



**“School memories between Social Perception and Collective Representation”.
An innovative research project with a marked international vocation¹**

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Um projeto de pesquisa inovador e com vocação internacional

“School memories between Social Perception and Collective Representation”.
Un proyecto de investigación innovador con vocación internacional

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Abstract

This article describes the activity promoted between 2019 and 2021 by the research units related to the research project “School Memories between Social Perception and Collective Representation (Italy, 1861-2001)”, which proposes to study school memory as an individual, collective and public practice of re-evoking a common school past through the creation of the www.memoriscolastica.it portal and eight databases relating to the various forms of this memory. The project focused on disseminating the results of scientific research to a general public and experimenting with new forms of scientific communication, free online accessible, in order to complying with the open science policy of the Horizon Europe Framework Programme for Research and Innovation 2021-2027.

Keywords: History of Education. School Memory. Databases. Open Science. Italy.

¹ As it is the result of a joint work of the authors, this contribution is to be attributed to Roberto Sani as regards paragraphs 1 and 2 and Juri Meda as regards paragraphs 3, 4 and 5. English version by Antonella Di Pasquale. E-mail: lavetrinasulmondo@libero.it.

Resumo

Este artigo descreve a atividade promovida entre 2019 e 2021 na unidade de pesquisa local relacionada ao projeto de pesquisa “School Memories between Social Perception and Collective Representation (Italy, 1861-2001)”, que se propõe estudar a memória escolar como prática individual, coletiva e pública de reevocação de um passado comum escolar através da realização do portal www.memoriscolastica.it e de oito repertórios eletrônicos relativos as várias formas desta memória. O projeto apostou na divulgação dos resultados da pesquisa científica com o público não especialista e a experimentar novas formas de comunicação científica, acessível gratuitamente online, na perspectiva de cumprir com a *open Science policy* do novo programa da União Europeia para pesquisa e inovação entre 2021 – 2027.

Palavras-chave: História da Educação. Memória Escolar. Bancos de Dados. Ciência Aberta. Itália.

Resumen

Este artículo describe la actividad impulsada entre 2019 y 2021 por las unidades de investigación relacionadas con el proyecto de investigación “Memorias escolares entre la percepción social y la representación colectiva (Italia, 1861-2001)”, que se propone estudiar la memoria escolar como práctica individual, colectiva y pública de reevocar un pasado escolar común a través de la creación del portal www.memoriscolastica.it y ocho repertorios electrónicos relacionados con las diversas formas de esta memoria. El proyecto se centró en difundir los resultados de la investigación científica a un público no especializado y experimentar con nuevas formas de comunicación científica, accesibles de forma gratuita en línea, con el fin de cumplir con la política de ciencia abierta del Horizon Europe Framework Programme for Research and Innovation 2021-2027.

Palabras-clave: Historia de la Educación. Memoria Escolar. Bases de Datos. Ciencia Abierta. Italia.

1. The research project “School Memories between Social Perception and Collective Representation (Italy, 1861-2001)”

The research project «School Memories between Social Perception and Collective Representation (Italy, 1861-2001)»² – which officially started with the first national seminar «Le forme della memoria scolastica: prospettive euristiche e indicazioni metodologiche» (“The forms of school memory: heuristic perspectives and methodological indications”), held in Macerata on June 27th and 28th, 2019 – focuses its attention on school memory, which is understood as an individual, collective and public practice of recalling a common school past. School memory is an interpretative category, which has recently been introduced in the historiographical reflection of the historical-educational field at an international level, both in the countries of the Iberian-American area and in the Anglo-Saxon world, and has also affirmed in Italy soon, largely thanks to the studies carried out by the scholars who have adhered to this project in the last five years.

On the basis of new types of sources and a necessarily interdisciplinary methodological approach, between 2019 and 2021, the research units and sub-units, who collaborate in the project³, investigated both the models of school, teaching, learning and school attendance emerging from individual memories and the representation of these models which has been proposed by the world of information and communication and the cultural industry – over the last two centuries –. Nonetheless, an attempt was made to focus on which school and teaching memory was elaborated in the context of official representations and public commemorations promoted by local and national institutions on the basis of a specific policy of memory, or rather a public use of the past aimed at acquiring consensus and strengthening the feeling of belonging to a specific community.

In this perspective, the research project aimed at outlining the evolution in the collective perception of the role and the purpose of education between 1861 and 2001, as well as highlighting the changes which can be observed in the perception of the teachers’

² The significant national three-year PRIN research project «School Memories between Social Perception and Collective Representation (Italy, 1861-2001)» (no. prot.: 2017STEF2S) was approved by Decree of the Director General for the coordination, the promotion and the enhancement of research on the Ministry of Education, University and Research (D.D.) no. 226 of April 12th, 2019 and, subsequently, admitted for funding by the same ministry with D.D. no. 984 of May 21st, 2019.

