism Transformation.

Universitat de Girona, Facultat de Turisme, 17-20 September 2019, Girona.

Panel: "Enhancing cultural landscape through education. Involving schools in touristic products development to enhance peripheral cultural landscape" (speaker: Marco Vedoà).

IMG 2019 "Graphics/Grafiche". International and Interdisciplinary Conference on Image and Imagination.

Università degli Studi di Sassari, 4-5 July 2019, Alghero.

Presentation of "A scuola di paesaggio. Mappa partecipata del patrimonio culturale di Milano Sud" (speaker: Camilla Casonato).

Brainstorming BIM, VR, AR, MR, 2019.

Politecnico di Milano, 21 October 2019, Milano.

Participation to the Experience Area with a stand to present and test the digital products developed during ScAR.

Stand: "Augmented Reality for promoting the peripheral Cultural Landscape" (Camilla Casonato, Marco Vedoà and Daniele Villa).

XVIII EGA. "The graphic heritage. The graphics of heritage".

Expresión Gráfica Arquitectónica (EGA) International Conference.

Universidad De Zaragoza, 4-6 June 2020, Zaragoza (postponed due to the COVID-19 pandemic and changed into an online conference, 14-18 September 2020).

Panel: "Depicting the urban landscape. Enhancing the cultural heritage of fragile areas with participatory mapping processes" (partecipanti: Camilla Casonato, Anna Greppi e Marco Vedoà).

42nd Conference of Unione Italiana Disegno (UID) 2020. "Drawing for weaving relationships".

Università Mediterranea di Reggio Calabria, Reggio Calabria and Messina, online conference,

18 September 2020.

Panel: "Landscape stories. Visual storytelling on the everyday landscape" (Camilla Casonato and Gloria Cossa).

phenomenon, in the context of a reflection on the relationship between urban peripheries and participation.⁴ The connections with the tourism sector were discussed at a conference on cultural and sustainable tourism, and technological innovation in the context of tourism education.⁵ In all these areas, the theme of the representation of the landscape and cultural heritage has played an important position, as a key element of the project actions and as an area of interdisciplinary discussion. The topic was proposed in specific debates related to the visual studies and the cultural heritage communication in which several aspects of the research were deepened such as, participative mapping, communication of heritage, representation of intangible assets, enhancement of the everyday landscape, the potential of virtual and augmented reality, introduction to the use of ICTs by non-expert users, visual storytelling.⁶

In all the contexts in which it has been presented, the reception towards the research has been positive and encouraging, it has provoked reactions and questions and has given rise to connections, research interactions and cross-publications.⁷ The conferences built a bridge between the experience

4. AISU 2019, IX International Congress of the Italian Association of Urban History, Università di Bologna Alma Mater Studiorum, 11-14 September 2019.

5. ATLAS Annual Conference 2019 of the Association for Tourism Leisure Education and Research on Tourism Transformation, Universitat de Girona, Facultat de Turisme, 17-20 September 2019.

6. XVIII EGA Expresión Gráfica Arquitectónica (EGA) International Conference "The graphic heritage. The graphics of heritage", Universidad De Zaragoza, 14-18 September 2020; IMG 2019 "Graphics/ Grafiche". International and interdisciplinary conference on images and imagination, Università degli Studi di Sassari, 4-5 July 2019, Alghero; 42nd Conference of the Unione Italiana Disegno (UID) 2020 "Connect. A design for binding and weaving", Università Mediterranea di Reggio Calabria, Reggio Calabria and Messina, 17-19 September 2020.

7. For example, participation in a book on communication technologies for cultural tourism edited by two scholars from the Università della Svizzera Italiana: Casonato C., Di Blas N., 2022. With new eyes: teaching students to discover their local landscape and communicate it with technologies. In De Ascaniis S., Cantoni L., (eds.), *Handbook on Heritage, Sustainable Tourism and Digital Media*. Cheltenham Glos (UK), Northampton Massachusetts (USA): Edward Elgar Publishing, pp. 129-141. Another collective publication, coordinated by a lecturer in the Department of Communication Arts and Sciences at Pennsylvania State University, focuses on the impact of educational



A child tests the prototype of the virtual reality tour “Experience Tour del Quartiere Stadera” during “Milano Digital Week 2019”. Photograph by Michele Silva.

carried out with schools and local stakeholders and international and interdisciplinary research on project themes, broadening the reflection and enhancing its value as a methodological proposal. The meetings also served as a vehicle for establishing international research agendas and launching new collaborations and experiments, as discussed below.

innovation on policy and learning and brings together scholars from all over the world, including the Emirate College of Advanced Education, the Chinese University of Hong Kong and the University of Hawai’i at Manoa. In the volume there is a chapter dedicated to ScAR: C. Casonato, N. di Blas, M. Fabbri, L. Ferrari, Little-known Heritage and Digital Storytelling. School as Protagonists in the Rediscovery of the Locality, in E. Taricani (ed.), *Design Thinking and Innovation in Learning*, Bingley, United Kingdom: Emerald Publishing, 2021, pp. 5-25.



Participatory mapping activities on during the event "*Festa delle scuole del Municipio 5*" ["Festival of Municipio 5 Schools"] at Parco Cascina Chiesa Rossa.



A moment of the workshops organized on the occasion of the exhibition dedicated to the ScAR project and inaugurated in conjunction with the "*Festa delle scuole del Municipio 5*" ["Festival of Municipio 5 Schools"] at the Parco Cascina Chiesa Rossa. The game consists of matching pictures of the local landscape with different representations of the same area, panoramas, aerial photographs, and topographical maps.

Events to dialogue with the city and the institutions

ScAR was then presented in various civic contexts that took the project out of its primary spheres, schools and universities, and placed it directly in dialogue with civil society. First and foremost, there were numerous occasions for interaction with the Education Department of Milan Municipality and with the decentralised municipal entities, in particular with Municipio 5, through meetings, institutional meetings and shared participation in events.

Two events in particular are worth mentioning, both promoted by the Municipality of Milan, which have in common the theme of civic participation and the fact that they involve public and private bodies, associations and businesses, addressing a wide and diverse audience of specialists, educators and citizens of different ages. The first of these events took place as part of "Digital Week", an event dedicated to the position that digital technologies can play in driving and

Politecnico di Milano per le periferie. Premiazione Polisocial Award 2017. [Politecnico di Milano for the peripheries. Polisocial Award 2017 Ceremony]

Awards ceremony for the winner projects of Polisocial Awards 2017 dedicated to marginal areas and fragile populations. Participants: the Dean of Politecnico di Milano, the Deputy Mayor, delegates from Fondazione Cariplo, Città Metropolitana di Milano, Fondazione Casa della Carità, the research team and from the other winner projects.

Palazzo Reale, Milan, 17 January 2018.

ScAR Kick-off meeting.

Kick-off meeting to present the research, round tables with partners and desinging sessions with principals and teachers. Participants: the Rectorate Delegate for Welfare, a delegate from the Regional Education Office (Regione Lombardia), the head of Ufficio X Area Territoriale di Milano, the president of Municipio 5, the Counselor fo Education of Municipio 4, a delegate from Fondazione Prada and the research team.

Politecnico di Milano, Campus Leonardo, 8 May 2018 (Facebook Live).

Milano Digital Week. "ScAR. Scuola Attiva Risorse. Percorsi virtuali nel paesaggio culturale". ["ScAR. School Activates Resources. Virtual Tours in the Cultural Landscape"]

Events organised by the Municipality of Milan and the Counselor for Digital Transformation and Civic Services. The event was dedicated to create

thought digital practices. The research team presented the ScAR project with the participatory mapping of the memories of the Southern peripheries, tested the virtual tour of Stadera Neighbourhood, proposed workshops of mental mapping for children. The event was organized by the research team in collaboration with Ecomuseo Sud Milano (MUMI), Fondazione Rete Civica Milano and Associazione Bei Navigli.

Ex Fornace Gola, sede dell'Ecomuseo Milano Sud (MUMI), Milano. 17 March 2019

Presentation at Municipio 5.

Presentation and public debate on ScAR project at Municipio 5 with the presence of the municipal council and the municipal commission for Welfare, Family and Education. Participants: the President of Municipio 5, Counselor for Education of Municipio 5, the teachers and the research team.

Council Room of Municipio 5, Milano, 14 May 2019.

Monitoring Event of Polisocial Award 2017 Projects "Lavorare sul tema delle periferie: riflessioni, opportunità e prospettive dalle esperienze in corso" ["Working on Peripheries: Reflections, Opportunitie and Perspectives from the Ongoing Experiences].

Collective and transversal debate on marginal areas starting from the research projects of Polisocial 2017.

Participants: the project manager Camilla Casonato and two teachers from the pilot schools.

Spazio Off Campus San Siro of Politecnico di Milano, 23 October 2019.

Good Practice Sharing Workshop with the Universidade do Estado de Mato Grosso.

ScAR project presentation and good practice sharing workshop of participatory practices on cultural heritage in fragile areas. Participants: the research team and delegates from Brazil coordinated by prof. Juliana Demartini from Universidade do Estado de Mato Grosso.

Politecnico di Milano, campus Leonardo, 24 October 2019.

Milano Partecipa 2019. "Esplorare i quartieri con i giovani cittadini. Virtual Reality, Gamification, Digital Mapping" ["Exploring the Neighbourhood with Young Citizens. Virtual Reality, Gamification, Digital Mapping"]

Presentation of the research project and the digital products developed followed by a public debate on cultural heritage education practices. The event was promoted by the Municipality of Milan and Fondazione Cariplo with the aim to promote the debate on values, principles and projects able to enhance active citizenship processes.

Visconti Pavillion Teatro alla Scala, Milano. 22 November 2019.

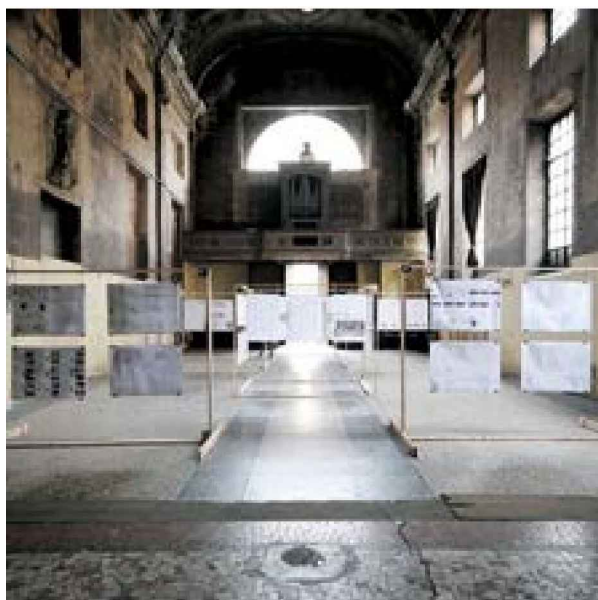
"R.S.V.P. Riapre San Vittore al Pubblico" Exhibition Opening.

Exhibition of the restoration projects for San Vittore e 40 Martiri church developed by Politecnico di Milano students.

Chiesa di San Vittore e 40 Martiri, viale Lucania Milano, 12 October 2019.

supporting processes in areas such as governance, education, and the sustainable economy. For the second edition (2019) ScAR organised an event in collaboration with the Ecomuseo Milano Sud (MUMI) at the museum's premises on the edge of the project area. In addition to a presentation of the research and activities with schools (then in full swing), shared digital mapping stations of memories and interpretations of the landscape, virtual tours of neighbourhoods for families, and workshops for children on mapping the home-school routes were offered to citizens. The initiative allowed the project to meet a new audience, to spread its message in a different context and to collect contributions from citizens: inhabitants of neighbouring districts, teachers and children from schools not involved in the project, representatives of institutions and associations, and the simply curious. Participation in the "Digital Week" proved to be an interesting opportunity for research, both in terms of expanding knowledge and collecting evidence on the cultural heritage of the area, and in terms of spreading and collecting reactions and reflections on the project.

This last aspect of exchange with subjects and realities active in fields neighbouring the project, took on a central position at the second event, entitled "*Milano Partecipa 2019*", which was held at a more advanced stage of the project and



The exhibition "R.S.V.P. Riapre San Vittore al Pubblico" inside the disused Church of San Vittore e 40 Martiri in Milan. The event exposed the posters of the students' projects developed during the course "Architectural Restoration Workshop" of the School of Architecture, Urban Planning and Construction Engineering of the Politecnico di Milano.

allowed for a more mature presentation of the process results. The event promoted by the Municipality of Milan, then in its first edition, was aimed at promoting dialogue on values, principles and projects capable of fostering citizenship and a sense of belonging among citizens. The presentation of ScAR in the Visconti Pavilion of the Teatro alla Scala and the ensuing debate were attended by a wide range of participants: lecturers (also from other cities and provinces), experts in participatory processes, researchers, students, educators and facilitators, people active in the voluntary sector, and city administration officials. The proposal of a project with a strong participatory dimension such as ScAR attracted participants who approached the issues at stake from different points of view. This gave rise to an articulate and highly stimulating debate for the team, also with a view to further developments and the initiation of new interactions.

Exhibitions

Two exhibitions were organised during the course of the project, aimed at different audiences but in both cases set in the local area and aimed not only at communicating the results of ScAR, but also at enriching its actions.

The first exhibition was organised in collaboration with the Municipal Council 5, the libraries and the Ecomuseo Sud Milano (MUMI). The occasion

Exhibitions

"Il progetto Scuola Attiva Risorse (ScAR)" ["The School Activates Resources Project (ScAR)"]

Exhibition of the project and presentation of the results of the research and interactive stands to experiment with the digital tools created with the schools. Exhibition of the products of the activities with the classes and the model of via Montegani, made by the children of the local elementary school. Exhibition curated by Camilla Casonato, Micaela Bordin, Gloria Cossa and Marco Vedoà of the ScAR team, in collaboration with Municipio 5, Ecomuseo Milano Sud (MUMI) and Biblioteca Chiesa Rossa. The exhibition was inaugurated in conjunction with the event "Festa delle Scuole del

Municipio 5" [Festival of Municipio 5 schools] and was then set up at the local library and at the headquarters of Municipio 5. *Parco Chiesa Rossa, Milan, 1-8 June 2019.*

"R.S.V.P. Riapre San Vittore al Pubblico" ["R.S.V.P. San Vittore Reopens to the public"]

Exhibition of the projects developed by the students during the Architecture Restoration Studio of Architecture, Urban Planning and Construction Engineering at Politecnico di Milano. Exhibition curated by Valeria Pracchi (ScAR research team) with Sofia Dordoni and Mattia Marcogliese. Chiesa di San Vittore e 40 Martiri, viale Lucania Milan, 12-19 October 2019.

Publications

Chapters

Casonato C., Di Blas N., Fabbri M., Ferrari F., 2021.

Little-known heritage and digital storytelling. Schools as protagonists in the rediscovery of the locality, in Taricani E. (ed.), *Design Thinking and Innovation in Learning*, Emerald Publishing, Bingley, Regno Unito, 2021, pp. 5-25.

Casonato C., Di Blas N., 2022. With new eyes: teaching students to discover their local landscape and communicate it with technologies. In De Ascaniis S., Cantoni L., (eds.), *Handbook on Heritage, Sustainable Tourism and Digital Media*.

Cheltenham Glos (UK), Northampton Massachusetts (USA): Edward Elgar Publishing, pp. 129-141.

Conference Proceedings

Bonfantini B., Casonato C., Villa D., Di Blas N., Pracchi V., Vedoà M., 2019.

Revealing the Everyday Landscape: Innovative Systems for Heritage Education in Schools. The ScAR (School Activates Resources) Project. In Brumana R., Pracchi V., Rinaudo F., Grimoldi A., Scaioni M., Previtali M., Cantini L. (eds.), *Proceedings of the GEORES (Geomatics and Restoration) conference 2019, Milan, May 8-10, ISPRS International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences, XLII-2/W11*, pp. 255-261.

Bertone G., Bordin M., Casonato C., Di Blas N., Pracchi, V., Vedoà M., 2019. **Schools as Protagonists in the Valorization and Communication of their Local Cultural Heritage**.

In J. Theo Bastiaens (ed.), *Proceedings of EdMedia and Innovate Learning*. Amsterdam: Association for the Advancement of Computing in Education (AACE), pp. 1562-1568.

Casonato C., Cossa G., 2020. **Landscape stories. Visual storytelling on the everyday landscape.** In Arena A., Arena M., Brandolino R.G., Colistra D., Ginex G., Mediati D., Nucifora S., Raffa P. (eds.), *Connettere. Un disegno per annodare e tessere. Atti del 42° Convegno Internazionale dei Docenti delle Discipline della Rappresentazione/Connecting. Drawing for weaving relationships. Proceedings of the 42th International Conference of Representation Disciplines Teachers*. Milano: Franco Angeli, pp. 3025-3042.

Casonato C., Greppi A., Vedoà M., 2020. **Depicting the Urban Landscape. Enhancing the Cultural Heritage of Fragile Areas with Participatory Mapping Processes.** In Agustín-Hernández L., Vallespin Muniesa A., Fernández Morales A. (eds.), *Graphical Heritage. Proceedings of XVIII EGA 2020 International Conference Universidad De Zaragoza. 4-5-6 giugno 2020, Zaragoza (Spain). Vol. 3: Mapping, Cartography and*

Innovation in Education. Cham: Springer Nature, pp. 295-306.

Casonato C., 2020. **Using Graphics to Communicate Intangible. Cultural Heritage: Kids and Teens at Work!** In Cicalò E. (ed.), *Proceedings of the 2nd International and Interdisciplinary Conference on Image and Imagination IMG 2019*. Cham: Springer, pp. 182-194.

Casonato C., Greppi A., 2021. **Memorie dai margini della metropoli. Un progetto partecipativo di valorizzazione del patrimonio culturale delle periferie urbane rivolto alle scuole.** In Pretelli M., Tolic I., Tamborrino R. (eds.), *La città globale. La condizione urbana come fenomeno pervasivo / The Global City. The urban condition as a pervasive phenomenon*. Bologna: AISU International, pp. 602-613.

Participatory Map of the Project

Casonato C., Di Blas N., Bonfantini B., Bordin M., Pracchi V., Villa D., Vedoà M., 2019.

A scuola di Paesaggio. Mappa partecipata del patrimonio culturale di Milano Sud. Milano: Planum Publisher.

was the big school festival, organised by the City Council and strongly attended by families from the neighbouring districts, gathered in a large neighbourhood park (Parco Chiesa Rossa) surrounding a farm complex where the local library involved in the initiative is also located. An exhibition of the works produced during the project was set up in the library, including a large model of a neighbouring street, Via Montegani, made by the children of a primary school.⁸

8. See chapter three.

In the spirit of the project as an open, inclusive and actionable process, the event was enriched by workshops for children and families, where analogue and digital mapping activities and immersive virtual tour experiences in the neighbourhood landscape took place. The drawings, comments and stories of citizens, both young and old, about their everyday landscape were then added to the Atlas of Memories, the digital participatory map produced in collaboration with the MUMI Ecomuseum.