³ The group of researchers and young scholars, who collaborate with PRIN «School Memories between Social Perception and Collective Representation (Italy, 1861-2001)», includes: Roberto Sani (University of Macerata), «principal investigator». *Research unit of the University of Macerata*: Anna Ascenzi, Edoardo Bressan, Marta Brunelli, Juri Meda, Elisabetta Patrizi, Luigiaurelio Pomante, Fabio Targhetta; affiliated members: Alberto Barausse and Valeria Viola (University of Molise), Dorena Caroli and Mirella D’Ascenzo (University of Bologna), Michelina D’Alessio and Clelia Tomasco (University of Basilicata); Andrea Marrone (University of Cagliari), Sofia Montecchiani, Lucia Paciaroni and Valentino Minuto (University of Macerata). *Research unit of the University of Florence*: Gianfranco Bandini, Silvia Cantelli, Pietro Causarano, Monica Galfrè, Stefano Oliviero, Tiziana Serena; affiliated members: Francesco Bellacci, Luca Bravi, Monica Dati, Chiara Naldi, Chiara Martinelli and Laerte Mulinacci (University of Florence), Caterina Benelli (University of Messina). *Research unit of Roma Tre University*: Carmela Covato, Susanna Barsotti, Francesca Borruso, Lorenzo Cantatore, Maura Di Giacinto, Chiara Lepri, Chiara Meta; affiliated members: Milena Bernardi (University of Bologna), Lavinia Bianchi, Giulia Cappelletti, Giovanni Castagno, Simone Di Biasio, Teresa Gargano, Matteo Loconsole, Luca Silvestri, Valentina Vallecchi. *Research unit of the Catholic University of the Sacred Heart in Milan*: Paolo Alfieri, Renata Bressanelli, Anna Debè, Sabrina Fava, Carlotta Frigerio, Carla Ghizzoni, Cristina Gumirato; affiliated members: Anna Antoniazzi (University of Genoa), Annemarie Augschöll (Free University of Bozen-Bolzano), Paolo Bianchini and Ilaria Mattioni and Maria Cristina Morandini (University of Turin), Carla Callegari, Marnie Campagnaro, Giulia Fasan, Giordana Merlo and Giuseppe Zago (University of Padua), Evelina Scaglia (University of Bergamo).

social status and the public function they have in schools of all levels – in the same time frame –. In fact, in addition to giving us back the overall cultural dimension of these historical phenomena, studying the methods of a collective symbolic representation of school and teaching over time has allowed us to define the origin of some mortgages still relating to public school image today and to also try to give awareness of themselves and their role back to all those involved in public education.

For this reason – also with a view to fulfilling the *public engagement*, which is increasingly practiced by universities through the transfer of scientific and technological research results to civil society –, this project does not only aim at the generation of further scientific knowledge in the historical-educational field through the production of studies and the publication of essays and articles⁴, but also the socialization of these main research results through the creation of a website devoted to school memory, which makes qualified *corpora* of sources accessible to a wider audience than just historians of education⁵, the promotion of specific initiatives for a wide-ranging historical spreading on the model of Anglo-Saxon *public history*⁶ – also in collaboration with the four museums of the school at the universities adhering to PRIN⁷ – and the creation of specific educational paths addressed to schools of all levels, even if the latter has suffered inevitable slowdowns because of the explosion of the pandemic emergency in February 2020, which is still ongoing.

The creation of the website www.memoriascolastica.it, which is devoted to school memory, precisely responds to the socialization needs of scientific project results. On this regard, the website was divided into three sections: the one relating to individual school memory, which consists in its representation provided by former teachers and pupils through oral testimonies, diaries, autobiographies and memoirs in general; the one regarding collective school memory, which consists in the representation which the cultural industry and the world of information offered about school and teachers instead; and, finally, the one concerning public school memory, which consists in the representation given about school and teachers as part of the official commemorations promoted by public institutions on the basis of a specific memory policy. Each section is linked to the electronic repertoires relating to various forms of memory: from the section relating to individual school memory, one can access the repertoires regarding educators and teachers' oral testimonies, diaries and autobiographies; from the one relating to collective school memory, one can access those regarding literary works, works of art, illustrations, cinema and television broadcasts; finally, from the one relating to public school memory, one can access those regarding decorations and honours, but also plaques, busts, monuments, stamps and coins.

⁴ It should be taken into account that the members of the various local research units produced a total of 83 publications about the topics of school memory and public history of education, including 2 monographs, 5 collective volumes, 32 magazine articles and 44 book chapters during the first two PRIN years; a patent relating to Mnemosine software, which was developed by Elicos s.r.l., was also registered. The updated list of the scientific products created under PRIN can be displayed on the website: <https://www.memoriascolastica.it/le-nostrepubblicazioni> (the last access: 11/06/2022).

⁵ The web potential in socializing the scientific research results had already been explored at the time in: G. Bandini, P. Bianchini (edd.), *Fare storia in rete. Fonti e modelli di scrittura digitale per la storia dell'educazione, la storia moderna e la storia contemporanea*, Rome, Carocci, 2007.

⁶ About the application of this historiographical paradigm to history of education, please see: G. Bandini, S. Oliviero (edd.), *Public History of Education: riflessioni, testimonianze, esperienze*, FUP, Florence, 2019.

⁷ These are the Museum of «Paolo e Ornella Ricca» School at the University of Macerata, the Museum of School and Popular Education at the University of Molise, «Mauro Laeng» Museum of School and Education (MuSEd) at Roma Tre University and the Museum of Education at the University of Padua.

The continuous progress of the investigations promoted as part of the research project is testified by the works during the five national seminars organized by various local research units between 2019 and 2021⁸, in addition to the contributions published or being published in national and international scientific magazines and collective works. Finally, the results of the investigations carried out will be officially introduced during the international scientific conference «The School and Its Many Pasts. School Memories between Social Perception and Collective Representation»⁹, which will be celebrated in Macerata from 12th to 15th December 2022 and it will allow to promote a broad methodological and historiographical confrontation on the problems concerning the study of school memory and, at the same time, to start an organic reflection on the same topic in a comparative key – through the institutional patronage by ISCHE and eight national scientific societies in history of education from other countries¹⁰ and the participation of 120 speakers from over twenty countries¹¹ –.