The second exhibition, called “*R.S.V.P. Riapre San Vittore al Pubblico*” [“R.S.V.P. San Vittore Reopens to the Public”] was the outcome of reflection on the possibility of rebirth of a church located in the project area, which had fallen into disuse and is now in a state of serious disrepair. The process, already mentioned, involved students from the Politecnico di Milano engaged in restoration workshops, who then presented their conservation and reuse projects and collected comments and contributions from the inhabitants of the neighbourhood on the prospects for reusing the space and returning it to citizenship.⁹

An ongoing experience

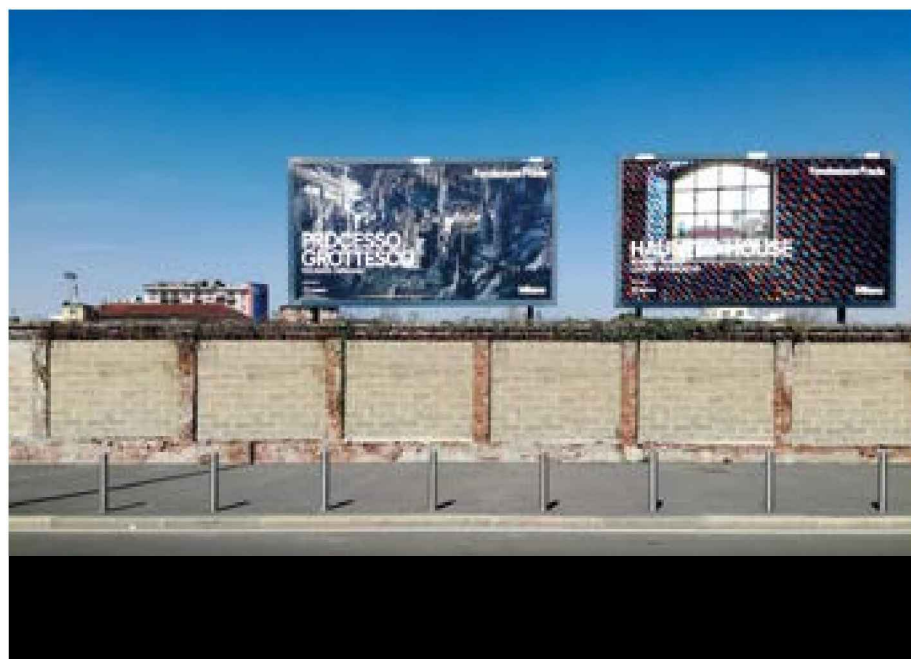
Digital collections, narrations and projects

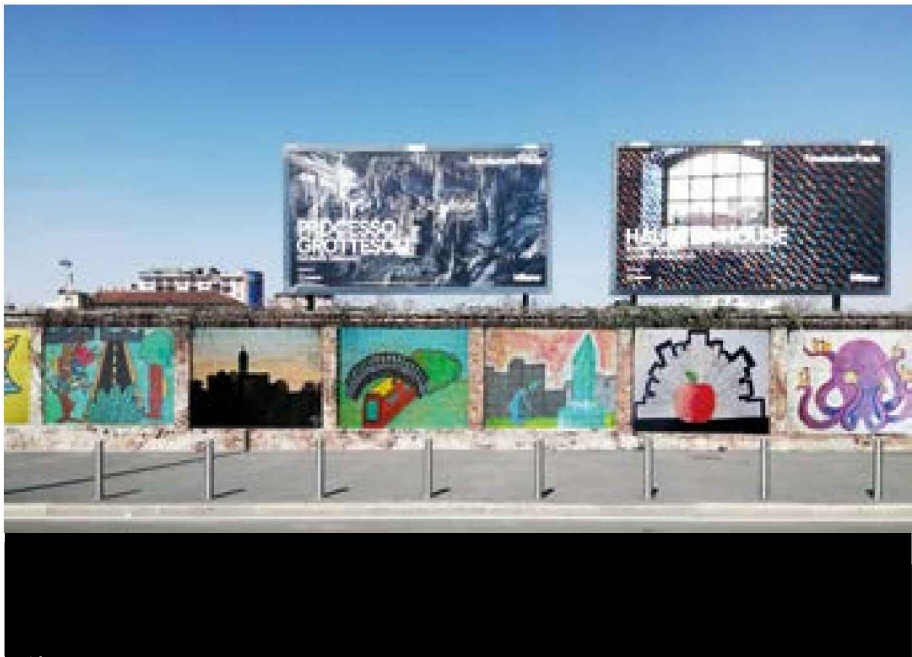
In the course of the activities, encounters with external parties gave rise to new collaborations and initiatives to be pursued beyond the project period.

New digital collections for Ecomuseo Milano Sud (MUMI)

The collaboration with the MUMI Ecomuseo Milano Sud and Fondazione Rete Civica di Milano (FRCM), about which we have already spoken, started the construction of a collective digital atlas to gather memories and interpretations of the urban landscape, the “Atlante digitale delle memorie” [“Digital

9. The students of the Restoration Laboratory at the School of Architecture, Urban Planning and Construction Engineering of the Politecnico di Milano held by lecturers Valeria Pracchi and Luigi Barazzetti.

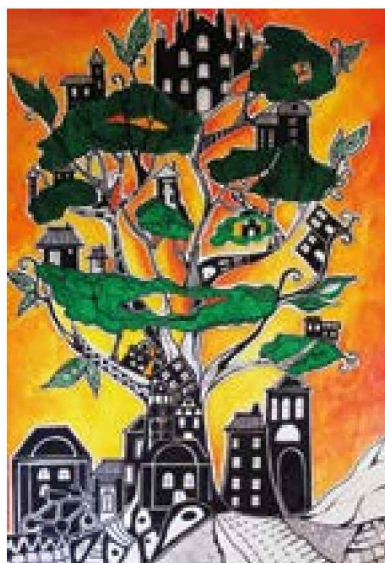




Simulation of the realization of a series of murals on the Scalo di Porta Romana walls. The activity simulated a micro-urban regeneration project elaborated with students' drawings from the local lower secondary school.



Two of the drawings for murals produced by lower secondary school students with the theme of the union between city and nature and the metamorphosis between artificial and natural.



Atlas of Memories”].¹⁰ For the development of the Atlas, the platform already used by the MUMI Ecomuseum to enrich its digital collections through a bottom-up dynamic was adapted to accommodate contributions from students and teachers. Schools thus became the soul of a digital participation project focused on the cultural heritage of the project area. The result is a platform for the collection of geo-referenced multimedia materials: images, documents, research, testimonies linked to the tangible and intangible values that are woven into the peripheral landscape. As materials are uploaded by users, they enrich the digital collections of the community museum and become accessible to all. Thanks to the connection between the media gallery that hosts MUMI’s collections and the Digital Atlas of Memories that collects the results of the activities with the schools of the ScAR project, a participatory mapping project specifically dedicated to schools has come to life, which will remain accessible from the MUMI website and can be implemented even after the end of the project. When ScAR closes, schools will be able to continue their work by uploading materials for new projects, built with new students, while at the same time other schools will be able to join the current partners to enrich and expand the collections.

10. See chapter four.



The research team meets the teachers, principals and local experts of Offanengo (Cremona) at the local primary and lower secondary school, the Istituto Comprensivo Falcone e Borsellino.

One of the most interesting aspects of this project is that the classes did not just collect and provide materials and reflections on heritage, but also shared aspects of process and method. Through the interwoven content of the media gallery, in fact, through the descriptions, comments and multimedia products, users can find the teachers' projects accompanied by stories and reflections and thus discover the many different paths and approaches developed to achieve the same objectives. The platform also tracks contributions according to the submitting institution, class, school order, location in the area and thematic axes. The result is an articulated repertoire of methodological proposals developed and shared by teachers, a result that achieves one of the fundamental objectives of ScAR: the spread of replicable work formats that can be shared, modified and shared again, in the logic of open knowledge.

The “Murales Project”

A direct initiative of one of the partner schools has led to the “Murales Project”, an urban regeneration and awareness-raising action on the themes of ScAR research that brings together schools, universities, institutions and the world of production. The project was initiated by the lower secondary school A. Toscanini

OFFANENGO

N



Map of the rural toponyms of Offanengo (Cremona) created as part of the collaboration between ScAR and a local mapping project that involved the schools of the area.

part of the Istituto Comprensivo F. Filzi (primary and lower secondary school) in Milan and involves, in addition to the Politecnico several local actors.¹¹ The plan calls for the creation of a series of murals reproducing the drawings made by the students in the context of a teaching project within ScAR that involved four classes (from age 13 to 14) in the creation of mural projects on the theme of the union between city and nature, interpreted with a series of metamorphoses between artificial and natural, between mineral and organic, between city and landscape.¹² The aim is to change the collective perception of an unqualified space in the southern peripheries of Milan, bringing the citizens' eyes to neglected places that often go unnoticed and starting a reflection on the theme of urban regeneration in the neighbourhoods where students live. The project involved partners in working groups to define logistical and technical solutions and to identify sources of funding. This project marks a significant step, because it shows how ScAR and its methodology can effectively act on the region as activators of latent but potentially dynamic and effective resources. In this case, participation in the project and the support of the university provided an incentive for a school to become the promoter of an action set in the administrative and productive context of the city and aimed at a specific result with repercussions on the physical space of the peripheries. When completed, the Mural Project will allow ScAR to leave a lasting mark on the area and continue to impact on the collective perception of a marginal urban area beyond its completion.

Mapping the Creiasco rural landscape with schools

A partnership with the ScAR team was also initiated by a school for a project to map the rural landscape of Creiasco, with particular attention to historical names. The research, launched in 2017, involves several schools in the area in two different levels (primary and secondary) belonging to the Falcone e Borsellino School in Offanengo (CR). Consistency with the themes of ScAR and the need to acquire new tools, especially in the technological direction, useful both for the project on toponyms and for teaching activities on the theme of the local landscape, led the teachers to participate in the

11. Promoters of the project was the lower secondary school A. Toscanini part of the Istituto Comprensivo F. Filzi (primary and lower secondary school.) The network, beyond Politecnico di Milano, gathered the Municipality 5, A2A, and CEI Group, a private energy company.

12. Reference was made above to the production of a calendar with these same activities, again in cooperation with the partner CEI Group.



Participatory redevelopment intervention as part of the project “*Oficina Comunitária de Arquitetura*” developed in the marginal areas of Barra do Bugres in Brazil by the Faculdade de Arquitetura e Engenharia of the Universidade do Estado de Mato Grosso and in collaboration with ScAR and other international partners.

ScAR training which – designed for partner schools in the Milan area – was then opened up to schools throughout the region. This contact gave rise to exchange best practices between the ScAR team and the Offanengo school working group, which already included, in addition to the principals, local historians, experts from the area, associations for the protection of local historical memory, libraries, teachers from different disciplines, retired teachers, etc. These meetings were also aimed at offering the group coordinated by the Comprehensive Institute advice on mapping production and the digital development of project processes and products with a view to a new phase of systematisation and in-depth research. The interaction with this project enabled ScAR to achieve two objectives. On the one hand, it made it possible to enrich with a solid case study the state of the art and good practices in the field of processes of knowledge and interpretation of the local landscape involving different figures and skills and placing the action of schools at the centre. On the other hand, it has made it possible to verify the exportability of certain methodologies and tools developed within the ScAR experience in a context that is significantly different from that of urban peripheries, but equally marked by territorial fragility.

ScAR in Italian Regions and South America

The connections established between the ScAR team and other working groups, together with the sharing of practices and research methodologies, have made it possible to extend the context of action beyond the project area, touching the entire national territory and even building bridges with distant places.

PoliCultura for ScAR

A further fruitful collaboration was initiated with PoliCultura, an initiative for Italian schools promoted by the aforementioned HOC-LAB research laboratory of the Politecnico di Milano, which is active in the field of communication through technology, in particular in the field of innovative teaching and cultural heritage.¹³ As part of the project, schools of all levels, from pre-school to secondary school, are invited to create interactive multimedia narratives through the contest formula. To do this, the lab provides an authoring tool called “*1001 Storia*”. As mentioned above when talking about teacher training, teachers participating in PoliCultura are offered a MOOC (Massive Online Open Course), a free online training course accompanied by tutoring to help them use the tool effectively in their teaching activities in order to introduce students to digital storytelling. The themes of the narratives are free and, thanks to the partnership with ScAR, a special track dedicated to the themes of the project has been offered from the 2019 edition. Schools were invited to create multimedia stories on the theme of discovering and enhancing the peripheries of cities large and small and, more generally, little-known and little-explored places. Every year PoliCultura reaches more than ten thousand schools with its communication, so ScAR was able to reach schools not directly involved in the project, extending its action throughout the country and finding a remarkable turnout, unusual in the history of the contest for special tracks, which confirms that there is a strong interest in the world of school for the proposed topics. These results led the PoliCultura staff to the decision to permanently include the special track dedicated to ScAR themes in the competition for subsequent years, thus following up the project. The partnership with PoliCultura brought ScAR three interesting opportunities. First of all, it integrated a structured and accessible activity with an ad hoc distance learning course into the proposal for schools. Secondly, it

13. See chapter two.

allowed for a scale-up by taking the proposal out of the project area and taking it on a national scale. Finally, it offered continuity beyond its closing date to a specific branch of the project, integrating the proposal of replication formats.

ScAR goes to Brazil

The project “*Oficina Comunitária de Arquitetura*” (OCA), launched in March 2020, aims to develop interactions between universities and communities, associated with the theme of the city, based on the experiences and methodologies used by ScAR.¹⁴ The project aims to promote reflection on issues related to the city, working on human rights, active citizenship and environmental issues, through a dialogue interaction between university teachers and students, teachers and students from public schools and organisations supporting education. Among the primary aims of this action-research is the promotion of participatory practices in the context of urban planning that is attentive to human rights and sustainable policies. The project aims to involve public schools in raising community awareness of these issues and to engage children and adolescents in the debate and search for solutions. Through the actions with the local community and with the collaboration of local university students, the research also intends to contribute to the identification and sharing of the tangible and intangible cultural heritage of the area. Moreover, it intends to contribute to the social transformations related to the city, in particular the empowerment of citizens and to train administrators and professionals more aware of their political and social role in the construction of more equitable and sustainable cities.

The project is configured as a pilot action, and it is hoped that it will be replicated in other schools and cities of Mato Grosso. It constitutes for ScAR – which collaborates to the research by providing the experience gained – a valuable opportunity to verify the methodologies developed that are now being applied in a high fragility context that, although different from the one experienced in Milan, is equally referable to the theme of urban peripheral areas.

14. OCA is led by the *Faculdade de Arquitetura e Engenharia* dell'*Universidade do Estado de Mato Grosso* (co-ordinator Professor Juliana Demartini) and has as partners, in addition to the Politecnico di Milano, the GESTUAL Group (Group of Socio – Territorial, Urban and Local Action Studies) of the Faculty of Architecture of the *Universidade de Lisboa*.

The participants' perspective.

Understanding the impact of the project

A complex and multi-faceted process such as the School Activates Resources (ScAR) project which works primarily with people, and moreover with young people in education, requires an assessment methodology that is flexible and complemented by qualitative considerations. Indeed, although the “numbers” of this project (to which we will return later) might be significant for evaluating its scope with regard to the amount of subjects involved and the extent of the actions, this type of research resists a quantification of the results in a strict sense just as it resists an immediate calculation of its impacts which should instead be examined in the long term. The capacity of the actions to influence young people in terms of, for example, their sense of citizenship, strengthening the relationship with the territorial area to which they belong or developing an informed use of technology cannot be evaluated in the short term and in any case it would be extremely difficult to isolate the contribution of this experience within the educational path of each individual. In one of the phases of consultation with the participants during the project, one of the teachers, although expressing her complete satisfaction with the process, when asked “After ScAR what benefits will remain for the students?” responded: “It is difficult to say, because I find it difficult to imagine ‘students’ as a category; I immediately think of specific names and I remember each of them on this journey, each of them will take something different away”.

In order to define the impact of the research project, it is also necessary to consider that it allowed for the actions to be jointly-planned with the partners and, most importantly, the schools. It follows that, starting from the initial impetus and the training of the teachers, the education activities of the various classes grew significantly different over time, giving origin to different journeys and outcomes. The evaluation of the outcomes of the actions must therefore also consider the specificity of each class's individual educational project, in terms of detail, time spent, whether or not the group belonged to the pilot actions and so on. Moreover, the project worked with a wide range of ages (7-19 years old) and operated in a wide range of settings. From this overall picture, it is evident that the evaluation of the benefits of the research project must follow broad lines of reasoning and consider primarily qualitative parameters.

For all of these reasons, both during the process and during the final reflection phase, the observations and feedback of those involved were of

The feedback collected

In total, 43 documents were analysed in the impact assessment phase. Of these, 8 are “Kick-off meeting surveys” relating to 7 different institutes across three levels of schooling; 8 are closing reports by teachers or groups of teachers active in the educational projects carried out as part of the research project (“Summary reports on the experience”); 13 are structured reports that accompanied the accounts presented at the meeting of the PoliCultura partner project as part of the special ScAR track; 7 are reports by interns, i.e., students on programmes at the AUIC School (Architecture Urban Planning Construction Engineering) at the Politecnico di Milano who undertook the curricular internship required by their educational plan

within the context of the ScAR research-action; lastly, 7 are transcriptions of video interviews carried out with teachers belonging to 4 of the 5 partner schools active in the project. Of these, 2 refer to the work carried out in the primary school setting, 3 to the lower secondary school setting and 2 to the upper secondary school setting. Among the teachers interviewed, two had coordinated several educational projects linked to the research project, one had conducted the same educational project in several sections of the same school, and another had coordinated a group of teachers working with a class. Therefore, the interviews carried out relate to the work of 17 classes, in addition to the direct experience of those interviewed.

“Kick-off meeting survey”

Kick-off questionnaire, taken after the first public presentation meeting.

- School order.
- If it is a Secondary School, specify which address.
- What is your role?
- If you are a teacher, what is your subject area?
- If you are a teacher, what subject do you teach?
- From whom did you learn about the project?
- After the meeting on May 8 at the Polytechnic, the project is now clear/ overall clear/ unclear.
- Comment on your answer here.

- What expectations and educational potential do you see?
- What potential problems do you see?
- Have you reported the project to colleagues?
- If so, to how many?
- How likely do you think you are to participate? (From 1 to 5)
- Are you interested in receiving more information about the project?
- Would you like to provide us with the email address of colleagues interested in receiving information about the project?

"Experience Summary Report"

Structure for writing the report required of all teachers who participated and presented their final products.

School and coordinating teacher
(Name; School order)

Teachers and children involved
(Which teachers were involved in the implementation of the project? How many children/classes?)

Type of activity
(Which of the ScAR activities was chosen)

Activity Title
(If it was given)

Brief description
(What does the work consist of? How does it meet the goals of the ScAR project? How did the idea to participate come about, how was the activity chosen, how were the students motivated, how/if colleagues were involved, how/if families were involved...)