2. The premises of the research project

The research project is based and lives on some previous experiences. From a historiographical point of view, it gets in the furrow traced at the time by the international conference «School Memories. New Trends in Historical Research into Education: Heuristic Perspectives and Methodological Issues» (Seville, 22nd-23rd September 2015)¹², organized by the University of Seville in collaboration with Centro Internacional de la Cultura Escolar (CEINCE), Centro de Estudios sobre la Memoria Educativa (CEME) at the University of Murcia and Centro di documentazione e ricerca sulla storia del libro scolastico e della letteratura per l'infanzia (CESCO) at the University of Macerata. In fact, a significant representation of historians of education coming from all over the world had already gathered on that occasion in order to elaborate the epistemological foundations of the historiographic reflection regarding

⁸ Extremely detailed scientific reports of these national seminars were published, documenting various implementation stages of the research project and the results gradually achieved: L. Paciaroni, S. Montecchiani, *Le forma della memoria scolastica. A proposito del primo seminario nazionale PRIN*, «History of Education & Children's Literature», vol. XV, n. 2, 2019, pp. 1047-1053; L. Paciaroni, S. Montecchiani, *Le forma della memoria scolastica: interventi nazionali e prospettive internazionali. A proposito del secondo seminario PRIN*, «History of Education & Children's Literature», vol. XV, n. 1, 2020, pp. 809-816; L. Paciaroni, *Memoria scolastica ed educativa: questioni metodologiche, buone pratiche ed esperienze digitali. A proposito del terzo seminario nazionale PRIN (Firenze, 17 settembre 2020)*, «History of Education & Children's Literature», vol. XVI, n. 1, 2021, pp. 755-765; S. Montecchiani, *Le forme della memoria scolastica e i primi affondi interpretativi. A proposito del quarto seminario nazionale PRIN (Milano, 26 febbraio 2021)*, «History of Education & Children's Literature», vol. XVI, n. 2, 2021, pp. 785-797; V. Minuto, *Presentazione ufficiale delle banche dati sulla memoria scolastica. A proposito del quinto seminario nazionale PRIN (Roma, 5 novembre 2021)*, «History of Education & Children's Literature», vol. XVII, n. 1, 2022, pp.545-555.

⁹ The official *call for papers* of this conference was published both in Italian and English in: «History of Education & Children's Literature», vol. XVI, n. 1, 2021, pp. 767-786.

¹⁰ The scientific societies, who granted their institutional patronage at the international conference, were – in order – Associação de História da Educação de Portugal (HISTEDUP), Associação Sul-Rio-Grandense de Pesquisadores em História da Educação (ASPHE), Association transdisciplinaire pour les recherches historiques sur l'éducation (ATRHE), Centro Italiano per la Ricerca Storico-Educativa (CIRSE), Greek Society of Education Historians (GSEH), International Standing Conference for the History of Education (ISCHE), Sociedad Argentina de Historia de la Educación (SAHE), Sociedad Española de Historia de la Educación (SEDHE), Sociedad Española para el Estudio del Patrimonio Histórico-Educativo (SEPHE), Sociedade Brasileira de História da Educação (SBHE) and Società Italiana per lo studio del Patrimonio Storico-Educativo (SIPSE).

¹¹ The proposals, which were received in response to the *call for papers* by December 15th, 2021, were 186. The international referees appointed by the program committee decided to discard 36% of them, as they were considered not in line with the proposed investigation lines and the methodological indications provided.

¹² A selection of works at that conference was published in: C. Yanes Cabrera, J. Meda, A. Viñao (edd.), *School Memories. New Trends in the History of Education*, Cham, Springer, 2017.

school memory – to which Agustín Escolano, Antonio Viñao and Pierre Caspard had already devoted some pioneering works in the previous decade – and elaborated a first systematic reflection on the topic, defining some general theoretical coordinates, providing methodological criteria and suggesting possible contaminations with anthropology of education and sociology of cultural processes¹³.

This important experience urged Macerata research group to promote the monographic issue *Memories and Public Celebrations of Education in Contemporary Times*¹⁴, published in the magazine «History of Education & Children's Literature» in 2019 and aimed at focusing multiple forms of school memory, which was developed in the context of official representations and public commemorations promoted by local and national public institutions on the basis of a «public use of the past», aimed at acquiring consensus and strengthening the feeling of belonging to a specific community, as well as exploring the social and cultural dynamics which supervise both the commemoration of pedagogues and their theoretical revolutions and teachers and the didactic activity promoted by them and the celebration of the places where school and education became part of collective memory and identity.

Leaving the mere historiographical context, other previous scientific initiatives can help us to outline the conceptual genesis of this research project. The first one – in chronological order – is EDISCO database, which was created as part of PRIN research project coordinated by Giorgio Chiosso and aimed at censuring the books for school and education published in Italy between the 19th and 20th centuries¹⁵, followed by FISQED national cumulative catalogue, created as part of recovery, reorganization and cataloguing activities for the «School Materials» fund by Archivio storico dell'Istituto Nazionale di Documentazione per l'Innovazione e la Ricerca Educativa (INDIRE) in Florence, which were carried out between 2003 and 2007 and had led to the creation of FISQED software and its adoption to catalogue school notebooks kept in the archives adhering FISQED national documentary network¹⁶. This project was immediately followed by the European project «History On Line», financed by the European Union under LLP/Erasmus program and implemented between July 2007 and December 2009; it led to the creation of a website and a series of databases, including the one about school legislation relating to textbooks edited by Macerata Research Unit, which were dispersed after the non-renewal of the domain by the IT company who had been in charge of maintaining the website¹⁷. This project was followed by PRIN research project relating to the creation of a biographical dictionary of Italian educators, philanthropists, pedagogues, school men and writers for children in action between the 19th and 20th centuries, promoted by a group of Italian

¹³ A detailed report of this event was published in: J. Meda, R. Sani, *Il Simposio internazionale su «La memoria escolar. Nuevas tendencias en la investigación histórico-educativa: perspectivas heurísticas y cuestiones» (Siviglia, 22-23 settembre 2015)*, «History of Education & Children's Literature», vol. XI, n. 1, 2016, pp. 603-609.

¹⁴ J. Meda, L. Pomante, M. Brunelli (edd.), *Memories and Public Celebrations of Education in Contemporary Times*, «History of Education & Children's Literature», vol. XIV, n. 1, 2019, pp. 9-394.

¹⁵ The project has its own website (<https://www.edisco.unito.it/>; the last access: 27/01/2022) and was combined within the International TextbookCat (<http://itbc.gei.de/>; the last access: 27/01/2022), created by the Georg Eckert Institute in collaboration with the University of Turin and Centro de Investigación MANES at the University of Madrid.

¹⁶ FISQED National Documentary Network was officially introduced on the occasion of the International Conference «School Exercise Books: a Complex Source for a History of the Approach to Schooling and Education in the 19th and 20th Centuries» (Macerata, 26-29 September 2007); see: M. Trigari, *La documentazione che fa la differenza: densità semantica, massa critica e integrazione virtuale nella Rete documentaria nazionale FISQED*, in J. Meda, D. Montino, R. Sani (edd.), *School Exercise Books: a Complex Source for a History of the Approach to Schooling and Education in the 19th and 20th Centuries*, Florence, Polistampa, 2010, pp. 41-62. The project – now suspended – still has its own website: <https://www.indire.it/progetto/fisqed/> (the last access: 27/01/2022).

¹⁷ About this project, please see: P. Bianchini, R. Sani (edd.), *Textbooks and Citizenship in Modern and Contemporary Europe*, Bern, Peter Lang, 2016.

universities, which was coordinated by the universities of Turin and Macerata, and admitted to the co-financing of the Ministry of Education, University and Research in 2010. The meticulous archival investigations carried out by a hundred scholars and researchers led to the creation of over two thousand biographical profiles, collected in two important volumes¹⁸, which were later transferred to DBE database, which is still accessible online¹⁹.

These experiences – with respect to which it is not by chance that we intend to underline the continuity here – were an essential point of reference, in the light of the fact that it was possible to provide for the creation of the eight electronic repertoires relating to various forms of school memory, perfectly integrated with each other within PRIN research project still ongoing. Then, it is no coincidence if both the database about «Public school memories» (coordinated by the Research Unit at the University of Macerata) and the one about the «Honours bestowed upon exponents and institutions of the world of school and education» (coordinated by the Research Sub-unit at the University of Molise) are interfaced with DBE database on the basis of a specific agreement stipulated with Editrice Bibliografica in Milan, in order to allow dialogue among the databases created in the context of two PRIN research projects, which are ideally linked to each other.

3. A new idea of scientific communication

We have briefly seen how some important experiences previously carried out by the members of the team of this research project have already contributed to make us immediately feel the need to socialize the research results which we would have promoted, adding to the traditional channels of scientific communication (contributions in books and magazines, conference reports, etc.) other more innovative ones, based on the digitization of contents, aimed at reaching a wider audience than just professionals. Other elements have subsequently confirmed that this was the correct perspective how to frame the research project and the spreading of its results. The first one of these elements within PRIN 2017 announcement was the inclusion of a specific article, called «Open Access», which provided that local research units had to guarantee «free and online access to the results obtained and the research contents, object of *peer-reviewed* scientific publications within the project (at least in *green access mode*²⁰), in accordance with the art. 4, paragraphs 2 and 2bis, Decree Law no. 91, August 8th, 2013»²¹, which establishes that the public bodies in their autonomy responsible for the provision or the management of scientific research funding are required to adopt «the necessary measures to promote open access to the research results financed with a share equal to or higher than 50 percent with public funds»²². This fact is a fundamental fact, which it is not possible to ignore, as it forced those who took part in the project to wonder what were the most appropriate ways

¹⁸ See G. Chiosso, R. Sani (edd.), *DBE: Dizionario biografico dell'educazione, 1800-2000*, Milan, Editrice Bibliografica, 2013 (2 voll.). About DBE characteristics and purposes, please see in particular: G. Chiosso, R. Sani, *Conservare la memoria. Per un dizionario biografico dell'educazione*, «History of Education & Children's Literature, IV (2009), n. 2, pp. 467-470.

¹⁹ The database can be reached at the website: <http://dbe.editricebibliografica.it/dbe/ricerche.html> (the last access: 27/01/2022).

²⁰ Publication in *green access mode* means that the author of a specific contribution freely spreads it, *self-archiving* it in a freely accessible institutional or thematic *repository* (such as the national management system of IRIS/AIR scientific research data developed by CINECA).

²¹ Article 7, in the Decree of the Directorate General for the coordination, the promotion and the enhancement of research at the Ministry of School, University and Research, December 27th, 2017, no. 3728.

²² Article 4, in the Decree Law no. 91, August 8th, 2013, «Urgent provisions for the protection, the enhancement and the relaunching of cultural heritage and activities and tourism», converted with amendments by the Law no. 112, October 7th, 2013.

to comply with this fulfilment in an intelligent way, creating an organic plan of digital and open publication for research contents rather than dividing and publishing them within tools already available, although they are not necessarily connoted from a scientific point of view.