Relationship to the curriculum of the subject

(Monodisciplinary work,
Multidisciplinary work,
Extracurricular work)

Disciplines involved

Disciplinary objectives and instructional methods

(What instructional/discipline goals/were there set? Were "transversal" objectives – e.g., motivational, technological, socialization objectives – expected to be achieved? How were these goals achieved?)

Tasks and roles

(Distribution of tasks and roles between students and teachers in the various phases of work: was the class divided into groups? Chosen by the teacher or by the students? How were different talents and aptitudes of the pupils taken into account? Did everyone take care of

everything or did each group have exclusive tasks? Were the groups homogeneous or uneven?)

Organization of work phases

(How was the work organized? Was it divided into phases? With goals/deadlines?)

Spaces, times, tools

(Where did the project take place? (school, home...) How much time was needed? How much and what work was done in class and how much and what at home? What tools, multimedia and otherwise, were used?)

Resources

(Did you use help from outside the school? E.g. families, experts... or internal to the school? E.g. other colleagues, the school technician... For what aspects did you draw on help/resources? For technology, for instructional organization, for content...?)

Distribution and dynamics of "knowledge"

(Who learned, what and from whom/what? Teachers, students, from books, the internet, each other, thanks to outsiders...)

Overall evaluation

(Evaluation of the whole project and of the training process: what worked, what didn't work? What were the educational benefits achieved? Were there any benefits for the teachers? What were the problems encountered during the activity and how were they solved? What can be improved? How did the children evaluate the work? etc.).

Inclusion

(Did the project encourage processes of inclusion of pupils with difficulties?)

Any anecdotes

(Did something particularly interesting happen? A relevant episode, a remarkable comment...)

"The teaching experience with the ScAR project"

Questionnaire-track for video interviews with teachers at the end of the process.

- Present yourself and your school.
- Present the socio-economic and cultural context of the students in the school.
- Describe specifically the class involved.
- Tell us about your approach to teaching.
- What was your and the students' motivation to join ScAR?
- Was the activity conducted regular time class?
- What activities did you do for the ScAR project?
- In what ways did the students work?
- In terms of inclusion, is there any aspect to report in relation to the project?
- Did you use any digital technologies?
- Did you include an evaluation for the activities?
- What benefits do you think your pupils gained from the experience?
- Did you encounter any problems during the activity?
- Is there an anecdote that you think is significant to remember?
- Do you think you learned anything from the experience?
- What is your overall comment?

fundamental importance to the working group and were collected in various phases and by various methodologies, the most appropriate method being chosen for the responder, the phase of the project and the circumstances in question. Therefore, structured consultation actions were developed through reports, questionnaires and interviews at crucial phases of the project, such as the teacher training sessions, the workshops that followed, the regular monitoring and joint planning sessions and the pilot class checkpoints.

To go into greater detail, during the kick-off meetings at the beginning of the research project, the participants were given a questionnaire regarding the clarity of the project, its focuses and the expectations and the delivery of work produced by the end of the project. When registering for PoliCultura, the digital storytelling contest, the teachers were asked to compile a semi-structured report on the experience. Finally, at the conclusion of the activities, a series of video interviews were carried out with certain participants including coordinators of the educational projects within the schools and a selection of teachers identified on the basis of parameters such as the focus and level of innovation of the educational activity they delivered as part of the research project and the strength of engagement and involvement.

During the research project, certain educational projects were identified as case studies of particular interest which were then the subject of a special

observation by the research team. The choice was made on the basis of the type of activities carried out by the teachers (pilot activities of particularly well-structured and meaningful projects), but also on the basis of class configuration in terms of age, level and type of school, social background of the students, cultural make-up of the class and whether the school had widespread issues with low engagement or early school leavers. These case studies were followed during the project and/or analysed at the end of the activities.

In addition to the structured consultation with teachers, further steps were added for ongoing exchanges with the project leaders as well as informal meetings with the children and young people during the activities. During the promotional events, parties from outside the schools were also consulted such as representatives of institutions, professionals from relevant sectors and even ordinary citizens. The concluding assessment phase also took into account the final reports written by the interns, students on programmes at the School of Architecture Urban Planning Construction Engineering at the Politecnico di Milano who offered a different point of view having participated in the research project as part of an internship required by their educational plan.

An important part of the evaluation of the outcomes of the research project relied on a review of the materials produced by all of the classes during the various activities. There was a substantial quantity of texts, written and graphic works (drawings, maps, diagrams, diaries, reports) and various digital works (digital maps and storytelling, multimedia guides, gaming applications). The materials were reviewed during intermediate phases as works in progress as well as once they had been finished. The quality of such materials, assessed in terms of their significance and relevance, is indicative of the efficacy of the processes that created them.

Where possible, such as in the case of certain digital applications, quantitative elements were collected for assessment, such as the usage data of the works made available to the public at the end of the educational projects. The data and results of these reviews emerge, both in pure and synthetic forms, from the descriptions of the processes and the works created by the classes and contained in this book.¹⁵ The following paragraphs will however contain summaries and examples of the reflections that emerged from the questionnaires, reports and interviews. The teachers' comments have been arranged into the following themes: description of the students' background, their engagement,

15. The comments that emerged from the review of the materials produced have been included in the chapters describing the activities (chapters three and four).

analysis of the project's methodology, the potential of this methodology in terms of inclusion and diversity, the role played by technology, the overall effectiveness of the actions and the benefits for students and teachers. For confidentiality reasons, information that could identify specific students and teachers has not been included. Instead, the aim was to create an overall picture capable of providing the basis for a reflection on the project's methodology and ScAR as a case study and pilot project.¹⁶

The social and cultural context and classes composition

The social and cultural context in which the actions were employed, as described by teachers and project leaders on several occasions, appears to vary by type and location of school within the research project's area. Predictably, the characteristics linked to the location of the school are more pronounced for the primary and lower secondary schools as their intake is predominantly from the surrounding neighbourhood while it is less evident in the case of upper secondary schools where students belong to a larger catchment area. In these schools, the differences in terms of student profile, academic success and engagement are instead linked to the type of educational offering (professional, technical or lyceum).

While broadly responding to the general concept of "peripheries", as has been seen, the research project's area is vast and includes various circumstances, as can also be seen from the teachers' analyses. We therefore had schools in which the intake was defined as 'medium-high' and others in which it was defined as "medium" or "low" with regard to social and/or economic hardship and cultural poverty. Even the multicultural make-up of the class groups, being linked to the proportion of families who have a history of migration, varied greatly from a few cases per class to other groups in which the proportion of students of foreign descent, mostly second generation, exceeded 70%.

«My class is made up of children belonging to families with a medium-high level of culture who are therefore already accustomed to a certain level of demand within the family of a cultural nature and when exploring certain subjects explained one teacher. «In the Seventies, the neighbourhood expanded

16. For this reason, it was decided that internal reference codes for the cited documents (kick-off questionnaires, interview transcripts, statements and reports) would not be indicated in order to avoid the identification, whether by comparison or recurrence, of the specific settings to which the comments included refer.

with a lot of attractive housing: many professionals decided to move here rather than to other, more central areas,” added a colleague from the same setting. Referring to a different area, one teacher instead reported that the intake of her school was “medium-high”: «despite the type of families that live in the neighbourhood» she specified «it is a neighbourhood of transition, with many different cultures, a neighbourhood that is open to new possibilities of interaction with the landscape and people of other countries». Another teacher, speaking about older students, described a difficult situation, above all in terms of academic success: «This school takes in many drop outs from other settings as well as a high percentage of disabled children: many of our students have a background of academic failure because they have come from lyceum where they have tried and, for a series of socio-economic, personal and family problems, have been expelled». The same teacher added «It is definitely not a given that this lowers the quality of a school, but it definitely adds complexity because there is greater need, with varied demands and educational requirements. It is clear that you need a different path if, for example, you carry certain vulnerabilities with you».

Engagement

With such a varied picture, the students’ engagement was also different in each case with responses ranging from immediate and active participation, including the support and cooperation of families, to settings in which obtaining the collaboration of the children was a challenge in itself.

In any case, the majority of teachers stated that the children willingly took part in the activities: «The children were completely committed to taking part», declared the project coordinator of a lower secondary school. A colleague confirmed: «The children happily embraced the project». «The children worked enthusiastically», a primary school teacher similarly declared, adding: «Some of them even made proposals, attempts to change, organise and add something of their own».

By contrast, other teachers told of fatigue and episodes of disengagement that occurred during the process, above all in the older age groups and in the technical and professional school settings. «It was difficult», said one upper secondary school teacher, «to obtain a consistent level of work. It is not an easy thing to acquire; the mindfulness of responsibility, of others’ opinions [...] because keeping to commitments is complicated and if you do not know how to commit to yourself, how can you make commitments to others? How do

you value yourself and understand the value of a commitment?» «I cannot lie» admitted the same teacher, «and tell you that the students were always enthusiastic and overjoyed. It was not like that; it was not a fairy tale: it was really very difficult. We really struggled to rethink how to motivate them, almost daily».

A teacher at another school even described a critical phase during the work-related learning programme followed by their students: communication between the experts and the children did not always work well and, as she told us, «There were tasks that were carried out in a very superficial and incomplete way that did not reach their target». Consequently, about halfway through these students' journey, the teachers and experts undertook a joint exercise in taking responsibility which proved to be effective. At that point, the students were told: «Okay guys, we need to renegotiate, we need to understand each other. You are doing work-related learning which means being accountable to someone outside of the project». «After that», said the teacher, «it definitely went better; we had to redirect the group a bit on what it wanted to do, where we were going, what we wanted to achieve, what the final product expected of them was. In short, it was quite demanding but in the end we were able to achieve what we set out to do». «This was definitely a positive aspect of the experience», concluded the teacher, «we decided to take part in this project as an alternating school and work programme and so, with good reason, the students were required to respect deadlines and the commitments made with a certain degree of independence and learn to work as a group. Towards the end we achieved that and so from that point of view it was also a learning experience for us».

Relationship with the local area and citizenship education

All the teachers reported in various ways that the students developed a new interest in their local area, becoming involved in the discovery and interpretation of the values and memories enclosed within it.

«The chance to create a personal project, a personal interpretation of the places but also the conditions in which they and their friends live, was an extremely important stimulus and an important motivating factor», one secondary school teacher told us. «At their age (12-13 years old) » she added, «curiosity is only piqued by certain factors and stimuli. They therefore overlook certain places and social conditions in the local area but, thanks to this project, we were able to awaken their curiosity and this was one of the objectives we had given ourselves. So there has been a rediscovery of the places they visit, or walk and cycle by, and those places they had never stopped to consider [...]

But above all» she concluded, «in my opinion, they have developed a sense of civic responsibility. That is, they have learned that some of their surroundings have a social value, as well as artistic or architectural value. And in this case the class even made proposals for the improvement of social settings».

A primary school teacher confirmed the positive impact on the relationship between her students and the local area, despite the fact that in many cases the children at her school had very limited opportunities: «It is difficult for the families to move so learning more about the territorial area [in which they live] has been rewarding for the children».

From the reports by the teachers at upper secondary schools however, it transpired that asking the older students to view their own territorial area as a field of investigation can be difficult. «At the start» one teacher told us, «the students actually asked me: “Miss, what is there to go and look at here? There isn’t anything!” [...] Then at the presentation [during the presentation of the project’s outcomes at the Institute] almost all of them would say that the positive side of this project was going out and discovering places they had known absolutely nothing about. So yes, we definitely met that goal and the goal of communicating it to others. Firstly, through their own discovery and then by sharing that knowledge with others». «We definitely achieved the project mission, beginning to understand the existence of a shared heritage and appreciating it» concluded the teacher.

Methodology

In many cases the teachers’ reflections in both interviews and reports focussed on methodological matters, emphasising the potential of an educational action that is based on a multidisciplinary approach, authentic learning, project learning and inclusion.

At the beginning of the process, we asked teachers «What exactly made you choose ScAR?» and often the response was of a methodological nature. «The inspiration for School Activates Resources» responded for example two teachers who were already using the flipped classroom method, «seemed very similar and relevant to our ideals of teaching and school». «In the beginning it seemed bold», they added, «for our level of school [a primary], but the research team welcomed us to the trial and guided us [...] and in the end all of our work over the year has been centred on this project, not for the sake of the project, but because it was preaching to the converted». They also added: «It was in line with the curriculum, definitely! Our method consists of taking

any impetus which we then elaborate on. You could say that our entire annual programme revolved around ScAR».

Additionally, an upper secondary school teacher noted: «This project was an ideal chance to show that education, which is the art of teaching, is an open art. It is the art of finding the key to learning for someone in a meaningful way».

Continuing on the theme of methodology, the multidisciplinary component was also highlighted positively by several teachers. For example, an upper secondary school teacher told us: «The ability to involve multiple subjects was important, especially because one of the criteria advocated by our Plan of the Educational Offer (“POF”) is specifically the use of an interdisciplinary approach. Therefore, in this case, the project was perfect as it allowed for activities involving more than one subject».

The majority of observations on the methodology related on the whole to the motivational power of authentic learning and project learning together with the potential for inclusion of activities that allow for work in groups on different tasks with a view to reaching a common goal. The upper secondary school teachers generally reported a development of project management and activity planning skills and an increased capacity for work in groups: «In terms of benefits, the students learned that when you work in a group, you need to collaborate», we were told by the coordinator of a pilot action that brought together students of several classes and pathways, and she added: «They learned that you can only reach the final goal if everyone does their part». «I believe» explained another teacher in a particularly underprivileged setting, «that this type of project, that involves the creation of something and has a defined end-point, helped them to understand the responsibility to the deadline. In school they do not respect deadlines. In this case, they learnt to use complex programmes in a very short time, and they completed a very complicated task on time, with several layers of narrative joined together. «They learned», remarked a teacher at another school similarly, «that when there is an external client it is not like having a teacher who tells you: “You have not studied! You get a low grade, but tomorrow you can make it up!” That is not the case here, you have to be accountable and respect the deadlines that you are assigned. In the end they learnt to achieve a goal. They learnt skills that you would undoubtedly struggle to pass on with traditional methods».

The effect of authentic learning was also highlighted in the reports and interviews from the younger age ranges (6-8 and 11-14 years old). «When there is a goal with personal gratification», one lower secondary school teacher told us, «there is always the desire to challenge yourself, [...] to strive for

authenticity, to make a mark with your ideas, to do something concrete and genuine». «When I handed out your certificates to the children», she concluded, «they were very happy: they felt important which is definitely positive; they felt they had a positive impact and for that they were happy». «The students' engagement», recounted one upper secondary school teacher, «grew slowly, step by step as they learnt what the local area can offer and later at the moment of applying this knowledge». The teacher explained that these students had been influenced by «the joy of creation, putting something into practice, seeing the theory of the research previously carried out become a something tangible to offer to others» She also added: «We made them the promise that [the project] would become something public to offer to others; if we had removed this, it would have been less engaging for them because it would have ended up as just a task to carry out: "I did it, they gave me a grade and nothing more, the end!"». Instead, this moves forward, it can evolve».

Among the parts of the methodology that were evaluated positively, the affordability of the actions was also highlighted. Indeed, several teachers reported that ScAR, unlike other projects, had a low cost for the schools. There was no charge for taking part in the research project and basic facilities that were already present in the schools were used for the educational projects, with the exception of very few activities that required professional tools or specialist services, such as photography with 360° camera or the development of urban gaming applications. However, in these instances the costs were borne by the research project. Naturally, operating in this way offers advantages in the medium and long term. The vast majority of the experimental activities could be replicated by the schools completely independently without any cost.

The use of technology

Many of the teachers that were interviewed having been involved in the activities using technology reported that there were benefits to their students in terms of computing skills and searching for reliable sources on-line. Even when the students were already accustomed to using technology in learning activities, the teachers observed an increase in their knowledge and recognised an opportunity within the project to update their methodological approach. From the accounts it transpires that the students were quick to welcome the digital tools that were proposed which, although not complicated, were new to them and the teachers and learning to use them was generally straightforward. One case in particular is significant for its relationship to the theme,

especially because it was a pilot alternating school and work programme activity that entailed substantial use of new technologies: «The students did not have any difficulties with the technological tools that we used», stated one teacher involved in the activity. «The teachers had been trained to use them [by experts provided by the research project] however the children used them without needing any help; rather it was they who explained how to use them to the teachers». Following the activities, as the same teacher reported, the students that had participated in the project and belonged to different classes, used the skills acquired in new contexts and also conveyed them to classmates who had not taken part. For example, some students voluntarily used the applications they had learnt to use (in this case a freeware tool for creating multimedia tourist guides) to prepare for and document their school trip. «Each of them», added the teacher, «had to study a monument and act as a guide to their classmates. At a certain point one of the students from the ScAR project in this class said to me: “Sorry miss but can’t we do it with Izi.Travel?” “Of course you can!” They organised everything themselves and asked their classmates to help».

The use of technology, as this episode also documents, was generally engaging for all students in the range from 12 to 19 years old. There was a further interesting outcome whereby a new attitude to the use of technology was observed; there were small changes in ordinary behaviours that indicated the emergence of a new awareness of the relationship with the digital world: «They are effectively digital natives», noted the project coordinator at an upper secondary school, «but they do not always know how to use technological tools appropriately. This has therefore been a great help: for example showing them that the various social media platforms can be used differently to the way they use them every day». In some cases, the students used social media for the purposes of the project of their own accord and showed, using the words of their teacher, «that they had learnt to make use of social media in a professional and informed manner».

The motivational power and the development of greater awareness seem to be the most relevant aspects of the use of digital technology in the project to which the significant contribution the authentic learning teaching method can be added, since the technologies introduced allowed for the creation of products for the analysis and promotion of cultural assets that could then be shared with a real audience outside of the schools, making the children’s views of the local area and their interpretation of its heritage available to the community.

Inclusion

Project work and group work facilitated inclusion in many cases, not only in multicultural and multilingual classes but also with regard to children or young people with special needs or disabilities. To cite a specific case, in one of the schools involved there is a trial for the inclusion of students affected by autism spectrum disorders: «Our school is geared towards the inclusion of children with quite serious learning difficulties of varying levels because some are high-functioning while others are not and require a simple, workshop-based approach to learning: each of them is different and requires targeted work» explained one teacher at the school. These students took part in the activities within their normal classes but also within their special class, working on a specific educational project for ScAR that defines it and was presented, through digital storytelling, as one of the cultural values conveyed by the local area. Incidentally, the school in question has a solid commitment to inclusion that sees that classes include students with different experiences and circumstances. «Another distinctive trait of this school» added the same teacher, «is that we have a Roma camp nearby so there are Roma students in our classes, although their attendance is sporadic». In response to the specific question «Has this research project encouraged inclusion?» another teacher from the same school also answered positively: «The best students contributed to inclusion by stimulating their classmates. This often happens [...] and it is also rewarding for the better students because they identify with the role and their classmates learn to interact with someone who has a clearer idea of the activity».