However, the constraints imposed by the announcement were not the only elements which led us to take a certain direction. In fact, in recent years, in the academic context the awareness that the effective social impact of new know-how produced by scientific research is possible only through the adoption of a new paradigm of mediation, which recovers the public role of the intellectual, has begun to make its way – also as a reaction to the process of hyper-specialization for scientific knowledge, its self-referentiality and self-exclusion, which are induced by the application of increasingly short-sighted and pressing criteria for evaluating academic scientific productivity²³–. This new paradigm is embodied by “public scientific communication”, «comunicazione scientifica pubblica» (CSP), which – unlike internal communication among members of the scientific community – is the type of communication which occurs between experts and non-experts, between creators and users of knowledge, and it consists of a high-quality scientific dissemination, which is able to mediate the contents of knowledge to a general audience, in an attempt to contrast the dangerous degenerations of a scientific pseudo-dissemination, which has conquered the top of *trending topics* in *social networks* and has infiltrated the social fabric in recent years, spreading misconceptions and stereotypes there and increasing individual skepticism towards science, as it has been recently denounced by the 55th annual report about the Italian social situation by Centro Studi Investimenti Sociali (CENSIS)²⁴.

The extensive spreading of the increasingly pervasive means of mass communication implies that scientific research results must be effectively communicated through television, radio, *world wide web* and *social media*, for which – however – it is necessary to use very different techniques from the ones used in scientific publications, in order to catch and to keep the attention of interlocutors who will otherwise address to so many barkers and charlatans who perfectly master those techniques, but spreading poor, or worse, harmful contents. Besides, the public nature of the funds granted at a national and/or community level to support university scientific research implies the need for them to be used to produce goods of public utility, such as knowledge, which is not the exclusive prerogative of either scientific community who generated it or the publishing houses who disseminated it, but it belongs to the community as a whole, in order to guarantee its social development and cultural progress with continuity.

Not surprisingly, in 2021 the European Commission also reiterated that it will continue the *open science policy* already adopted in Horizon 2020, also within the new framework program of the European Union for research and innovation for the period 2021-2027 (Horizon Europe), aimed at sharing knowledge in an open and transparent way since the earliest stages of the scientific discovery process, guaranteeing the public reusability of research data and products and promoting the public accessibility and the transparency of the scientific communication process²⁵. In parallel to this, therefore, the European Commission intends to

²³ For a lucid analysis of how a certain «rhetoric of merit» is irreparably damaging the Italian school and university system, promoting a purely utilitarian approach to knowledge and significantly reducing its public dimension, please see: M. Marzano, *Publish or Perish*, «Cités», vol. 37, n. 1, 2009, pp. 59-64 (a part of the monographic issue «L'idéologie de l'évaluation. La grande imposture»); M. Boarelli, *Contro l'ideologia del merito*, Bari-Rome, Laterza, 2019.

²⁴ CENSIS, 55° *Rapporto annuale sulla situazione sociale del Paese/2021*, Milan, FrancoAngeli, 2021; in particular, the chapter «La società italiana al 2021» [“Italian society in 2021”], where the wave of irrationality – or rather, «the rejection of rational speech, that is, the tools with which we built progress and our well-being in the past» –, which hit Italian society in coincidence with the pandemic still ongoing and whose socio-economic roots are analysed, is denounced.

²⁵ About the European Commission's *open science policy*, please see especially the documentation accessible within the website: https://ec.europa.eu/info/research-and-innovation/strategy/strategy-2020-2024/our-digital-future/open-science_en (the last access: 27/01/2022).

promote the adoption of *open science* and *citizen science* practices: the latter is understood as the participatory scientific activity carried out by members of civil society in collaboration with or under the direction of professional scientists and scientific institutions, including through the promotion of responsible research and innovation²⁶ on the one hand, and to develop new indicators for evaluating scientific research quality and to reward the most sensitive researchers in these innovative practices on the other hand. Therefore, those who benefit from European funds to carry out research will increasingly have to be *open by mandate*, that is, they are required to spread their publications in *open access* mode²⁷. However, as we have already seen, the inclusion of a specific article about this question in PRIN 2017 announcement clearly shows how this orientation has already been acknowledged even by national institutions, who will increasingly follow this criterion in the next years. In this sense, in the light of what we have written above, also considering the progressive decline in public funding granted to research and in particular the one in the humanities at a national level (as recently confirmed even by the projects approved under PRIN 2020 announcement²⁸) and the consequent need to increasingly focus on the funds made available on the credit lines at a community level, it was considered strategic to make an effort to better fulfil this criterion.

4. *Mnemosine* software and databases on the forms of school memory

In this sense, in the first two years of the research project we worked on the design and the implementation of the software for cataloguing the forms of memory described in the eight databases, establishing a close link between the Commission for the design and the implementation of databases – where there were the representatives of each local research unit²⁹ – and the developers of the IT company Elicos s.r.l., in charge of the creation of the web and the databases on the basis of a competitive announcement. The Commission for the design and the implementation of databases developed a first draft of the formal ontology for the data entry forms relating to each database, consisting of a hierarchical data structure containing all the relevant descriptive fields, the taxonomies associated with them, the relations among them, the rules, the axioms and the specific constraints. Logically, each data entry form was developed

²⁶ According to a well-known definition coined by René von Schomberg – who edited the volume *Towards Responsible Research and Innovation in the Information and Communication Technologies and Security Technologies Fields* (Luxembourg, European Union, 2011) for the Directorate General for Research and Innovation in the European Commission in 2011 –, «responsible research and innovation» mean «A transparent and interactive process, through which various actors of society and innovators interact to ensure that scientific and technological progress can give rise to processes and products which are safe for humans and environment, ethically acceptable and in accordance with the needs and the requirements of individuals and society», in order to allow a correct incorporation of scientific and technological progress in our society (see R. von Schomberg, *A Vision of Responsible Research and Innovation*, in R. Owen, J. Bessant, M. Heintz (edd.), *Responsible Innovation: Managing the Responsible Emergence of Science and Innovation in Society*, Hoboken, John Wiley & Sons, 2013, pp. 51-74).

²⁷ For a critical analysis of the spreading of the *open access* publication method in the scientific context at a national and international level, please see: A. Calia, *L'Open Access: analisi del movimento sull'accesso aperto alla letteratura scientifica*, Rome, Edizioni Accademiche Italiane, 2016; K.L. Smith, K.A. Dickson (edd.), *Open Access and the Future of Scholarly Communication: implementation*, Lanham, Rowman & Littlefield, 2017; S. Aliprandi, *Fare open access: la libera diffusione del sapere scientifico nell'era digitale*, Milan, Ledizioni, 2017; S. Pinfield, S. Wakeling, D. Bawden, L. Robinson, *Open access in theory and practice: the theory-practice relationship and openness*, London-New York, Routledge, 2021.

²⁸ See Decree no. 1628 by the Directorate General for the coordination and the enhancement of research and its results at the Ministry of University and Research, October 16th, 2020. It is emphasized how the provisions of the previous announcement on *open access* are also provided in Article 13 within this announcement.

²⁹ The Commission for the design and the implementation of databases was established as part of the first meeting of PRIN Board of Directors on June 28th, 2019; the commission is coordinated by Juri Meda (University of Macerata) and is composed of Fabio Targhetta (University of Macerata), Anna Debè, Carla Ghizzoni (Catholic University of the Sacred Heart of Milan), Chiara Lepri, Chiara Meta (Roma Tre University), Silvia Cantelli and Stefano Oliviero (University of Florence).

on the basis of the specific characteristics of the forms of memory which it should have described; they are extremely diversified with unique peculiarities and range from oral testimonies to diaries, autobiographies, literary works, works of art, films and television broadcasts, but also decorations, honours, plaques, busts, monuments, stamps and coins, as we have already said. This was a very heterogeneous material and describing it was not easy at all, because it was necessary to identify the descriptive «least common multiple», which is able to guarantee the uniformity of the system as a whole.

Once developed, this first draft was delivered to the IT company Elicos s.r.l. for the development of the software through which the data useful to implement catalogue cards can be entered into electronic directories. The software – called *Mnemosine*, the titanid who represented the personification of memory in Greek culture and had given birth to the nine muses – was developed on the basis of the *open source* CMS Drupal 9.1.9, which ensures a better performance in terms of versatility and customizability (compared to Squarespace and WordPress, for example) and provides more guarantees in terms of security, besides already counting on a decent spreading in the university context.

Therefore, the Commission for the design and the implementation of databases began to develop the necessary complementary tools for a correct approval of the contents from a descriptive and indexing point of view: the compilation manuals of the eight databases, a vademecum for the use of images with a particular reference to the legislation on protection of copyright³⁰, a *thesaurus* of over 600 entry words for the thematic *tagging* of catalogue cards, a nomenclature protocol for the composition of name identifiers, the editorial rules for bibliographic and archival references and the processing of personal data policy.

Mnemosine software, which allows the physical description and the semantic indexing of various forms of school memory mentioned above, was published by Elicos s.r.l. on hardware (cd-roms) on May 17th, 2021, and it was therefore registered in the special public Register for computer programs on June 10th, 2021, edited by OLAF Section in Società Italiana degli Autori ed Editori (SIAE)³¹. It should be emphasized that this operation allowed the software authors to register a patent in their own name, which represents an absolute novelty among the research products created in the context of research projects in humanities and history.

Then, the software and the complementary tools were introduced to the compilers identified by the local research units to enter catalogue cards into their databases as part of the training course «*Mnemosine* software. Users, features and use cases», organized by Elicos s.r.l.

³⁰ The vademecum was created on the basis of the legal opinion arranged by the lawyer Giorgio Pasqualetti, Head of the Legal Department at the University of Macerata, who has provided careful and qualified assistance in the most delicate phases of the project several times.

³¹ It is interesting to underline how all the published computer programs, which comply with the requirements of originality and creativity such that they can be identified as intellectual works, can be registered at the special public Register for computer programs – established with Legislative Decree no. 518, December 29th, 1992 – and, therefore, registration within it is equivalent to submitting it to a patent. The law currently establishes that the software is patentable if it has a technical nature deriving from an effect obtained from the operation of the software, which goes beyond the normal simple physical interaction between software and machine; in this sense, it is not possible to patent a software which performs calculations or a management system, as they are limited to manage and to process information without producing any technical effect. Responding to these criteria, *Mnemosine* software was registered with registration number D000015049 on June 10th, 2021, in the name of the authors listed below: Paolo Alfieri (Catholic University of the Sacred Heart in Milan), Anna Ascenzi (University of Macerata), Gianfranco Bandini (University of Florence), Alberto Barausse (University of Molise), Carmela Covato (Roma Tre University), Anna Debè (Catholic University of the Sacred Heart in Milan), Carla Ghizzoni (Catholic University of the Sacred Heart in Milan), Chiara Lepri (Roma Tre University), Juri Meda (University of Macerata), Chiara Meta (Roma Tre University), Maria Cristina Morandini (University of Turin), Stefano Oliviero (University of Florence), Roberto Sani (University of Macerata), Fabio Targhetta (University of Macerata), Giuseppe Zago (University of Padua) and Luca Levantesi (Elicos s.r.l.).

on June 18th, 2021, electronically through the Skype platform. The thematic sections of the website www.memoriascolastica.it³² and its main functions were introduced as part of the course and the procedures for registering and accessing the reserved area of the website, within which it is possible to compile data entry forms, to upload catalogue cards and to publish them in the respective databases, were shown to compilers. The course continued with a practical test for compiling and entering catalogue cards into all the databases and the simulation of some specific use cases reported by users. The closure of the course determined the beginning of the phase for cataloguing various forms of school memory within the respective databases, which continued in the following months. The first *tranches* of catalogue cards – in variable quantities depending on the reference database – were published online between September and October 2021 in view of the fifth national PRIN Seminar «Official presentation of databases on school memory», held in presence in accordance with the rules on social distancing in force due to the pandemic at the Department of Education in Roma Tre University on November 5th, 2021.