The question about inclusion was posed to the teachers of all of the schools and the responses largely confirmed that the learning methodologies adopted by ScAR encourage inclusion and that group and project working allows for the differentiation of tasks, valuing the skills of each individual. «For those with linguistic difficulties we compensated by making use of the medium of drawing» explained one primary school teacher. «You teach me to do sums» she added, giving an example of the dynamics between pupils, «but I am teaching you to make a basket [as part of an activity about artisan culture] and both things are equally important to my teacher!» These dynamics become more complex once the secondary school classes are taken into consideration, especially when children arrive at upper secondary schools with difficult educational backgrounds. «The ScAR project was also a new source of motivation to stay in school» a teacher who works in a setting with high levels of early school leaving told us, «because it is different from [ordinary] teaching during which they are normally squashed together». Indeed, changing the

surroundings, leaving the school and working in the community may help in these cases: «A student may have shown disapproval for a certain type of activity, but perhaps he can show me that they can do it under different circumstances; he merely does not want to do it in school». In these cases, giving students freedom may encourage their involvement and uncover unexpected abilities: «We tried to eliminate all preconceptions and only in the end we realised that, at least in part, they confirmed the attitudes that they had already shown [...] Nevertheless, this allowed each of them to choose their own path meaning each of them discovered their own ability to be useful to the project». Recognising all abilities can also help in supporting self-confidence and conflict management. «In the group learning phase» the same teacher reported for example, «the students were able to reflect: “I know how to do this, I can do this, they have asked me to do this because I am important so I will not be distracted by the person who insulted me”. And this did actually happen: they argued amongst themselves during the project».

There are various episodes in the teachers' accounts of untapped potential emerging during the project: the failing, disengaged student who turns out to be more productive when he begins creating videos and is the quickest to learn how to use the editing software; the unsettled, argumentative and destructive student who manages to capture a fragment of humanity and beauty in a video taken on the streets, thereby encapsulating the essence of the difficult neighbourhood and elevating the quality of the final product; the vulnerable, disabled student who finds the courage and motivation to make his voice heard; the student with reduced mobility who finds a way to offer his own vision of the city, filming it from a tram. We would also like to include the case of a student who arrived in Italy only a few years ago. She was shy and reluctant to speak up, but through the project's activities she displayed skills that had previously been hidden, such as organisational and leadership abilities, together with unprecedented levels of engagement and a proactive approach that she then applied to other activities outside of the research project over the school year. In a short time, the girl became a point of reference for some classmates and even for the team of experts who had assigned tasks and responsibilities to the group.

To conclude, the outcomes described above should above all be attributed to the teachers' meticulous work and awareness, and in many cases to that of the students. However, the project undoubtedly offered the school community a working framework in which these dynamics could evolve and in many cases we received reports of surprising and unexpected outcomes.

In contexts where the meeting between cultures was a sensitive subject, the project was also a vehicle to strengthen multicultural teaching, working locally, in fact, can also be an opportunity to encounter the different cultures that are there and to build bridges with students' cultures of origin. One of ScAR's teaching projects, dedicated to the neighbourhood of a primary school and to the intangible heritage made up of artisan knowledge, clearly exemplified this assumption because it also represented an opportunity for teachers to get in touch with the children's families and have them talk about the places where they come from. «The little girl who comes from the Philippines - said a teacher for example - explained life as it is in the Philippines, she remembers it because why she goes back there in the summer. Parents want her to keep their roots». «It was nice to involve families from other countries too - said the teacher - a mother from Santo Domingo came to tell us about the craft activities that are there, so for example making things with natural raffia: they dry it and then make baskets, it is basically the wicker plant. They make furniture and baskets which they then sell. And the way of trading is completely different from ours, it provides for a much freer interaction». «The comparison was also pleasant - added a colleague - for example the Egyptian tailor told about their typical clothes, and then this mother from Santo Domingo told us that in their country, tailors do not work like this, they go to customers' home, drink a coffee and eats a slice of cake with them, really just another way of dealing with customers». «It was in fact also an intercultural comparison - observed the teacher - not just between Italy and other countries [but also between all the cultures present]: this made every country of origin equal, that's what we wanted... This is integration». The children were therefore also valued as carriers of their culture of origin, starting from their knowledge of their native language: «Arab children, for example - explained the teacher, telling of walks around the neighbourhood - directly translated Arabic signs and wordings [on shop windows] into Italian; something like this also occurred with the Chinese beautician: there are details that [the beautician] described and that the Chinese girl recognized and confirmed». These teachers have shown how working in this way, by teaming up and pooling all resources, can bring children closer to the reality of a multicultural society, helping to break down prejudices and stereotypes or to prevent them. «Children have absolutely no prejudices - the teacher stressed - if it's not the adult who passes them on to them [...] especially our children, who come from all over the world». Referring to an episode that occurred while scouting around the neighbourhood in

search of crafts, the same teacher described an episode: «We got to the Chinese beautician and we wanted to ask her where she learned her trade, and we thought maybe some beautiful town in China. But she replied: “In Pesaro!” Where?! And there we understood that in any case one is biased even without wanting to be, this too is a form of prejudice». «We learn from them - she concluded referring to her children - as they enrich us by telling us experiences from other countries, and we try to include and instruct them, and at the same time we enrich each other by sharing experiences».

Benefits for students, teachers and the community

Some of the significant benefits deriving from the project clearly emerge from the teachers' statements on topics as diverse as those dealt with so far. However, we would also like to recall here some of the teachers' answers to the direct questions on the results of the action research: «What benefits do you think your students have had thanks to ScAR? Were there any benefits for teachers?». In response to these questions, various teachers reported various kinds of benefits for students, of which a good amount has already been said, for example in relation to digital skills and relations with the local area. Many teachers, as we have seen, also reported an increase in planning skills, i.e., the ability to plan and organize the stages of a task or the ability to organize information and transfer it between different areas, to re-elaborate and transmit it. «The children have certainly learned to manage the phases of a project, which is an important skill» a secondary school teacher (students aged 11-14) told us. «They had benefits for digital skills - said a colleague from the same school - because they had to work a lot with IT tools, but in the meantime they also developed design skills, also in the sense of programming, because the work we did involved different stages». The teacher then added: «They had to render what they were looking for graphically or with texts, then they had to synthesize, re-elaborate graphically or by computer some information they had on paper, such as maps». Even older children, as stated in the report by an upper secondary school teacher, have learned «to write texts taking into account the context, the purpose and the recipient» and «to coherently integrate texts and images». A primary school teacher then included other aspects among the benefits: «Definitely the ability to work and the development of critical thinking, or rather the laboratory activity to develop critical thinking. And the enhancement of any type of intelligence is the inclusion of any child». And then he added: «Furthermore, the fact that they develop this

idea, which is not to be taken for granted: that knowledge is not sectoral. I'm not doing Science, Geography, Italian, but I'm learning, with knowledge that comes to me from various subjects. And this enriches our students».

Many considerations, in the reports as in the interviews, concern the relationship with the local area. For example, «children certainly now look at the neighbourhood through different eyes» a teacher who worked on interculturality told us. The consideration also applies to secondary school students: «They began to look at the near reality in another way - reported a teacher who worked with 12-13 year olds - they were urged to observe very well what is there and also what is not there. Observe looking with the mind, in another way, and thinking of planning the space in another way: "Now there is a park, but what do I dislike about the park? How would I change it? What do I see in it?" It was a fantastic part and also very useful for them to imagine their future, even as a personal competence. And we have invested in this discourse of the future». «Our teaching path - added the same teacher - was also linked to change, finding one's own path, changing the things that exist and making them more beautiful. This was certainly an added value for the project».

As for the benefits to themselves, some teachers report having transferred the skills acquired to new contexts, having «used the tools and methodologies in their own curricular activity outside the project». In general, however, the impression obtained from the reports and interviews is that in many cases those who joined the project were already oriented to similar methodological approaches, and that they found in ScAR the opportunity to develop them, to give space to and nurture a way of teaching that was already dear to them. «This project helped me just do things I like doing» a secondary school teacher told us quite simply. Beyond this harmony of intent, for some the project was also an opportunity to try their hand at something new. «I have certainly learned to have a go even more. At the beginning, after taking the course, it seemed difficult and I said to myself: "We have such young children, maybe it's not a good idea..."». But then we decided to give it a try, so I rediscovered the value of always questioning ourselves».

Thinking in terms of benefits for the community, teachers' mainly make reference to the families, which the children involved in their activities by asking questions or through interviews, feedback meetings; sometimes family even invited to participate in laboratory activities. «Involving parents and grandparents was a very important stimulus - explained a secondary school teacher - because through them [the students] have discovered anecdotes, situations, buildings that no longer exist, but which have been described to them». If we think about these statements and what has been said, speaking of multiculturalism regarding the involvement, for example, of craftsmen and

neighbourhood traders, it can be said that the benefits of a project like ScAR can also extend to communities. Some of the children who have followed these projects, as a teacher told us for example, have few opportunities to get in touch with the community outside the school: «They never leave the house and we have only travelled a minimum distance, but some just stay at home, at most in the park in front of the school, so not only have they known the place where they live, but they have established contacts: now they pass by and greet the craftsmen because they remember them. This project expanded their world and created a community. It was also inclusive for the craftsmen!». In another neighbourhood something similar happened with secondary school kids: «They also went to “bother” all the shopkeepers on my recommendation - said their teacher - [...]. And they did it by bike, out of school hours. Since I am an historical citizen of the neighbourhood, every now and then I would go into a shop and shopkeepers would say to me: “It’s you who sent them, eh?!” They were all happy: especially the historic shops, the older shopkeepers are very happy to be able to talk about past times and how commerce was different».

Anecdotes such as those reported show how, starting from what is close and tangible, as in these cases the area and the neighbourhood shops, it is possible to build connections between students and their local area, their community, but also with what happened in the past or elsewhere, with other ways of living, conveying to the students the idea that all knowledge, every age and every culture is equally worthy of attention and interest. Not only that, starting with children and schools, intergenerational and intercultural encounters can also be encouraged between the adults of the community, as happened in these cases between the families of the students and the inhabitants of the area, representing different generations and experiences and sometimes being the bearers of different cultures.

Orientation

An orientation action was not among the initial objectives of the project, since those participating were mainly from the lower secondary school, and also the upper secondary schools involved did not present polytechnic curricula, and a direct benefit in terms of orientation to university studies was not expected. For many young people, however, the very idea of being involved in a project from a well-known and recognized university was actually stimulating, as emerged from the teachers’ stories, and for some it opened a new

horizon of possibilities. «The Politecnico is one of the universities they hear about as an excellence - an upper secondary school teacher told us - therefore, the idea of working with teachers from the Politecnico was certainly one of the reasons that led them to participate in this project. Yes, in my opinion a good part of the students who participated did so because it was proposed by the Politecnico di Milano». «Lately we also have a good percentage of students from the Istituto Tecnico per il Turismo (technical school for tourism) who decide to continue their studies and go to university» explained the teacher in fact, «the idea of going to visit the Politecnico came from the students of the Istituto Tecnico per il Turismo participating in this project: “We are working with the Politecnico, but aren’t we going there?”. They wanted to see, they did the laboratory activities. And one of the girls who participated, when asked about the positive aspects [of the project], rightly mentioned the visit to the Politecnico. And this is a great success also because for us, due to our field of study, continuing at university is not taken for granted, and above all it is not usually at the Politecnico [...]. So we were positively impressed by the request from the students from the Istituto Tecnico per il Turismo to go and visit the Politecnico. They became curious about the type of activity». A curiosity that, in the secondary school context, also stimulated much younger children, as a teacher who works with the 11-14 year olds told us: «Just think that two or three have told me: “I want to be an architect!”. Someone, in this activity, has discovered a profession that they probably would not have known. This contact with the world of the Politecnico gave them more information on professional figures such as architects, engineers, urban planners, who we had dealt with in Technology class doing Construction Technology, but they did not have a very clear idea: yes, it is a name... like that of many professions. And some students, who were already predisposed to graphic reworking, said: “Well then ... maybe I’ll be an architect!” It is one of the objectives that we set ourselves at school: to try to make children try various experiences in various professional fields».

Limitations and criticalities

In all consultation phases, teachers were asked to highlight any difficulties or problematic aspects encountered during the project. From the responses it emerged that the limitations and criticalities found by the teachers focused on three main aspects: the difficulty in making the project work within the ordinary teaching structure, the difficulty in motivating older children to make

the commitment required and finally the strong workload required, especially concerning some particularly demanding didactic projects. Although these are not across-the-board findings of the participating schools and classes but rather of difficulties relating to specific cases, it is useful to analyse them because each is indicative of potentially recurring situations that can be found in different contexts.

The first aspect, reported in two different institutes, is, as has been said, the difficulty in reconciling the usual work structure of schools and project activities. «A negative aspect - the coordinator of an educational project that is particularly challenging in terms of organization, because it crosses different classes and tracks, told us - is that this project has also emerged as an extra-curricular activity, that is, few of us have managed to bring it into daily teaching». Furthermore, in the same school, in the face of a high level of participation in the teacher training phase, the actual participation in the activities was limited and the investment of teachers was uneven, which could indicate a difficulty in putting into practice a thematic and methodological proposal that also catches the interest of teachers. However, we were told that, again in the same school, some teachers have applied the training received by ScAR within their curricular activities even without actively joining the project, which is encouraging in relation to the replicability of the actions in the future.

A second aspect, as anticipated, concerns the difficulty in motivating older children, especially in relation to a task that has external contacts and therefore requires the achievement of results in set times. «There have been many difficulties in rebuilding motivation every day: ours, theirs and in the relationship» disclosed a teacher at the end of the programme. «It was not easy - she added - to be a coordinator, I realized that for young people who are not used to respecting delivery, to self-referent motivation - 'I work not because I am obliged to, but because I feel that it is my responsibility!' - this is also a sign of maturity, which certainly was not easy». Teachers' reflection on the difficulty of their students in taking on adequate responsibilities is common to upper secondary schools. «We also wondered - another upper secondary school teacher told us - if we pamper them too much. School users have changed over the years, so now we get students whose families justify them at any time. So we're perhaps a bit too soft, or rather, we try to understand these students». From the Nineties to now, he explained to us, «students have changed a lot and we actually have to adapt a little bit to this change, even our relationship with parents most of the time is not easy».

In some cases, teachers who work in classes with complex dynamics have reported that they also considered the eventuality of letting student experience

failure with respect to the project (not completing activity, not delivering expected results), as an educational step, but then, how a project representative said, «The determination to give them the satisfaction of ending this programme and this concept prevailed: I show you that if today I don't listen to your frustration, I don't raise my voice or I don't listen to you, or I don't punish you because you are not in the mood for working, but rather I embody everyone's result for you, then I am a good model for you. [...] Because this is also the point: to believe in it for them too. Is it true: do we take their place? I don't know, maybe it is better to say that we support them».

A final critical aspect noted, as anticipated at the beginning, concerns the amount of work faced by teachers who have undertaken the most demanding teaching programmes. «There were times during the year when my colleagues would probably have physically eliminated me» the coordinator of ScAR activities in one of the schools that spent the most on research revealed with irony. The main difficulty in this case was «to reconcile a project like this with the ordinary teaching structure». «Because - observed the teacher - it is a very demanding project, especially on a lower secondary school class. In my opinion the results are very good, but this is because the time devoted to the project was truly remarkable. Only this time has been removed from regular programming activities, [...] the timetable was still the original one and in some cases we were able to make it coincide with activities that we could include in our programming, but in other cases we didn't manage to do so. So, it was challenging and I must say that the kids arrived tired: satisfied but tired. So, probably an activity of this kind, if I had to do it again, I could do it over two years, not just one». «At a certain point the neighbourhood [which was the project's theme] exploded in our programming» said another colleague from the same school, satisfied but also tired at the end of the programme. And she went on to tell us: «I want to tell you this: the amount of work was still very important, [...] the activities involve a whole series of investments and either one who has many teaching hours takes them on - but in this case you must be aware that you'll only have time to teach about half your usual educational programme - or a better sharing solution [among teachers] must be found» sharing which, however, in the current school structure, she explained to us, is substantially impracticable. «Not to mention the time it took to rearrange... at a certain point» she added with irony, «when I saw the ScAR email, I felt sick: No... oh my God... again?! Still ScAR?».

The difficulty in reconciling a project such as ScAR with the current teaching structure and school organization was an expected criticality, even if the occurrence in tangible cases highlighted more clearly the possible dynamics to be addressed in applying the methodology. Critical situations, however,

concentrated in the programmes that were the most consistent in terms of time required and quantity and complexity of the activities, therefore in the programmes where the methodology, also thanks to the availability of the teachers, has been experimented with particular intensity and concentration of time, or, otherwise, in schools with particularly fragile users. At the end of the project we can say that reducing the activities or diluting them over several school years would certainly have facilitated the task of those teachers - key to the research - who enthusiastically and proactively joined the more substantial teaching projects and who were therefore more engaged. On the other hand, an effective choice was the possibility for teachers to establish their class' level of involvement, adhering to the activities defined as "open" with an autonomous programming or starting a more demanding programme, in direct collaboration with the team, as a "pilot class". This has allowed many teachers to also contribute to the project with a more contained contribution and compatible with other teaching choices and with specific programming needs. It should be noted that the call for funding required the work to be concentrated over two calendar years, however staggered with respect to the school calendar; consequently 95% of the activities with the schools were condensed into a single school year. Subsequently, also due to the problems caused by the COVID-19 pandemic, the research was extended by a third year which was, however, mainly dedicated to dissemination activities, re-elaborating the experience and launching related activities. In light of these constraints, promoting extensive experimentation - even if in a short time - was effective in order to develop a set of good practices that constitute a repeatability format that is wider, clearer and more adaptable to the many and different needs of schools.

Response to expectations

In drawing up a summary of the overall assessment of the project's results, starting from the statements from the teachers, it may be useful to remember the expectations recorded during the start-up phase at the kick-off meeting.

Among the expectations of teachers and school heads who completed the first meeting questionnaires at the time of joining the project, there are:

- knowledge of new technologies and interaction with the university world;
- the development of local pedagogy;
- an active multidisciplinary for the knowledge of one's own landscape;
- the possibility of reinforcing through improvement some activities already started in the school, especially in the field of innovative technologies;

- interaction with others in the local area;
- the possibility for students to gain an alternating school and work experience;
- possible in-depth analysis of theoretical arguments in real situations.

Downstream of the process, in the light of the activities described and the conclusions collected through the final consultations, we can say that these expectations have on the whole been satisfied. At the end of the experience, all the teachers who participated, delivered papers and presented reports, stated that they are in fact satisfied. Some, in the interviews, amplified the answer on this point, providing a synthetic judgement: «I am wholly satisfied with the experience - one secondary school teacher told us - it interested me despite being demanding. I hope to repeat other experiences of this type and I hope that the Politecnico itself can propose some. In fact, this type of experience» added the teacher, «can open up tangible and, at the same time, propulsive visions for the children of their real life and experience». In the final report of another teacher, in the entry “Overall assessment” we can also read: “Very positive value of the proposed activities, which lent themselves to being developed in a workshop and in an inclusive manner, and which have allowed us to open significant spaces for reflection”. A primary school teacher who at the beginning of the experience was very interested but a little hesitant, when interviewed at the end of the project finally told us (also referring to a colleague with whom she collaborated): «As a teacher we must always have the enthusiasm to try new things and learn, and in the end we are happy: because we are really satisfied. Then we said: If we want to teach children to face even a difficult thing and that it doesn't matter if they can't do it, then we must be the first to believe that!».

We could then report numerous other interesting observations by the teachers, however the arguments put forward would be similar, instead, in conclusion, we would like to mention some statements from the interns who found themselves as part of the team and therefore to work closely with their teachers. Being to all intents and purposes students, albeit university students, the interns considered the project from a special standpoint, reflecting from a professional point of view but at the same time also related to an educational programme. «I am very satisfied - wrote a three-year degree programme student - to have carried out this internship from among all the other choices available to me. I was in a team that I felt comfortable with. From the beginning I knew that it was not the classic internship in an architectural firm but this did not stop me, indeed it intrigued me even more». «It was very interesting» said another intern, «to have taken part in a Politecnico di Milano

research activity and to have had the opportunity to contribute to some of its activities. I have had the chance to try my hand at numerous different tasks, which have let me increase my knowledge. In particular, I was able to observe the perception that children of different ages develop regarding the urban environment in which they live, their ability to portray the city and their interest in everything that can be considered cultural heritage in the peripheries and in the importance of its protection. I am convinced that this experience will be useful to me in the continuation of my university studies and my future professional career». The variety of activities in which it was possible to involve the interns is also positively found in other reports: «I consider very positive - wrote for example a student - the variety of tasks that have been entrusted to me: they have been a reason for growth for me, allowed me to develop the ability to face different tasks and to grow a lot in knowledge and skills». Another student who, as part of ScAR, created her own articulate personal internship programme and then also a degree thesis, wrote at the bottom of her report “With the promise of using as an example what is already there to better realize my future and present ideas, I sincerely thank you for having listened to my ideas, even if unorthodox for my study programme”. Another student, who has since graduated, contacted her ScAR team representative to inform him, after some time, of her satisfaction with what she had learned: «I am writing to you because I am pleased to tell you that the internship experience with ScAR during my three-year degree programme is giving me the opportunity to work on a similar project [...] in short, the internship at ScAR is paying off».

The numbers of ScAR

To conclude this examination of the qualitative considerations that can be made at the end of the programme, it may also be useful to propose a brief overview of the “project numbers”. Taking stock of the research’s “numbers”, we can briefly say that ScAR covered 22 classes within the 7 partner schools, to which were added 27 classes from other cities, distributed in 7 Italian regions, which contributed to the research participating in the contest promoted by the partner project PoliCultura and following the special track dedicated to ScAR themes. Overall, the research has thus reached over 750 students and more than 50 teachers on three school levels from primary to upper secondary school. In addition to those of the schools, more than 400 university students were involved through the launch of ad hoc teaching contexts within

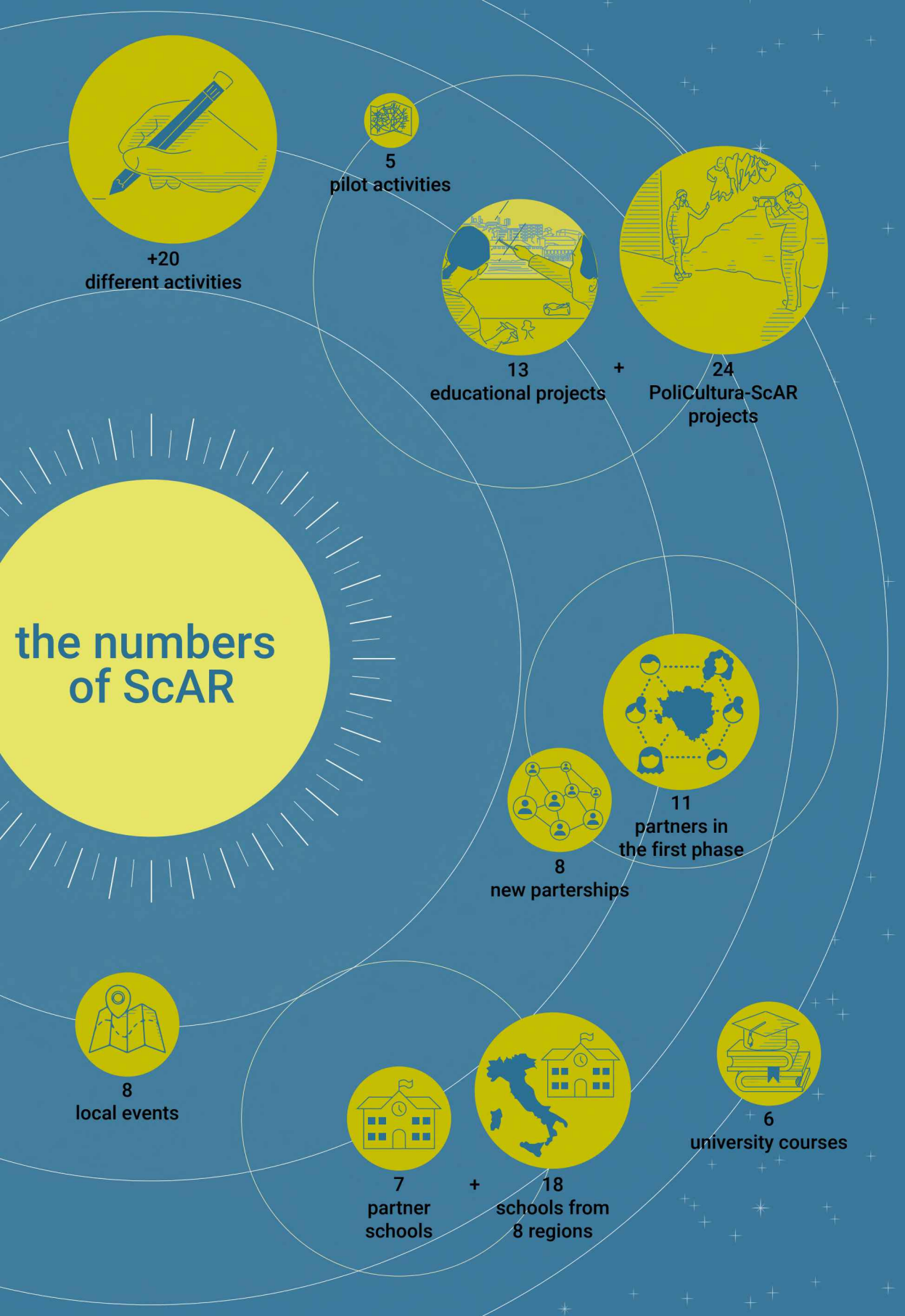
6 different Politecnico di Milano programmes and 7 Architecture and Urban Planning programme interns.

Overall, the classes created 37 different teaching projects, of which 5 were conducted by the research team as a pilot action and 24 took shape within PoliCultura, the remaining projects were configured as “open activities”.¹⁷ During the teaching projects, the classes carried out at least 20 different types of activities proposed by the experts in the training courses, of which about half involved the use of communication technologies. Through the teaching projects, 5 digital applications (2 multimedia guides, 2 game applications for mobile devices, 1 Digital Atlas of Memories and teaching projects) were created and made available to the public, on platforms external to the project, to which are added 25 new collections for the digital museum of the Ecomuseo Milano Sud and over 30 between digital narratives and map storytelling.

Starting with 11 initial partners, ScAR has grown in its programme collaborations with further 8 partners in the public and private sector. The research also resulted in 5 spin-off projects with different partners in Italy and abroad. To disseminate both the project and the methodologies, 8 public events were organized, in addition to the presentation of the project at 8 international conferences and the creation of 10 publications, 3 of which in open access.

This sequence of figures certainly cannot convey the complexity of a lengthy and well-structured process, however if you read it alongside the reflections of the persons involved and shown in the pages preceding this summary, it can give an idea of the range of action of a research which, even if with limited means, has managed to monitor many heterogeneous subjects, to activate the latent resources of an area on the sidelines and to extend the scope of its actions even beyond the envisaged borders.

17. See chapter two.





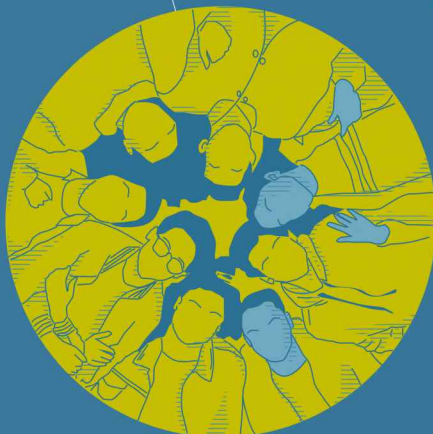
+50
teachers



5
digital products



+ 150
features mapped in
the "Atlante digitale delle memorie"



+ 750
students



49
classes



10
publications



8
conferences



5
spin-off
projects



7
interns



12
researchers
& professors



3
universities



4
collaborators



2
thesis



FINAL CONSIDERATIONS

When initiating this project, we highlighted how the Italian and European guidelines on cultural heritage and landscape education throw up some important questions which institutions, as well as the educational community more generally, now have to provide answers for. The fundamental choice underpinning the “*Scuola Attiva Risorse*” [“School Activates Resources”] project to operate in marginalised areas led to a focused reflection on the specific qualities of an educational action concentrated on local heritage and geared towards territories apparently lacking in cultural heritage and landscape values. Consequently, the research developed along two tracks: on the one hand, launching an experimental action in pursuit of answers to the new challenges posed by heritage education, and on the other, specifically investigating approaches and methodologies suited to operating in ordinary or fragile contexts with a wide-ranging action, rooted in a participatory process and oriented towards education on citizenship, intercultural and intergenerational exchange, protecting common assets, and developing widespread demand for high-quality landscapes.

At the end of the experiment, the research questions which initially sparked the project can be reformulated in a more conscious way, strengthened by the multitude of contributions provided by the various actors involved and the shared experiences of the teams and participants. As such, these considerations in particular retrace the crucial steps of the reflections developed on the theme of cultural heritage education, touching upon some particularly important issues such as how to define the subject of educational actions, the potential role of schools, the possible contribution of universities and research, the strategic role taken on by processes of representation within the actions and, finally, the connections between the experiment carried out and the current and future scenarios of research in the field.



Presentation poster of the project for a research centre for puppetry in the Stadera district realized by a student from the "Architectural Design Studio 1" of the Bachelor's Degree in Architectural Design. During the course, carried out remotely during the COVID-19 emergency, Atelier Carlo Colla e Figli simulated the client. (Drawing by Alice Dell'Acqua).

The first set of considerations concerns defining the subject of the actions in the field of heritage education and the role that schools and universities are called upon to play in constructing practices and methodologies. In the context of European culture, the inextricable link between heritage and cultural landscapes has long been clarified, much as it seems to be established – at least in theoretical terms – that the familiarisation and promotion actions that are traditionally the preserve of heritage and contexts considered exceptional should be extended to instances of local and intangible heritage, as well as to everyday places and even deteriorated landscapes. ScAR as an experiment sheds light on how heritage education can effectively find a place in an area filled with contradictions, where aspects of deterioration and fragility coexist intimately with wellsprings of unexpressed potential. By working together, teachers and researchers have shown how we can guide young people of varying ages along their journey as they learn about, interpret and communicate

about tangible and intangible heritage, drawing upon multiple sources of inspiration and focusing on areas which initially appear to be of no interest, as those around schools often seem to be. The educational projects developed during the research demonstrate a great many things: that interculturalism can be fostered by starting from the shops on our local street; that we can change our perception of a marginalised neighbourhood by looking at the graffiti on the walls of underpasses and abandoned buildings through new eyes; that we can work with young people to craft a professional tourist trail along unexpected routes on the outskirts of the city. They even show that it is possible to use games to encourage teenagers to take a closer look at where they live, interpret it, reflect upon their future, and much more besides.

If, as suggested by the current guidelines, in the near future we intend to undertake a systematic, structural approach to cultural heritage education that is inclusive of all contexts, it is crucial for schools – as the main educational agency, their reach more extensive than any other – to accept a central role in the process. Indeed, as the ScAR experiment once again confirms, schools are not just rich in human, cultural and professional resources, but they also bear within them a vast amount of design potential that is constantly seeking out contexts in which to be expressed and recognised. The schools involved in the project have shown that they wholeheartedly embrace the push for an approach to heritage and landscape education that is experimental, innovative, technologically up-to-date and open to external inputs. The teacher wholeheartedly embraced the spirit of putting together field work in conjunction with experts, set in the context of a wider process, and took great pains to overcome the difficulties involved in reconciling their schools' traditional organisational structure and consolidated operating methods with the demands of an approach to teaching that is strongly oriented towards design, transdisciplinarity, and learning about the local area in the field. In fact, the teachers made a significant contribution to the development of a *modus operandi* very much in its infancy, in many cases also helping to define it by actively participating in methodological reflections. The ScAR process also revealed how, with adequate support, schools can effectively take on the role of territorial hubs capable of connecting students, local communities, institutions and actors both public and private. However, in order for experiments such as these to be translated into widespread practices and develop within a process that is capable of evolving without crystallising into inflexible procedures, the primary resources – namely the design capabilities and proactivity of the teachers involved – need to be acknowledged, stimulated and nurtured. It is also important for the school community to be given more opportunities

– in much the same vein as the scientific community – to communicate and share experiences, results and reflections so that the work of individuals can become elements of a shared heritage. Much as suggested by the ScAR experiment, universities can play an important role in this broader process, in the spirit of the third mission and with a view to building collaborative and responsible research. In addition to training professionals who can simply work within the framework of processes, the academic world can – in this case as in others – drive and support the creation of the processes themselves, especially in pursuit of an open and experimental approach to methodological investigation. Academia can also bring together and centralise results, making shared solutions available to all, facilitating connections between different experiments and situations, and promoting participatory dynamics, including between different kinds of actors. In doing so, it would provide a catalyst for the energies of the school and local communities, ultimately resulting in shared practices and pluralistic reflections. In doing so, it would become possible to include the general public – and schools in particular – in a scientific research process that concerns the community, the territory and education, not merely as objects of study, but indeed as actors in their own right, with their own specific skills and viewpoints to contribute.

Downstream in the process, some consideration should also be dedicated to certain transversal aspects that emerge from the methodological survey itself. In particular, the experience gained within the project and the significant part played by the representation processes within the educational actions lead to questions about the role that constructing new representations can play more generally in the context of heritage and landscape education. The ScAR experiment as a whole could be seen as an articulated process of collecting and sharing knowledge and interpretations about a given territory and the cultural values that it encapsulates, and thus as a process of constructing and exchanging representations. This theme goes hand in hand with another one, intimately related to the first, namely the role that new technologies can play in this context. Over the course of the research project, the use of digital tools – always in conjunction with analogue and manual activities, as well as the direct experience of the places in question – played a significant role. This offered teachers the opportunity to interact with new technologies, motivated students to participate, acted as a lever for peer education and, last but not least, offered a quick and flexible medium for sharing information. On the whole, it can be said that the targeted use of ICT made it possible to develop a participatory process for the promotion of the cultural landscape in which digital tools – accessible and managed with bottom-up development logic – does not merely

serve as a means of communication, but instead becomes a vehicle for education, community building, and critical knowledge of the territory.

A final series of considerations concerns the connections between the research action described, the European and Italian guidelines, and the strategic indications for future research established by the European agenda.

When compared with the *Piano nazionale per l'educazione al patrimonio culturale* [National Plan for Cultural Heritage Education], the project reveals a substantial degree of congruence with the vision put forward by the MiBACT (now the Ministry of Culture) at the time. To summarise the main characteristics with reference to the indications contained within the Plan, it can be said that the ScAR project proposed and tested in the field a system of heritage education that is capable of including a multitude of subjects (schools, administrations, institutions, museums, families, associations and private organisations) in concrete actions geared towards building knowledge, communication and tourist promotion of elements of cultural heritage, particularly the more fragile and lesser-known ones, in this case hidden in the neighbourhoods on the urban outskirts. The project also supported teachers in their role as creators and facilitators of innovative educational programmes by providing training courses, tools, replicable work formats and experimental approaches to collaboration between schools and universities. The activities, based on the paradigms of project-based learning, authentic learning and peer education, involved all levels of education, from primary and secondary school students all the way to young people on vocational training schemes and university students, and they therefore offer a wide-ranging overview of the practices at play. In line with the MiUR guidance on digital development in the educational field – as expressed in the *Piano nazionale per la scuola digitale* [National Digital School Plan]), the ScAR project offered young people the opportunity to try their hand at producing digital content and architecture, supporting teachers and younger students in the conscious use of technologies for sharing and communicating about elements of cultural heritage.

All these characteristics also demonstrate how the project effectively fits into the European strategy on cultural heritage for the 21st century. Indeed, this strategy identifies cultural heritage as a key factor in refocusing European societies on a firm foundation of intercultural dialogue and respect for diversity and different identities. In keeping with this vision, ScAR's actions all followed the key guideline of an inclusive approach, namely by involving citizens in training on how to identify, familiarise themselves with, protect and promote the heritage that they are stewards of, as well as by drawing

the attention of the school community (and beyond) to its immediate surroundings, within the context of the students' everyday lives, thus helping to develop a sense of belonging in young people and stimulating their collective responsibility towards their shared cultural heritage. The actions developed within the project made the cultural heritage more accessible not only to the schoolchildren, but in many ways to their communities as well, highlighting its role as a vehicle for intergenerational and intercultural dialogue, for peace and tolerance. Again in accordance with European strategies, the project also provided inspiration on how to use innovative techniques to present cultural heritage to the public, as well as on incorporating heritage education more effectively and efficiently into school curricula. Finally, the research investigated the possibility of bringing together multiple facets of a single issue – namely landscape education, education on slow cultural tourism, and the development of tourism in areas off the beaten track – in response to calls to consider heritage within the framework of policies for the development of sustainable tourism, in line with European strategies for this century.

More generally, the research strived to follow the Sustainable Development Goals established by the United Nations' 2030 Agenda, such as quality education (goal 4), reduced inequality (goal 10), and creating sustainable cities and communities (goal 11). The set of practices and methodologies set out by ScAR effectively demonstrated how well-suited heritage education is to an inclusive approach to teaching, which helps to bring down school dropout rates and to address the results of school segregation, whilst also offering ideas on how to support inclusivity during an extended crisis such as the one brought about by the COVID-19 pandemic. Heritage education and education on sustainable development were also incorporated into the project, guiding the young students through the promotion of common assets and prompting them to care for the landscape in the locations of everyday life and in deteriorated areas, but also encouraging them to lead sustainable lives and train younger generations to appreciate multicultural environments and to active citizenship.



A primary school student draws the landscape from an urban scale model developing the concept of map and zenithal projection.