In the months when the authors of catalogue cards were in charge with their own research – despite numerous restrictions imposed on the consultation of archival and bibliographic material due to the pandemic – and compilers proceeded to upload the fruits of their work into databases, the Commission for the design and the implementation of databases – in close collaboration with the developers of the IT company Elicos s.r.l. once again – consequently went to work for the design and the implementation of a transversal query system among all the databases to be placed on the *homepage* of the website, specific query systems for each database, a series of search filters interfaced with the geographic, chronological and thematic indexing of the contents and the display *layout* of the catalogue cards for each database, taking into account their specificities once again. Finally, this work allowed to complete and to publish online the eight databases created as part of the project³³ – always in view of the Roman seminar in November 2021 –:

- *Memorie Educative in Video (Educational Memories in Video)*, directed by Gianfranco Bandini and edited by the research unit at the University of Florence: an electronic repertoire of video testimonies by teachers, students, educators, didactic headmasters and school inspectors, but also other school and education operators;
- *Banca dati delle opere letterarie e dei diari editi sulla scuola (Database of literary works and diaries published about school)*, directed by Carmela Covato and edited by the research unit at Roma Tre University: an electronic repertoire of the main and most significant literary sources within which it is possible to trace a narration of school reality, pupils, teachers and educational everyday life.
- *Banca dati dei diari di scuola e delle autobiografie (Database of school diaries and autobiographies)*, directed by Francesca Borruso and edited by the research unit at Roma Tre University in collaboration with the research sub-unit at the University of Turin: an electronic repertoire of unpublished school diaries and unpublished autobiographies written by teachers and related to educational and teaching experiences carried out in public or private schools;

³² The website is managed by an editorial team coordinated by Paolo Alfieri (Catholic University of the Sacred Heart in Milan) and composed of: Chiara Meta (Roma Tre University), Head of the thematic sections; Luca Bravi (University of Florence), Head of the *public history* section; Lucia Paciaroni (University of Macerata), Head of the database section; Marnie Campagnaro (University of Padua); Evelina Scaglia (University of Bergamo); Anna Antoniazzi (University of Genoa) and Michela D'Alessio (University of Basilicata).

³³ For more information on the eight databases, please see the web page: <https://www.memoriascolastica.it/banche-dati> (the last access: 27/01/2022).

- *Banca dati delle illustrazioni sulla scuola (Database of illustrations about school)*, directed by Chiara Lepri and edited by the research unit at Roma Tre University: an electronic repertoire of illustrations relating to school life in publishing industry for and about childhood and adolescence.
- *Banca dati delle opere d'arte sulla scuola (Database of works of art about school)*, directed by Lorenzo Cantatore and edited by the research unit at Roma Tre University: an electronic repertoire of visual works of art inspired by the world of school;
- *Banca dati degli audiovisivi sulla scuola e sugli insegnanti (Database of audiovisual aids about school and teachers)*, directed by Paolo Alfieri and edited by the research unit at the Catholic University of the Sacred Heart in Milan, in collaboration with the research sub-unit at the University of Padua: an electronic repertoire of audiovisual aids concerning school and/or teachers produced and distributed in Italy during the 20th century;
- *Banca dati delle onorificenze conferite a esponenti e istituzioni del mondo della scuola e dell'educazione (Database of honours awarded to representatives and institutions from the world of school and education)*, directed by Alberto Barausse and edited by the research sub-unit at the Universities of Molise and Basilicata: an electronic repertoire of school medals, decorations, diplomas and honours granted by national and local public and private institutions to teachers working in Italian schools of all levels, as well as headmasters and officials of the school administration and city halls;
- *Banca dati delle memorie pubbliche della scuola (Database of school public memories)*, directed by Roberto Sani and Juri Meda and edited by the research unit at the University of Macerata: an electronic repertoire of various forms of public memory (from tombstones to monuments, stamps and coins) relating to educators and teachers working in Italian schools of all levels, but also pedagogues and officials of the central and peripheral school administration³⁴.

5. Databases: a new scientific communication tool?

Databases are the heart of this research project, not only because they collect a considerable amount of data (536 catalogue cards and 436 biographical cards have been loaded into the website at the moment³⁵) and make them searchable and comparable, showing possible interactions among different forms of school memory, whether they are individual or collective, but also because they contribute to effectively disseminate the research results carried out within the project to a public of non-experts, who are difficult to be reached. However, if databases proved to be an effective tool for socializing research results on the one hand, they

³⁴ The peculiarity of the catalogue cards included in *Banca dati delle memorie pubbliche della scuola* and *Banca dati delle onorificenze conferite a esponenti e istituzioni del mondo della scuola e dell'educazione* is that they contain an interactive link to a detailed biographical card relating to the personality commemorated through a tombstone, a monument, a coin or a stamp and/or decorated with an honour, which is also made by one of the authors of the two databases, or a biographical entry word in the above-mentioned DBE database from Editrice Bibliografica in Milan.

³⁵ The uploaded catalogue cards are divided as follows: 257 in *Memorie Educative in Video*; 188 in *Banca dati delle opere letterarie e dei diari editi sulla scuola*; 57 in *Banca dati dei diari di scuola e delle autobiografie*; 51 in *Banca dati delle illustrazioni sulla scuola*; 58 in *Banca dati delle opere d'arte sulla scuola*; 84 in *Banca dati degli audiovisivi sulla scuola e sugli insegnanti*; 50 in *Banca dati delle onorificenze conferite a esponenti e istituzioni del mondo della scuola e dell'educazione*; 173 in *Banca dati delle memorie pubbliche della scuola*.

forced us to wonder about the ways through which to protect copyright and to consider catalogue cards as research products in all respects on the other hand; only in this sense, they can be accountable for the purposes of assigning annual research funds on the basis of the scientific productivity certified within the national management system of IRIS/AIR scientific research data. Therefore, with the conviction that it was necessary to protect both needs, we collected background information about how to make databases a publication tool in all respects, like an e-book and an electronic magazine.