REFERENCES

- Agnus J. M., 1998. Out-of-school heritage education for young people from disadvantaged neighbourhoods. In Council of Europe (ed.), *Cultural heritage and its educational implications: a factor for tolerance, good citizenship and social integration, proceedings, seminar, Brussels, 28-30 August 1995*. Strasbourg: Council of Europe Publishing, pp. 39-43.
- Antinucci F., 2007. *Musei virtuali. Come non fare innovazione tecnologica*. Bari: Laterza.
- Bertone G., Bordin M., Casonato C., Di Blas N., Pracchi V., Vedoà M., 2019. Schools as Protagonists in the Valorization and Communication of their Local Cultural Heritage. In Bastiaens T. J. (ed.), *Proceedings of EdMedia and Innovate Learning*. Amsterdam: Association for the Advancement of Computing in Education (AACE), pp. 1562-1568.
- Blades M., Spencer, C., 1990. The development of 3 to 6-year-olds' map using ability: the relative importance of landmarks and map alignment. In *Journal of Genetic Psychology*, 151(2), pp. 181-194.
- Blaut J. M., 1991. Natural Mapping. In *Transactions of the Institute of British Geographers*, 16(1), pp. 55-74.
- Bodo S., Cantù S., Mascheroni S., 2007. *Progettare insieme per un patrimonio interculturale*. Quaderni ISMU 1/2007. Milano: Fondazione ISMU.
- Bonacini E., 2014. La realtà aumentata e le app culturali in Italia: storie da un matrimonio in mobilità. In *Il Capitale Culturale. Studies on the Value of Cultural Heritage*, IX, pp. 89-121.
- Bonfantini B., 2015. Caleidoscopio heritage: le dimensioni patrimoniali nel progetto d'abitabilità di città e territori. In Gastaldi F., Martinelli N. (eds.), *Atti della XVIII Conferenza Nazionale Siu, Società Italiana degli Urbanisti, Italia 45-45. Radici, condizioni, prospettive (Venezia, 11-13 giugno 2015)*. Milano: Planum Publisher, pp. 1388-1392.
- Bonfantini B., Villa D., 2015. Paesaggi culturali in rete. Metodi sperimentali per l'analisi, la mappatura, la gestione informativa integrata, la riattivazione del palinsesto insediativo storico e del patrimonio culturale diffuso. In *Urbanistica Informazioni*, n. 263/2015, special issue, *Atti della IX Giornata di Studi Inu (Napoli, 18 dicembre 2015)*, pp. 33-36.
- Bonfantini B. (ed.), 2016. *Attivare risorse latenti. Metodi sperimentali per l'analisi, la mappatura e la gestione informativa integrata delle trasformazioni di territori e manufatti del patrimonio culturale diffuso*. Milano: Planum-Publisher.
- Bonfantini B., Casonato C., Villa D., Di Blas N., Pracchi V., Vedoà M., 2019. Revealing the Everyday Landscape: Innovative Systems for Heritage Education in Schools. The ScAR (School Activates Resources) Project. In Brumana R., Pracchi R., Rinaudo F., Grimoldi A., Scaioni M., Previtali M., Cantini L. (eds.), *ISPRS International Archives of Photogrammetry, Remote Sensing and Spatial Information Sciences*, XLII-2/W11, *Proceedings of the GEORES (Geomatics and Restoration) conference 2019, Milan, May 8-10*, pp. 255-261.

- Borgia E., Di Berardo M., Occorsio S., Rainone G., 2019. *Minilemmi della cultura. Una rubrica per l'educazione al patrimonio*. Roma: Gangemi Editore.
- Bortolotti A., Calidoni M., Mascheroni S., Mattozzi I., 2008. *Per l'educazione al patrimonio culturale, 22 tesi*. Milano: Franco Angeli.
- Boterman W., Musterd S., Pacchi C., Ranci C., 2019. School segregation in contemporary cities: Socio-spatial dynamics, institutional context and urban outcomes. In *Urban Studies Volume 56 (15)*, pp. 3055-3073.
- Branchesi L., 2001. Pedagogia del patrimonio e cittadinanza democratica: scoprire nell'identità la ricchezza delle diversità. In De Cato G. (ed.), *Pedagogia del patrimonio per la costruzione della cittadinanza democratica. Seminario internazionale Council of Europe, MPI, Apricena 2001*. Apricena: Arti Grafiche Malatesta.
- Branchesi L. (ed.), 2006. *Il patrimonio culturale e la sua pedagogia per l'Europa*. Roma: Armando Editore.
- Branchesi L. (ed.), 2007. *Heritage Education for Europe*. Roma: Armando Editore.
- Branchesi L., 2011. Identità culturali, valori condivisi e cittadinanza. Dal patrimonio locale alle politiche europee. In Cristofano M., Palazzetti C. (eds.), *Il museo verso una nuova identità, Atti del Convegno internazionale Roma, La Sapienza, 21-23 febbraio 2008, vol. II*. Roma: Gangemi editore, pp. 209-218.
- Breiting S., Mayer M., Finn M., 2005. *Quality Criteria for ESD-Schools*. Wien: Radinger Print.
- Burini F., 2007. Sistemi cartografici e governance, dalla carta partecipativa ai PPGIS. In Casti E. (ed.), *Cartografia e progettazione territoriale. Dalle carte coloniali alle carte di piano*. Torino: UTET, pp. 178-192.
- Burini F., 2013. Metodologie partecipative e processi decisionali inclusivi: dalle iniziative europee alle pratiche italiane. In Burini F. (ed.), *Partecipazione e governance territoriale. Dall'Europa all'Italia*. Milano: Franco Angeli, pp. 31-53.
- Calcagno Maniglio A., 2017. Landscape and education. In Council of Europe (ed.), *Landscape dimensions. Reflections and proposals for the implementation of the European Landscape Convention*. Strasbourg: Council of Europe Publishing, pp 55-120.
- Careri F., 2006. *Walkscapes. Camminare come pratica estetica*. Torino: Einaudi.
- Carli P., 2017. GAIAsmart. Un'app ICT georeferenziata per la disseminazione e lo storytelling del patrimonio culturale/GAIAsmart. A free georeferenced ICT app for the dissemination and the storytelling of the cultural heritage. In Villa D. (ed.), *Open Data for Cultural Heritage, Place Based Digital Humanities Between Representation, Design and Innovation*. Milano: Planum Publisher, pp. 55-62.
- Carter T., Harvey D. C., Jones R., Robertson I. J. M., 2020. *Creating Heritage. Unrecognised Pasts and Rejected Futures*. Losanne: Routledge.
- Casey L., Pederson T., 2002. Mapping Philadelphia's neighbourhoods. In Craig W.J., Harris T. M., Wener D. (eds.), *Community Participation and Geographic Information Systems*. New York: Taylor & Francis, pp. 65-76.
- Casonato C., 2008. Rappresentare i paesaggi minori: dispositivi per la condivisione delle conoscenze. In R. Salerno, C. Casonato (eds.), *Paesaggi culturali/Cultural landscapes, Atti del Seminario internazionale di studi tenutosi a Milano presso il Politecnico, 3-4 Dicembre 2007*. Roma: Gangemi, pp. 215-227.
- Casonato C., Salerno R., Villa D., 2010. Perception, Representation, Awareness: the EUMM's Experience. In Pedroli B., Antrop M., Pinto Correia T. (ed.), *Living Landscape The European Landscape Convention in research perspective*. Firenze: Bandecchi & Vivaldi Editori, pp. 102-113.
- Casonato C., Salerno R. e Villa D., 2011. Sharing heritage: the Urban Ecomuseum in Milan experiences of participation and new information technologies. In Gambardella C. (ed.), *S.A.V.E. heritage. Safeguard of architectural, visual, environmental heritage*. Napoli: La Scuola di Pitagora Editore, pp. 9-11.

- Casonato C., Di Blas N., Bonfantini B., Bordin M., Pracchi V., Villa D., Vedoà M., 2019. *A scuola di Paesaggio. Mappa partecipata del patrimonio culturale di Milano Sud*. Milano: Planum Publisher.
- Casonato C., 2020. Using Graphics to Communicate Intangible. Cultural Heritage: Kids and Teens at Work!. In Cicalò E. (ed.), *Proceedings of the 2nd International and Interdisciplinary Conference on Image and Imagination IMG 2019*. Cham: Springer, pp. 182-194.
- Casonato C., Cossa G., 2020. Landscape stories. Visual storytelling on the everyday landscape. In Arena A., Arena M., Brandolino R.G., Colistra D., Ginex G., Mediati D., Nucifora S., Raffa P. (eds.). *Connettere. Un disegno per annodare e tessere. Atti del 42° Convegno Internazionale dei Docenti delle Discipline della Rappresentazione/Connecting. Drawing for weaving relationships. Proceedings of the 42nd International Conference of Representation Disciplines Teachers*. Milano: Franco Angeli, pp. 3025-3042.
- Casonato C., Greppi A., Vedoà M., 2020. Depicting the Urban Landscape. Enhancing the Cultural Heritage of Fragile Areas with Participatory Mapping Processes. In Agustin-Hernandez L., Vallespin Muniesa A., Fernandez Morales A. (eds.), *Graphical Heritage. Proceedings of XVIII EGA 2020 International Conference Universidad De Zaragoza. 4-5-6 June 2020, Zaragoza (Spain)*. Vol. 3: *Mapping, Cartography and Innovation in Education*. Cham: Springer Nature, pp. 295-306.
- Casonato C., Greppi A., 2021. Memorie dai margini della metropoli. Un progetto partecipativo di valorizzazione del patrimonio culturale delle periferie urbane rivolto alle scuole. In Pretelli M., Tolic I., Tamborrino R. (eds.), *La città globale. La condizione urbana come fenomeno pervasivo / The Global City. The urban condition as a pervasive phenomenon*, Bologna: AISU International, pp. 602-613.
- Casonato C., Di Blas N., Fabbri M., Ferrari F., 2021. Little-known heritage and digital storytelling. Schools as protagonists in the rediscovery of the locality. In Taricani E. (ed.), *Design Thinking and Innovation in Learning*. Bingley: Emerald Publishing, pp. 5-25.
- Casonato C., Di Blas N., 2022. With new eyes: teaching students to discover their local landscape and communicate it with technologies. In De Ascaniis S., Cantoni L., (eds.), *Handbook on Heritage, Sustainable Tourism and Digital Media*. Cheltenham Glos (UK), Northampton Massachusetts (USA): Edward Elgar Publishing, pp. 129-141.
- Casonato C., Bonfantini B., (eds.) (2022). *Cultural Heritage Education in the Everyday Landscape. School, Citizenship, Space and Representation*. Cham: Springer.
- Castiglioni B., 2012. Education on landscape for children. In Council of Europe (ed.), *Landscape facets Reflections and proposals for the implementation of the European Landscape Convention*. Strasbourg: Council of Europe Publishing, pp. 217-268.
- Castiglioni B., 2013. *Il paesaggio come strumento di mediazione interculturale*. Verona: Cierre Gruppo editoriale.
- Castiglioni B., 2015. Educare al paesaggio. Educare attraverso il paesaggio. In *Sentieri urbani*, no. 17, p. 28. Crocetta Del Montello (TV): Grafiche Antiga.
- Cenedella C., Mascheroni S., 2014. *Fonti del sapere. Didattica ed educazione al patrimonio culturale*. Genova: Virtuosa-Mente.
- CERI OCSE, 2011. *Apprendere e innovare*. Bologna: Il Mulino.
- Cerini G. (ed.), 2011. *Dalle Indicazioni al curriculum, USR Emilia Romagna*. Bologna: Tecnodid.
- Clifford S., King A., 1996. *From place to place: maps and Parish Maps*. London: Common Ground.
- Consalez L., 2018. Un ponte tra scuola e territorio. In *Territorio*, 85, pp. 80-92.
- Copeland T., 1998. Whose monuments, are they? Whose past is it? The multicultural use of monuments. In Council of Europe (ed.), *Cultural heritage and its educational implications: a factor for tolerance, good citizenship and social integration*. Strasbourg: Council of Europe Publishing, pp. 39-43.

- Copeland T., 2006a. *European democratic citizenship, heritage education and identity*. Strasbourg: Council of Europe Publishing.
- Copeland T., 2006b. Pedagogia del patrimonio e cittadinanza democratica nel Consiglio d'Europa. In Branchesi L. (ed.), *Il patrimonio culturale e la sua pedagogia per l'Europa*. Roma: Armando Editore, pp. 65-84.
- Cordini M., Parma A., Ranci C., 2019. A 'white flight' in Milan: School segregation as a result of home-to-school mobility. In *Urban Studies* 56(15), pp. 3216-3233.
- Costantino L. M., 2001. *Mnemosyne a scuola. Per una didattica dai beni culturali*. Milano: Franco Angeli.
- Council of Europe (ed.), 1993. *Handbook on European Heritage Classes*. Strasbourg: Council of Europe Publishing.
- Council of Europe (ed.), 1995. *European Heritage Classes. Proceedings of Colloquy organised by the Council of Europe and the French Ministry of National Education and Culture, in collaboration with the Caisse nationale des monuments historiques et des sites. Chateau de Maisons-Laffitte (France) 7-9 October 1992*. Strasbourg: Council of Europe Publishing.
- Council of Europe (ed.), 1998. *Cultural Heritage and its educational implications: a factor for tolerance, good citizenship and social integration: Proceedings. Brussels Seminar 1995*. Strasbourg: Council of Europe Publishing.
- Council of Europe (ed.), 2002. *European Cultural Heritage, Volume 1*. Strasbourg: Council of Europe Publishing.
- Council of Europe (ed.), 2012. *Landscape facets: Reflections and proposals for the implementation of the European Landscape Convention*. Strasbourg: Council of Europe Publishing.
- Council of Europe (ed.), 2017. *Landscape dimensions. Reflections and proposals for the implementation of the European Landscape Convention*. Strasbourg: Council of Europe Publishing.
- Dagnino F. M., Ceregini A., Pozzi F., Tavel-la M., 2016. Designing learning paths in the field of Intangible Cultural Heritage (ICH): a new methodology. In *Proceedings of the 10th International Technology, Education and Development Conference (INTED 2016), Valencia, Spain, 7-9 March*. Valencia: ITED publisher, pp. 6624-6631.
- Davidson D., 2010. *Cross-media Communications: An Introduction to the Art of Creating Integrated Media Experiences*. Pittsburgh: ETC Press.
- De Nardi A., 2013. *Il paesaggio come strumento per l'educazione interculturale. Linee Guida del Museo di Storia Naturale e di Archeologia di Montebelluna*. Montebelluna: Cierre Grafica.
- De Rita G., 1987. Le ragioni del successo dei beni culturali nella società post industriale. In Clementi A., Perego F. (eds.), *Memorabilia. Il futuro della memoria: beni ambientali, architettonici, archeologici, artistici e storici in Italia. Confronti per l'innovazione*, vol. 1. Bari: Laterza, pp. 267-279.
- De Santis R., 2019. "Il Nonino agli autori contro il sovranismo", *La Repubblica*, giovedì 10 gennaio, p. 32.
- De Troyer V., 2005. *Hereduc. Heritage Education in the classroom. A Practical Manual for Teachers*. Antwerpen-Apeldoorn: Garant.
- Derr V., Chawla L., Mintzer M., 2018. *Place-making with Children and Youth. Participatory Practices for Planning Sustainable Communities*. New York: New York Village Press.
- Di Berardo M., 2019. Patrimonio Culturale. In Borgia E., Di Berardo M., Occorsio S., Rainone G. (eds.), *Minilemmi della cultura. Una rubrica per l'educazione al patrimonio*. Roma: Gangemi Editore, pp. 175-192.
- Di Blas N., Bolchini D., Paolini P., 2007. Instant multimedia: A new challenge for cultural heritage. In *Museums and the Web*, pp. 1-12.
- Di Blas N., Paolini P., 2012. Digital Storytelling and Educational Benefits: Evidences from a Large-Scale Project. In Iurgel I., Mueller W.,

- Petta P. (eds.), *Transactions on Edutainment – Special Issue on Interactive Digital Storytelling, Lecture Notes in Computer Science, Springer vol. 10 (7775)*. Cham: Springer pp. 83-101.
- Di Blas N., Paolini P., 2013. Beyond the School's Boundaries: PoliCultura, a Large-Scale Digital Storytelling Initiative. In Leo T., Spalazzi L., Ghislandi P., Lerardi M.G. (eds.), *Educational Technology & Society, Special Issue on "Innovative technologies for the seamless integration of formal and informal learning"*, 16(1), pp. 15-27.
- Di Blas N., & Ferrari L., 2014. Digital storytelling at school: what kind of educational benefits?. In *International Journal of Arts and Technology*, 7(1), pp. 38-54.
- Di Blas N., 2016. *Storytelling digitale a scuola*. Milano: Apogeo Education.
- Dumont H., Istance D., Benavides F., 2010. *The Nature of Learning: Using Research to Inspire Practice, Educational Research and Innovation*. Paris: OECD Publishing.
- Ellerani P., 2013. *Metodi e tecniche attive per l'insegnamento, creare contesti per imparare ad apprendere*. Roma: Anicia.
- Federculture, 2016. *12° Rapporto Annuale Federculture – Cultura, identità e innovazione la sfida per il futuro*. Roma: Gangemi.
- Ferlinghetti R. 2009. Paesaggi minimi e spazi urbani. In *Dintorni*, 6, pp. 273-296.
- Giorda C., Puttilli M. (eds.), 2011. *Educare al territorio – educare il territorio. La geografia per la formazione*. Carocci: Roma.
- Gombault A., Allal-Chérif O., Décamps A., 2016. ICT adoption in heritage organizations: Crossing the chasm. In *Journal of Business Research* 69, pp. 5135-5140.
- Gordon E., de Souza Silva A., 2011. *Net Locality. Why Location Matters in a Networked World*. Chichester: Wilwy-Blackwell.
- Harley J. B., 1989. Deconstructing the Map. In *Cartographica vol. 26, n.2*. Spring, pp. 1-20.
- Hart R., 1992. *Children's participation. From tokenism to citizenship*. Firenze: UNICEF International Child Development Centre.
- Herrington J., Reeves T.C., Oliver R., 2010. *A guide to authentic e-learning*. London-New York: Routledge.
- Ippoliti E., 2011. Media digitali per il godimento del patrimonio culturale. Digital Media and enjoyment of Cultural Heritage. In *Disegnare-Con*, 4 (8), pp. 2-13.
- Jenkins H., 2009. *Confronting the Challenges of Participatory Culture Media Education for the 21st Century*, Cambridge. Boston: MIT Press.
- Katsoni V. (ed.), 2015. *Cultural Tourism in a Digital Era: First International Conference IACu-DiT*. Athens: Springer.
- Kokotsaki D., Menzies V., & Wiggins, A., 2016. Project-based learning: A review of the literature. In *Improving Schools*, 19(3), pp. 267-277.
- Laino G. (ed.), 2020. *V Rapporto sulle città italiane. Politiche urbane per le periferie*. Bologna: Il Mulino.
- Lavoie C., 2005. Sketching the Landscape: Exploring a Sense of Place. In *Landscape Journal*, 24(1), pp. 13-31.
- Lessig L., 2008. *REMIX – Making Art and Commerce Thrive in the Hybrid Economy*. London: The Penguin Press.
- Levy J., 2007. La carta, uno spazio da costruire. In Casti E. (ed.), *Cartografia e progettazione territoriale. Dalle carte coloniali alle carte di piano*. Torino: UTET, pp. 42-62.
- Lévy J. (ed.), 2016. *A cartographic turn*. Losanne: EPFL Press/Routledge.
- Luigini A. (ed.), 2019. *Proceedings of the 1st International and Interdisciplinary Conference on Digital Environments for Education, Arts and Heritage, EARTH 2018*. Cham: Springer.
- Luigini A., Panciroli C. (eds.), 2018. *Ambienti digitali per l'educazione all'arte e al patrimonio*. Milano: Franco Angeli.

- Lynch K. A., 1960. *L'immagine della città*. Venezia: Marsilio.
- Macdonald L.W., 2006. *Digital Heritage: applying digital imaging to cultural heritage*. Amsterdam: Elsevier.
- Manovich L., 2009. The Practice of Everyday (Media) Life: From Mass Consumption to Mass Cultural Production?. In *Critical Inquiry*, 35(2), pp. 319-331.
- Marinelli O., 1917. Ancora sul concetto di paesaggio. In *Rivista di Geografia Didattica*, 1, pp. 136-138.
- Ministero dei Beni e delle Attività Culturali e del Turismo (MiBACT) 2017a, Osservatorio Nazionale per la qualità del paesaggio (ed.), *Rapporto sullo stato delle politiche per il paesaggio*. Roma: CLAN group.
- Ministero dei beni e delle attività culturali e del turismo (MiBACT) (ed.), 2017b. *Atti degli Stati Generali del Paesaggio. Roma, 25-26 ottobre 2017*. Roma: Gangemi Editore.
- Ministero per i Beni e le Attività Culturali e per il Turismo (MiBACT), 2018. *Carta nazionale del paesaggio. Elementi per una strategia per il paesaggio italiano*. Roma: Gangemi Editore.
- Mitchell L. S., 1991 (1934). *Young Geographers: How They Explore the World and How They Map the World*. New York: Bank Street College of Education.
- Mitchenson D., 2015. Safeguarding Intangible Cultural Heritage by Creating Meaningful Transmission Experiences. In *International Journal of Heritage in the Digital Era*, 4(1), pp. 57-70.
- Modigliani D., 2001. Piani, programmi e azioni per la periferia. In *Urbanistica*, 116, pp. 74-82.
- Montella M., 2009. *Valore e valorizzazione del patrimonio culturale storico*. Milano: Electa.
- Morisette L.K., 2011. *La ville phénomène de représentation*. Montreal: Presses de l'Université du Québec.
- Munarin S., Tosi M.C., 2014. *Welfare space: on the role of welfare state policies in the construction of the contemporary city*. Barcelona: LISt Lab Laboratorio Internazionale Editoriale.
- Organizzazione per la Cooperazione e lo Sviluppo Economico (OCSE), 2016. *Rapporto PIAAC Programme for the International Assessment of Adult Competencies*. Paris: OECD Publishing.
- Ott M., Pozzi F., 2008. ICT and Cultural Heritage Education: Wich Added Value?. In Lytras M. D., Carrol J. M., Damiani E. Tennyson R. D. (ed.), *Emerging Technologies and Information Systems for the Knowledge society. Proceedings of the World Summit on the Knowledge Society, WSKS 2008, Athens Greece, September 24-26 2008*. Berlin: Springer 2008.
- Ott M., Pozzi F., 2011. Towards a new era for Cultural Heritage Education. Discussing the role of ICT. In *Computers in Human Behavior*, 27. Washington: America Psychological Association, pp. 1365-1371.
- Pacchi C., Ranci C. (eds.), 2017. *White Flag a Milano. La segregazione sociale ed etnica nelle scuole dell'obbligo*. Milano: Franco Angeli.
- Pasqui G., 2008. *Città, popolazioni, politiche*. Milano: Jaca Book.
- Pedroli G. B. M., Van Mansvelt J. D., 2006. *Landscape and awareness-raising, training and education*. Strasbourg: Council of Europe Publishing.
- Petrillo A., 2018. *La periferia nuova. Disuguaglianza, spazi, città*. Milano: Franco Angeli.
- Piaget J., 1964. Part I: Cognitive development in children: Piaget development and learning. In *Journal of research in science teaching*, 2(3), pp. 176-186.
- Pickles J. (ed.), 1995. *Ground Truth. The social implications of Geographic Information Systems*. New York: The Guilford Press.
- Pietrolucci M., 2017. *Verso la realizzazione delle 'microcittà' di Roma*. Milano: Skira.

- Pomilio F. (ed.), 2009. *Welfare e territorio: esplorare il legame tra politiche dei servizi e dimensione urbana*. Firenze: Alinea.
- Pracchi V., 2001. La domanda o il bisogno di conservare l'eredità del passato. In Ventura F. (ed.), *Beni Culturali. Giustificazione della tutela*. Torino: Utet, pp. 115-143.
- Pracchi V., Della Torre S., 2003. *Le chiese come beni culturali. Suggerimenti per la conservazione*. Milano: Electa.
- Pracchi V., Della Torre S., 2006. Saper vedere (la complessità dell')architettura. In Cucuzza N., Medri M. (eds), *Archeologie. Studi in onore di Tiziano Mannoni*. Bari: Edipuglia, pp. 453-456.
- Pracchi V., 2017. La 'domanda' o il 'bisogno' di fruizione dei beni culturali. In Prescia R. (ed.), *RICerca/REStauo, D. Fiorani, a cura di, sezione 4 Valorizzazione e gestione delle informazioni*. Roma: Edizioni Quasar, pp. 857-865.
- Pracchi V., Chiapparini A., 2013. Il restauro e i possibili modi per "comunicare" il patrimonio culturale. In *Il Capitale Culturale. Studies on the Value of Cultural Heritage*, VIII, pp. 137-155.
- Priore R., 2009. *No People, No landscape: la Convenzione Europea del Paesaggio. Luci ed ombre nel processo di attuazione in Italia*. Milano: Franco Angeli.
- Remotti, F., 2013. *Contro l'identità*. Roma-Bari: Laterza.
- Remotti F., 2017. *L'ossessione identitaria*. Roma-Bari: Laterza.
- Renzoni C. (ed.), 2018. Cinquant'anni di standard urbanistici (1968-2018). *Radici. In Territorio*, 84, pp. 21-76.
- Ripp M., Rodwell D., 2015. The geography of urban heritage. In *The Historic Environment: Policy & Practice*, 6(3), pp. 240-276.
- Riva R., 2017. *Ecomuseums and cultural landscapes. State of the art and future prospects*. Santarcangelo di Romagna: Maggioli.
- Robin B., 2006. The educational uses of digital storytelling. In *Technology and teacher education annual*, 1, pp. 706-716.
- Russi N., 2009. "Progettazione alla scala locale. I Nuclei di identità locale del Pgt di Milano. In Pomilio F. (ed.), *Welfare e territorio. Esplorare il legame tra politiche dei servizi e dimensione urbana*. Firenze: Alinea, pp. 133-146.
- Savoldi P., 2006. *Giochi di partecipazione. Forme territoriali di azione collettiva*. Milano: Franco Angeli.
- Scazzosi L., 2017. La convenzione Europea del Paesaggio nel quadro internazionale. In Ministero dei Beni e delle Attività Culturali e del Turismo (MiBACT), Osservatorio Nazionale per la qualità del paesaggio, *Rapporto sullo stato delle politiche per il paesaggio*. Roma: CLAN group, pp. 27-29.
- Settis S., 2012. *Paesaggio costituzione cemento. La battaglia per l'ambiente contro il degrado civile*. Torino: Einaudi.
- Settis S., 2017. *Architettura e democrazia. Paesaggio, città, diritti civili*. Torino: Einaudi.
- Shaw A., Krug D., 2013. Youth, heritage, and digital learning ecologies: Creating engaging virtual museum spaces. In Herrington J., Couros A., Irvine V. (eds.), *Proceedings of Ed-Media 2013--World Conference on Educational Media and Technology*. Victoria: Association for the Advancement of Computing in Education (AACE), pp. 673-679.
- Shuib L., Shamshirband S., Ismail M. H., 2015. A review of mobile pervasive learning: Applications and issues. In *Computers in Human Behavior*, 46, pp. 239-244.
- Sobel D., 1998. *Mapmaking with children. Sense of place education for the elementary years*. Portsmouth: Heinemann.
- Sonkoly G., Vahtikari T., 2018. *Innovation in Cultural Heritage Research. For an integrated European Research Policy*. Lussemburgo: Publication Office of the European Commission.

- Spirn A.W., 2005. Restoring Mill Creek: landscape literacy, environmental justice and city planning and design, In *Landscape Research*, 30(3), pp. 395-413.
- Swensen G., Jerpåsen G. B., 2008. Cultural heritage in suburban landscape planning: A case study in Southern Norway. In *Landscape and urban planning*, 87(4), 289-300.
- Sylaiou S., Mania K., Paliokas I., Pujol-Tost L., Killintzis V., Liarokapis F., 2017. Exploring the educational impact of diverse technologies in online virtual museums. In *International Journal of Arts and Technologies* (10) n.1, pp. 58-83.
- Turri E., 2006 (1998). *Il paesaggio come teatro. Dal territorio vissuto al territorio rappresentato*. Venezia: Marsilio.
- Van Lakerveld J., Gussen I., 2011. *Aqueduct. Acquiring Key Competences through Heritage Education*. Bilzen: Lies Kerkhofs, Landcommanderij Alden Biesen.
- Vermeersch J., 2005. *Hereduc – Heritage in the Classroom. A Practical Manual for Teachers*. Brussel: Garant Verlag Publisher. CHIEDERE A CAMILLA
- Villa D., 2014a. Visualizzare la Massa Le pratiche di partecipazione basate sul Web come strumenti innovativi nel disegno e nella mappatura di Milano Città Metropolitana. In *DisegnareCon* 7(X), pp. 1-6.
- Villa D., 2014b. Identità Digitale dei Luoghi. Sviluppi e prospettive dell'informazione geografica volontaria nell'era dei geo-social network. In Scaramellini G., Mastropiero E. (eds.), *Atti del XXXI Congresso Geografico Italiano*. Milano: Mimesis, pp. 459-470.
- Villa D., 2015. What is the City but the People? Redraw the Perceived Townscapes: Visual Genealogies and Contemporary Trends. In Marotta A., Novello G. (eds.), *Disegno & città-Drawing & city*. Roma: Gangemi, pp. 1197-1202.
- Villa D., 2016. Paesaggi fragili, Digital Humanities, Open Data: coniugare digitalizzazione, informazione e comunicazione del patrimonio culturale. In Bonfantini B. (ed.), *Attivare Risorse Latenti*. Milano: Planum Publisher, pp. 21-31.
- Viola A., 2004. Tous les savoirs de l'architecture: une école pour apprendre à habiter. In Desmerges J.-C., Champey I., Cambier A., Borrillo M., Escoubas E. (eds.), *Art et savoir: De la connaissance à la connivence*. Paris: L'Harmattan.
- Viola A., 2006. Il progetto della memoria. In Branchesi L. (ed.), 2006. *Il patrimonio culturale e la sua pedagogia per l'Europa*. Roma: Armando Editore.
- Volpe G., 2015, *Patrimonio al futuro. Un manifesto per i beni culturali e il paesaggio*. Milano: Electa.
- Waterton E., Watson S., 2010. *Culture, Heritage and representation. Perspectives on Visuality and the past*. Farnham: Ashgate.
- Widgren M., 2004. Can landscapes be read?. In Hannes Palang H., Sooväli H., Antrop M., Setten G. (eds.), *European rural landscapes: persistence and change in a globalising environment*. Dordrecht: Springer, pp. 455-465.
- Wood D., 1992. *The power of maps*. New York: The Guilford Press.
- Xu F., Weber J., Buhalis D., 2013. Gamification in tourism. In Xiang Z., Tussyadiah I. (eds.), *Information and communication technologies in tourism 2014*. Cham: Springer, pp. 525-537.
- Yung R., Khoo-Lattimore C., 2019. New realities: a systematic literature review on virtual reality and augmented reality in tourism research. In *Current Issues in Tourism*, 22(17), pp. 2056-2081.

DOCUMENTS

Council of Europe, 1998. *Recommendation of the Committee of Ministers to member states concerning heritage education, adopted by the Committee of Ministers on 17 March 1998* (Recommendation n. R (98) 5). Available on the Council of Europe website: <https://rm.coe.int/16804f1ca1>.

Council of Europe, 2000. *European Landscape Convention, Florence 20 October 2000*. Available on the Council of Europe website: <https://rm.coe.int/CoERMPublicCommonSearchServices/DisplayDCTMContent?documentId=09000016802f80c6>.

Council of Europe, 2005. *Council of Europe Framework Convention on the Value of Cultural Heritage for Society Convenzione di Faro*, sottoscritta dall'Italia nel 2013. Available on the Council of Europe website: <https://rm.coe.int/1680083746>.

Council of Europe, 2008. *Recommendation of the Committee of Ministers to member states on the guidelines for the implementation of the European Landscape Convention, adopted by the committee of Ministers on 6 February 2008* (CM/Rec(2008)3). Available on the Council of Europe website: https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=09000016805d3e6c.

Council of Europe, 2014. *Recommendation of the Committee of Ministers to member States on promoting landscape awareness through education, adopted by the Committee of Ministers on 17 September 2014* (CM/Rec(2014)8). Available on the Council of Europe website: https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=09000016805c5138

Council of Europe, 2015. *Recommendation of the Committee of Ministers to member States on pedagogical material for landscape education in primary school, adopted by the Committee of Ministers on 14 October 2015* (CM/Rec(2015)7). Available on the Council of Europe website: https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=09000016805c3a7c.

Council of Europe, 2017. *Recommendation of the Committee of Ministers to member States on the contribution of the European Landscape Convention to the exercise of human rights and democracy with a view to sustainable development, adopted by the Committee of Ministers on 27 September 2017* (CM/Rec(2017)7). Available on the Council of Europe website: https://search.coe.int/cm/Pages/result_details.aspx?ObjectID=0900001680750d64.

Council of Europe, 2017. *Recommendation of the Committee of Ministers to member States on the European Cultural Heritage Strategy for the 21st century* (CM/Rec(2017)1), adopted by the Committee of Ministers on 22 February 2017. Available on the Council of Europe website: <https://www.coe.int/en/web/culture-and-heritage/strategy-21>.

Council of Europe, 2018. *Glossary of the Information System of the Council of Europe Landscape Convention. Spatial planning and landscape, No. 106*. Available on the Council of Europe website: <https://edoc.coe.int/en/environment/7623-glossary-of-the-information-system-of-the-council-of-europe-landscape-convention-spatial-planning-and-landscape-no-106.html>.

Council of Europe, 2019. *Recommendation of the Committee of Ministers to member States with a view to the implementation of the European Landscape Convention of the Council of Europe – Landscape and democracy: public participation, adopted by the Committee of Ministers on 16 October 2019* (CM/Rec(2019)8). Available on the Council of Europe website: https://search.coe.int/cm/pages/result_details.aspx?objectid=09000016809841c3.

Council of Europe, 2019. *Landscape and education, Proceedings of the 21st Council of Europe Meeting of the Workshops for the implementation of the European Landscape Convention, Tropea, Calabria, Italy, 3-4 October 2018, European spatial planning and landscape, No. 114*. Available on the Council of Europe website: <https://rm.coe.int/09000016809404c2>.

Eurydice/INDIRE, 2015. *Lotta all'abbandono precoce dei percorsi di istruzione e formazione in Europa. Strategie, politiche e misure*. Versione italiana del documento dell'UE *Tackling Early Leaving from Education and Training in Europe: Strategies, Policies and Measures*. Available on the Indire website: https://eurydice.indire.it/wp-content/uploads/2016/05/Q_Eurydice_31.pdf.

ICOMOS, 2014. *Florence Declaration on Heritage and Landscape as Human Values. Declaration of the principles and recommendations on the value of cultural heritage and landscapes for promoting peaceful and democratic societies*,

Florence 14 November 2014. Available on the ICOMOS website: https://www.icomos.org/images/DOCUMENTS/Secretariat/2015/GA_2014_results/GA2014_Symposium_FlorenceDeclaration_EN_final_20150318.pdf.

Ministero dei Beni e delle Attività Culturali e del Turismo (MiBACT), Direzione Generale Educazione e Ricerca, 2015. *Primo piano nazionale per l'educazione al patrimonio culturale 2015-2016*, approvato dal Consiglio Superiore per i Beni Culturali e Paesaggistici in data 14 dicembre 2015. Available on the MiBACT website: <http://www.sed.beniculturali.it/index.php?it/439/piano-nazionale-per-leducazione-al-patrimonio-culturale>.

Ministero dell'Istruzione, dell'Università e della Ricerca (MIUR), 2015. *Piano nazionale scuola digitale*. Available on the MIUR website: <https://www.miur.gov.it/documents/20182/50615/Piano+nazionale+scuola+digitale.pdf/5b1a7e34-b678-40c5-8d26-e7b646708d70?version=1.1&t=1496170125686>.

Ministero dei Beni e delle Attività Culturali e del Turismo (MiBACT), Direzione Generale Educazione e Ricerca, 2017. *Secondo piano nazionale per l'educazione al patrimonio culturale 2016-2017*, approvato dal Consiglio Superiore per i Beni Culturali e Paesaggistici in data 10 aprile 2017. Available on the MiBACT website: <http://www.sed.beniculturali.it/index.php?it/439/piano-nazionale-per-leducazione-al-patrimonio-culturale>.

Ministero dei Beni e delle Attività Culturali e del Turismo (MiBACT), Direzione Generale Educazione e Ricerca, 2018. *Terzo piano nazionale per l'educazione al patrimonio culturale 2018-2019*. Available on the MiBACT website: <http://www.sed.beniculturali.it/index.php?it/439/piano-nazionale-per-leducazione-al-patrimonio-culturale>.

Ministero per i Beni e le Attività Culturali e per il Turismo (MiBACT), Direzione Generale Educazione e Ricerca, Centro per i servizi educativi (Sed), 2019. *Note per l'educazione al patrimonio culturale*. Available on the MiBACT website: <https://dger.beniculturali.it/wp-content/uploads/2020/04/Note-per-leducazione-al-patrimonio-culturale-DGER-Sed-2.pdf>.

Osservatorio sulla dispersione e l'integrazione scolastica (Bugli V., Conte M., Laffi S.), 2014. *La dispersione a Milano nei dati dell'Anagrafe scolastica, Anno scolastico 2013-2014, Report di ricerca*. Available on the Municipality of Milan website: <https://mediagallery.comune.milano.it/cdm/objects/changeme:28325/datastreams/dataStream4221113832403805/content>.

Provincia di Sondrio, Distretto Culturale della Valtellina, 2013. *Un curriculum di scuola per il patrimonio culturale valtellinese. Il paesaggio e le sue trasformazioni*, *Linee guida 2013-2014*.

APPENDIX

Summary of the educational projects developed during the School Activates Resources project

This section collects a summary description of the educational projects of the classes during the school year 2018/19. It offers a first picture of the many different possible interpretations of the methodology proposed by the ScAR project.