Despite the great steps forward, which have been made in recent years, for recognizing the scientific validity of *open access* publications, the first surveys carried out on the subject have immediately made it clear how much still remains to be done and how a deep uncertainty about the treatment of some unconventional forms of scientific communication also continues in the librarianship context, with consequent and even unjust disparities and devaluations, based more on blind compliance with old cultural paradigms than on solid regulatory principles.

On the basis of a meticulous investigation, it was agreed to provide catalogue cards for a code DOI (Digital Object Identifier), in order to allow their unique identification within the network through the association of their respective metadata, and the databases for a code ISSN (International Standard Serial Number), which configured them as online digital serials in all respects. For this reason, Elicos s.r.l. contacted the multilingual European DOI Registration Agency (mEDRA) for the acquisition of a certain quantity of DOI codes – calculated by each local research unit on the basis of the total number of catalogue cards they planned to include in the database – and then proceeded to implement a system for the automatic attribution of the same codes to catalogue cards. In the meantime, the Commission for the design and the implementation of databases contacted the Italian ISSN Centre at the Central Library of the National Research Council in Rome to inquire about the general requirements necessary in order to assign ISSN code to a database, an eventuality foreseen by the law, but it is not very widespread yet. We were informed that ISSN code could identify serial publications online only when the intellectual content is treated editorially and the identification title of the serial, the place of publication (with full postal address), the name of the publisher, the name of the intellectual responsible, the date of publication and the update frequency or rate, or the indication of sequential numbering, or the progressive dating of each issue are clearly indicated³⁶. The scientific nature of online serial publications is attested by a refereeing committee, made up of well-known experts, who are able to ensure the *peer review* procedure of the contents published within them.

Based on the information received, the local research units entered into specific agreements with their *university presses* for the publication of the respective databases and all the information requested in order to issue ISSN code³⁷ was therefore highlighted at the time of the creation of the user interface in (*front-end*) databases by Elicos s.r.l. The university publishing houses (EUM, Educatt, Roma TrE-Press) immediately became the protagonists of this process, as the possibility of spreading the scientific research results carried out within PRIN through a database was immediately interpreted by them as an innovative approach to scientific communication, achieved through a tool which is completely accessible online free of charge.

The attribution of DOI codes to catalogue cards and ISSN codes to databases, published by university publishing houses as well as the universities themselves, made it

³⁶ The editorial characteristics, which serial publications on-line must have, are indicated on the website: <https://www.bice.cnr.it/bice-rim/9-centro-issn/55-seriali-correnti> (the last access: 27/01/2022).

³⁷ ISSN code has been attributed to all databases.

possible to create real electronic repertoires where to publish the research results carried out in *open access* mode, in accordance with the art. 7 in PRIN 2017 announcement, as we have already underlined. At this point, however, the website www.memoriascolastica.it and the eight scientific databases contained in it became a real research infrastructure; in fact, according to the definition recently given by the European Commission³⁸, they are able to provide the reference scientific community with resources and services (series of tools, scientific data collections, computer systems, communication networks, etc.), in order to carry out research activities and to promote innovation³⁹, but they can also be used beyond research, for example in the context of public education.

For this reason, in anticipation of the closure of the research project in February 2023, during the meeting of PRIN Board of Directors held in Rome on November 5th, 2021, the coordinators of the local research units and sub-units unanimously resolved to sign a framework agreement which guarantees the continuity of this research infrastructure, regulating its co-ownership, controlling the distribution of ordinary and extraordinary maintenance and management costs and establishing the guidelines to be followed for the permanent updating of databases, the possible adhesion of new members and the creation of new electronic repertoires relating to other forms of school memory, also through the participation in further national and EU funding announcements in collaboration with individual foreign scholars and research groups, who are interested in working on the same topics in a comparative perspective at an international level.

The funding of the Portuguese research project «Memórias Resgatadas, Identidades Reconstruídas» (MRIR), coordinated by Ana Isabel Madeira and Justino Pereira de Magalhães (University of Lisbon) and funded by the Portuguese Fundação para a Ciência e a Tecnologia del Ministério da Ciência, Tecnologia e Ensino Superior and co-financed by the European Regional Development Fund (ERDF), which ended on April 30th, 2022, and the very recent funding of the Spanish research project «Historia pública de la educación en España (1970-2020). Percepción social, memoria colectiva y construcción de imaginarios sobre los docentes y sus prácticas», coordinated by Francisca Comas Rubí and Xavier Motilla Salas (University of the Balearic Islands), which will end in 2025, show how school memory can be a unique opportunity for relaunching history of education, which is essential to get out of the rigid heuristic boundaries attributed to it and to attract funding in a historical moment when – as we have already said – the public funding system for research is in trouble, risking to jeopardize the advancement of studies in numerous disciplinary fields, especially in the humanities.

³⁸ See European Commission, *Supporting the transformative impact of research infrastructures on European research*, Bruxelles, Publication Office of the European Union, 2020.

³⁹ Consider that based on the statistical data extrapolated from Google Analytics between October 1st and May 24th, 2022, the website was visited by 4,564 users (26% of them came from the United States of America, Brazil, Spain, Greece, France, China and other foreign countries) for a total of 47,728 views and an average engagement duration of just over 3 minutes.