Primary and lower secondary school Arcadia – Milan

Class 3B primary School Feraboli

“Atelier Colla e Figli: Il mondo magico delle marionette”

[Atelier Colla e Figli: The magical world of marionettes]

Teachers: E. Cacciatore, A. P. Gellini, P. Scala

A study of the local tangible and intangible heritage related to the tradition of the puppetry company “Carlo Colla and Sons”, which has the historical atelier in via L. Montegani. The children visited the theatre and interviewed the troupe. Thanks to this experience, students elaborated the stories, drawings and plots for a puppet show that takes place in their neighbourhood Gratosoglio.

Activities: interviews with witnesses and experts, digital storytelling, video making.

Class 3D lower secondary school Arcadia

“Da Gratosoglio allo Stadera” [From Gratosoglio to Stadera]

Teachers: G. Appolonia, M. C. Corvi, P. Ghinatti, M. T. Tamburini

An articulate urban landscape interpretation activity, between its cultural contents and transformations, along an itinerary that connects Gratosoglio and Stadera neighbourhoods. The students’ reflection began by analysing the familiar landscape of home-school paths through the drafting of individual and collective mind maps. The journey in the neighbourhoods and a documentation activity led to the design of geo-tagged game itineraries for children (urban game) and the realisation of a digital map with the support of the “Atlante digitale delle memorie” platform. The process enabled the students to perceive their neighbourhood differently,

discover the surrounding territory, build a bridge between the familiar and the nearby but less known areas, and share their discoveries with peers through technology and mobile games.
Activities: journeys in the neighbourhood, interviews of witnesses or experts, mind mapping, landscape drawing, urban geogames, atlante digitale delle memorie.

Primary and lower secondary school F. Filzi – Milan

Class TEACCH lower secondary school A. Toscanini

“La settimana della classe TEACCH” [The week of TEACCH class]

Teachers: V. Chatzipetros, R. Salbe

The students of the TEACCH class (Treatment and Education of Autistic and Communication Handicapped Children) tell about their typical week at Toscanini lower secondary school, a reference point for children affected by the autistic syndrome. The project documents an essential reality of integration as an expression of the cultural and social value of its territory. The narration will be visible on page “La nostra storia” [Our story] on www.policultura.it.

Activities: digital storytelling, video making.

Classes 1D and 3D lower secondary school A. Toscanini

“Vit@social”

Teachers: A. Alletto, E. Bonaidimani

Reflection didactical process on the territory and its transformations centred on the Fondazione Prada area: have you ever been in that area? What is new in the neighbourhood? What was there before? The theme of landscape is associated with social media, their use, strengths and weaknesses. The reflection becomes a cue for realising a theatrical show in collaboration between students (script by the class 3D, dramatisation by the class 1D).

Activities: video making, sharing via social media, theatre workshops.

Classes 3A, 3C, 3D and 3E lower secondary school A. Toscanini

“Progetto Murales” [Murales Project]

Teacher: T. Bramati

Mural project for walls delimiting industrial or degraded areas, in particular for the Porta Romana railway station area. The idea is to change the students’ perception of familiar places as degraded or unattractive, stimulating precise observation and suggesting creative solutions for urban regeneration.

Activities: landscape drawing, urban regeneration projects, atlante digitale delle memorie.

Class 1E lower secondary school A. Toscanini

“Quattro passi per il Vigentino” [Walking in Vigentino]

Teacher: M. T. Bagnato, V. Del Pizzol

A Didactical process to know the neighbourhood and deepen history and geography topics. The children documented historical topics starting from the local heritage of Vigentino from the medieval age to today. Students analysed the monasteries, the abbeys and the testimonies of the rural past of the area, until understanding the contemporary city through the analysis of the route of tram n.24 along via Ripamonti, the backbone of the neighbourhood. The students then shared their work, first with itinerant lessons in the neighbourhood or inside the tram, then through the “Atlante digitale delle memorie” platform.

Activities: journeys in the neighbourhood, peer learning, atlante digitale delle memorie.

Class 2B lower secondary A. Toscanini

“Vigentour – cerca il tuo futuro nel Vigentino” [Vigentour – Find your Future in Vigentino]

Teachers: B. Cagnoni, D. Manenti, V. Chatzipetros, M. Bagnato

An articulated activity of interpretation of the urban landscape, its cultural contents and its transformations, along an itinerary that connects the school to the headquarters of Fondazione Prada. The drawing of mind maps of the daily experience of the landscape, the routes on the territory, the landscape analysis workshops and the extensive documentation work have led to the design of geolocalised game itineraries for peers (urban geogame) and the realisation of a digital map with the “Atlante digitale delle memorie” platform. The arrival point of the process was a cue for a reflection on the relationship between the studied area and the rest of the city with the workshop of landscape reading performed inside the tower of Fondazione Prada. The design of murals for the Porta Romana rail yard wall, which marks a barrier with the northern side, concluded the experience by opening to the theme of urban regeneration. The class then experienced a series of urban design workshops. The development of a “logbook” to tell, observe and understand landscapes, built and open spaces, has allowed identifying the factors of criticality and degradation in which to converge through the project proposal, a different way of the use of the area for a better urban space liveability.

Activities: journeys in the neighbourhood, landscape drawing, urban regeneration projects, landscape reading workshops at Fondazione Prada, peer learning, interviews with witnesses or experts, urban geogames, atlante digitale delle memorie, digital mapping, video making.

Class 3C lower secondary school A. Toscanini

“Alla scoperta del quartiere Vigentino” [Discovering the Vigentino Neighbourhood]

Teachers: C. M. Mazzone

An educational path to learn the history of the neighbourhood through mapping with the “Atlante digitale delle memorie” platform, and through the collection of interviews and historical images with the aim to compare the past and the present.

Activities: interviews with witnesses or experts, atlante digitale delle memorie.

Primary and lower secondary school Via Palmieri – Milan

Class 3E and 3F lower secondary school S. Pertini

“Zona 5.0!! La periferia capovolta” [Zone 5.0!! The outskirts turned upside down]

Teachers: M. C. Crea, A. Misitano, S. Russo.

A journey in the landscape about the students’ everyday places of life and the cultural landscape of the peripheries. The tangible and intangible heritage has been considered in all its forms: from architecture to services and infrastructures, from spontaneous artistic manifestations, such as graffiti and music video clips, to the cinema. The contents were then reworked with digital map storytelling and shared through the “Atlante digitale delle memorie” platform, creating a digital map of the streets of the Stadera and Gratosoglio districts..

Activities: atlante digitale delle memorie, map storytelling.

Class 2A primary school C. Battisti

“Dal mondo allo Stadera: tutti i colori dell’artigianato” [From the world to Stadera: all the colours of craftsmanship]

Teachers: M. A. Picillo, L. Tarricone

An articulated itinerary of landscape interpretation around the school guides children to discover the craftsmanship culture in their neighbourhood and their families’ countries of origin, building a bridge between generations, territories and cultures. The children mapped the hand-craft activities in via Montegani, carried out video interviews with locals, made a model of the

street and designed play areas for open spaces, following a path to discover the intangible cultural heritage and learn the standard languages of cartography and architectural representation. *Activities: journeys in the neighbourhood, landscape drawing, neighbourhood models, urban regeneration projects, interviews of witnesses or experts, atlante digitale delle memorie, video making.*

Upper secondary school IPSC W. Kandinsky – Milan

Class 3B (in collaboration with 3A)

“Questa città che non finisce mai. La street art racconta la Zona 5” [This City that Never Ends... Street art illustrates zone 5.0]

Teachers: A. De Blasi, M. Introvini, M. Rizzaro, A. Rizzo

The project assumed the peripheries as “the fertile landscape in which needs of expression and stories of teenagers can have a place”. Starting from a reflection on the reality of Gratosoglio and the attitudes and interests of students from the course of graphics, the didactic process focused on the theme of street art. The students immersed themselves in the neighbourhood, documented the expressive activities of the school (the murals realised by class 3A), and collected materials and testimonies on the territory. The students experienced the different phases of the documentation work and then concentrated on the interpretation and restitution through the creation of poetic texts, the elaboration of images, the video editing, and finally the development of digital storytelling that brings out, alongside fragility, the less known and hidden values of a peripheral neighbourhood. The narrations will be visible on page “La Nostra Storia” on the website www.policultura.it.

Activities: journeys in the neighbourhood, interviews of witnesses or experts, digital storytelling, video making, digital image editing.

Class 2A

“Leggere il paesaggio urbano con il disegno dal vero” [Reading urban landscape through life drawing]

Teachers: A. De Blasi, F. Cannata, A. Rizzo, A. Franzone

An educational activity through photography, maps reading, and life drawing, connected with an activity on the landscape of “L’infinito” poem by Leopardi. The project has been articulated in a sequence of tours around the Milanese territory and to Fondazione Prada, accompanied by activities of photographic survey and life drawing in places with a strong sense of popular tradition and most recent transformation.

Activities: landscape drawing, landscape reading workshops at Fondazione Prada.

Upper secondary school IIS C. Varalli – Milan

Classes 3CT, 3DT, 3ET, 3CL and 4CL

“Seguitemi, prego...” [Follow me, please...]

Teachers: T. Caputo, A. Cristiani, I. Fabrocile, D. Radrizzani, A. Rutili, S. Zanella

An articulated educational path of cultural landscape interpretation and communication with advanced technologies. The students’ reflections started from the familiar landscape of home-school paths by drawing individual and collective mind maps. The following explorations were accompanied by analysis, discussions, mapping, sound recordings, collection of photographic and video contents and a 360° camera survey campaign. The documentation phase, complemented by interviews with experts and witnesses, provided the content for communication aimed at peers and citizens. Students developed two interactive tourist itineraries in two languages with izi.TRAVEL, a free and intuitive CMS (Content Management System). The

“Atlante digitale delle memorie” platform then allowed to build a digital route map. Finally, as part of the *alternanza scuola-lavoro* project, students organised a public presentation and a launch event of the digital products with guided tours of the area.

Activities: journeys in the neighbourhoods, mind mapping, peer learning, interviews with witnesses or experts, mobile tourist guides, atlante digitale delle memorie, virtual tours in the cultural landscape, sharing via social media.

PoliCultura and ScAR

Since 2018, the ScAR project has collaborated with “PoliCultura”, a national digital storytelling contest that proposes to schools from all over Italy to work on their local cultural heritage. The list shows the works of the classes, which some were already partners of the ScAR project, while others from eight different Italian regions (Campania, Lazio, Lombardy, Molise, Piedmont, Apulia, Abruzzo and Sicily) became aware of the research through the special track dedicated to ScAR proposed by “PoliCultura”. The titles suggest the variety of the different interpretations of the theme performed by the schools.

2019 edition

- **Dall’Inferno ad altri ‘inferni’ – Storie di ordinaria quotidianità. [From Inferno to other ‘hells’ – Everyday life stories]** Class 3B, upper secondary I.S.I.S. Majorana-Fascitelli (Molise)
- **Il Santuario della Beata Vergine Addolorata di Rho [The Sanctuary of Beata Vergine Addolorata in Rho]** Classes 3F and 4G, upper secondary Majorana (Lombardy)
- **Li cant dellu Nazzarenu [The songs of Nazzareno]** Class 2AME, upper secondary I.I.S. F. Botazzi (Apulia)
- **Alatri 3.0 e dintorni [Alatri 3.0 and surrounding areas]** Class 2A, upper secondary IIS S. Pertini (Lazio)
- **Un giardino... Brancaccio [A garden... Brancaccio]** Class 3F, lower secondary school A. Pecoraro (Sicily)
- **SCaRamagna – La periferia dei talenti [SCaRamagna – The outskirts of talents]** Class 4B, lower secondary school (Piedmont)
- **Palermo e le sue periferie [Palermo and its peripheries]** Classes 3C and 3B, lower secondary school A. Pecoraro (Sicily)
- **Alfabeto di periferia [Periphery’s alphabet]** Class 2C, lower secondary school Pontevico (Lombardy)
- **Pontevico: cuore di megalopolis [Pontevico: megalopolis’ heart]** Class 3C, lower secondary school Pontevico (Lombardy)
- **I passi dell’orologio [The steps of the watch]** Class 3ACP, upper secondary I.I.S. F. Botazzi (Apulia)
- **Questa città che non finisce mai... [This city that never ends...]** Classes 3B and 3A, upper secondary IPSC W. Kandinsky (Lombardy)
- **Camminando si fa cammino: andemm a Ulginaa [Walking makes the path: let’s go to Olginate]** Class 3B, primary school G. Rodari (Lombardy)
- **Valorizziamo il nostro quartiere [Enhancing our neighbourhood]** Class 2E, primary and lower secondary school PS Di Guardo – S. Quasimodo (Sicily)
- **(Kataballontes)-Post demolitori [(Kataballontes)-Post wreckers]** Class 3A, military school P. Teuliè (Lombardia)

2020 edition

- **Martina Franca declinata in ARE, ERE e IRE: abitare, vedere, scoprire...** [Martina Franca declined in ARE, ERE, IRE: living, seeing, discovering...] Classes 4A, 4B, 4C, 4D and 4E, primary school Giovanni XXIII (Apulia)
- **Al ventiduesimo miglio, sulla via Salaria, Sant'Antimo** [At the 22nd mile, on Via Salaria, Sant'Antimo] Class 3D, primary school Giovanni XXIII (Campania)
- **A passeggio tra i Forti di Messina** [A journey among the Messina fortresses] Class 3B, lower secondary school Giovanni XXIII (Sicily)
- **Nella nostra scuola, 130 anni fa, si curava il mal della rosa** [Inside our school, 130 years ago, doctors treated pellagra] Class 5C, upper secondary I.I.S. M. Bellisario (Lombardia)

2021 edition

- **Tra la gente di Pontevico** [Among the people of Pontevico] Class 1C, lower secondary school Pontevico (Lombardy)
- **Io resto qui** [I stay here] Class 4C, upper secondary IISS. E. Medi (Apulia)
- **Mazara con i nostri occhi** [Mazara by our eyes] Classes 2C and 2D primary school Mazara del Vallo (Sicily)
- **Torino di Sangro: un paese abruzzese** [Torino di Sangro: a town in Abruzzo] Class 3, primary school Paglieta (Abruzzo)
- **Caccia ai Tesori di Bussero** [Treasure Hunt in Bussero] Class 4A primary school Montegrappa (Lombardy)
- **Con il naso all'insù** [With the nose on the sky] Class 1A, lower secondary school L. Fantappiè (Lazio)
- **Una gita a... Il sacro monte di Varese** [A journey to... Sacro monte di Varese] Class 4E, upper secondary I.I.S.S. D. Crespi (Lombardy)

All the digital storytellings are available on the PoliCultura website www.policultura.it.

ACKNOWLEDGMENTS

At the end of an extended collective experience such as the project *"Scuola Attiva Risorse. Ricucire il patrimonio disperso delle periferie"*, it is difficult to concentrate in a few lines the many reasons of gratitude that bind the authors to the many who have offered their unreplaceable contribution.

The first thanks indeed go to the schools, to the students especially, the girls and boys who participated in the activities with intelligence, curiosity and desire to learn.

A heartfelt and warm thank you goes to the teachers who have contributed with their skills, design abilities, and a great generous passion. Without them, none of this would have been possible. For all of them, and there are so many, we want to remember Barbara Cagnoni, Consuelo Corvi, Teresa Caputo, Daniela Manenti, Maria Antonietta Picillo, Antonella Rizzo and Luisa Tarricone. Thanks also to the school principals who believed in the project and welcomed it in their institutes, particularly to Gianpaolo Bovio, Livia Ispano and Enrica Minori for having accompanied us with enthusiasm from the very beginning.

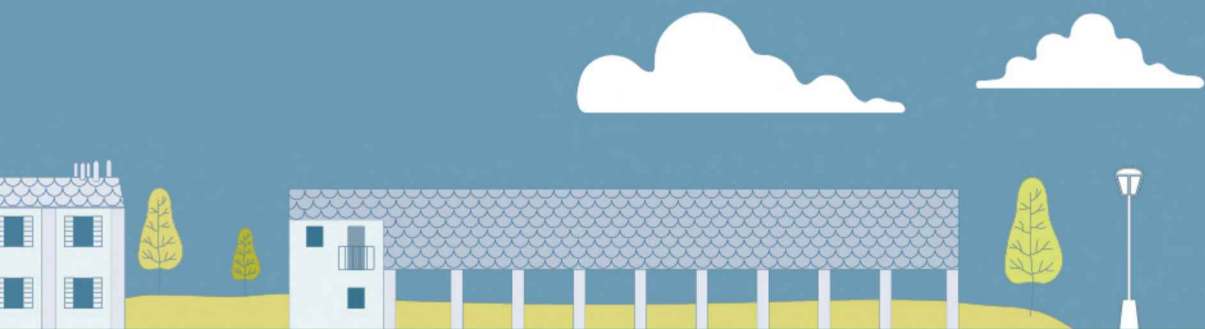
We would like to thank the Deputy Mayor of Milan Anna Scavuzzo and the Councillor for Education Laura Galimberti who supported the project in its various phases. Thanks to President Alessandro Bramati and Councillor Silvia Soresina of Municipality 5, who joined with conviction and contributed on many important occasions. Thanks again to the Territorial School Offices (Uffici Scolastici Territoriali) of Lombardy and Milan for getting involved in an unusual partnership for this type of institution.

Thanks to Fondazione Prada for accepting the challenge of this collaboration and for welcoming the project activities. Thanks to the Ecomuseo Milano Sud (MUMI) and Fondazione Rete Civica di Milano for sharing methodological reflections and actions in the field with us. Thanks to all the groups and associations that collaborated in various ways, in particular Associazione Bei Navigli and Federica Bozzi of the Cooperativa Zero5, for her valuable contribution to the start of this long journey. Thanks to the whole team of PoliCultura for the fruitful cooperation that will keep alive the themes of ScAR. A heartfelt thank you goes to Compagnia Carlo Colla e Figli for having made available to the students the knowledge and passion of the historical Atelier and the LaborA, the laboratory of architectural modelling of the Politecnico di Milano for having welcomed our 'young modellers'.

Last but not least, a big thank you to the research team with whom we shared these years of work; the colleagues Nicoletta di Blas, scientific responsible for the project, Bertrando Bonfantini, Micaela Bordin, Valeria Pracchi, Daniele Villa and the collaborators Elena Negro and Anna Greppi and, finally, the many students and trainees who participated with their diligent work.

Heritage and landscape education is crucial to training young people in active and responsible citizenship, protection of the public assets, appreciation of the cultural diversity and intergenerational dialogue. Therefore, it cannot be limited to sporadic experiences and on outstanding heritage and contexts but must be transdisciplinary, inclusive and practicable everywhere.

This book relates the research and action project “Scuola Attiva Risorse” (ScAR), winner of the Polisocial Award that recognizes research for social purposes at the Politecnico di Milano. The text describes an experimental and innovative action delivered within the fragile context of the urban peripheries. This participatory process involved schools, universities, cultural institutions, administrations and private actors in interpreting and enhancing the “hidden” cultural heritage in Milan’s fringe neighbourhoods.



ISBN 978-88-6264-794-4

