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ARACNE

ADVOCATING THE ROLE OF SILK ART AND CULTURAL HERITAGE AT NATIONAL AND EUROPEAN SCALE

Deliverable 1.2

Report on the bottom-up and participative activities for building research, innovation and knowledge for the Silk Innovation Ecosystem

Version 1.0

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Abstract

This document contains the description of the format and teaching materials provided to carry out the activities with the schools participating in the ARACNE project. The activity foresees the collection of information directly in the field to study how sericulture has shaped European territories, landscapes, art, culture, genetics, production, industrial heritage and constituted value through mulberry cultivation and silkworm rearing, silk processing and trade, as a unifying element but with local specificities. These activities are necessary to develop the knowledge base for the benefit of a European silk innovation ecosystem, which is one of the main objectives of the ARACNE project.

Partners involved in the document

Participant n.	Participant organisation name	Short name	Check if involved
1 Coordinator	Consiglio per la Ricerca in Agricoltura e l'Analisi dell'Economia Agraria	CREA	X
2	Iniziativa Cube S.r.l.	INI	
3	Lepl State Silk Museum	SSM	X
4	Nauchen Tsentar Po Bubarstvo Vratsa	SCS	X
5	Piraeus Bank Group Cultural Foundation	PIOP	X
6	Univerza V Mariboru	UM	X
7	Ethniko Kai Kapodistriako Panepistimio Athinon	NKUA	X
8	Instituto Murciano de Investigacion y Desarrollo Agrario y Medioambiental (IMIDA)	IMIDA	X
9	D'orica S.r.l. Società Benefit	DOR	
10	Chemins De La Soie - Des Cevennes aux Alpujarras	ASSOIE	X
11	Sericyne	SER	
12	Universita degli Studi di Padova	UNIPD	X
13	Council Of Europe - Conseil de L'europe	COE	
14	Mouseio Technis Metaxiou	ASMS	X

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1. Description of the project

ARACNE project focuses on the cultural heritage of the European silk production and its preservation, protection and valorisation; it aims at reinvigorating traditional skills through the adaptive reuse of the common cultural and artistic legacy and at shaping a silk-linked European cultural identity.

The production and the past and present development of the silk sector can be again the common basis for a future European Silk Route intended as a cultural itinerary across Europe. To create a wide and well-connected network that, starting from the historical path followed by Marco Polo in his travels to East, even includes the routes of production and commercialization of silk in Europe in the following centuries, we aim to:

❖ Bring back silk production in vogue by reconstructing a resilient and innovative silk ecosystem that retraces the concerned European countries and promotes traditions, architecture, and both tangible and intangible heritages. The consolidation of a European Silk Route will encourage links and shared activities among European cities and regions to strengthen the preservation and protection of their culture and promote innovations in production and trade;

❖ Contribute to improve skills and competitiveness of silk-related European Cultural and Creative Industries through the renewal, co-development and the implementation of human-centered and place-specific silk-based cultural products, processes and service innovations, leveraging on digital applications and cutting-edge technologies, to foster the transition to more sustainable business models, and promote economic and social growth, and strengthen the reputation of European countries abroad.

1.1   ARACNE specific objectives

The overarching goal of ARACNE is to create a wide and well-connected Silk Innovation Ecosystem that, starting from the historical path followed by Marco Polo in his travels to East, also includes the routes of production and commercialization of silk in Europe in the following centuries. An innovation ecosystem is an interconnected network of quadruple helix stakeholders, including academia, industry and different levels of the public sector and civil society. This multi-level approach applies a systemic and bottom-up approach to creating research, innovation and knowledge. Silk Innovation Ecosystem includes every stakeholder and innovator in the cultural silk value chain even if not participating directly in the project activities. The production and, more in general, the past and present development of the silk sector in the ARACNE Consortium countries represent the common thread for the future "European Silk Route" as a cultural itinerary across Europe, to boost the European values in relation to the silk arts and CH for the benefit, prosperity, peace of our societies. To this aim, the project will explore the CCIs' capacities to create a cultural and artistic niche market where silk produced within EU boundaries will be valued as a distinct immaterial asset; on the other hand, the ambition is to contribute to stop the loss of technical, traditional and cultural know-how and skills that accompanied the decline of this fiber production and that

is detrimental exactly to those CCIs which might be active in fashion, art, design and product communication. In fact, the so-called "Silk Road" is generally associated to its Asian origin; however, its European ramifications were fundamental for the development of Europe as we know it today. More in general, the silk production (silkworm rearing, mulberry cultivation, silk reeling), originated from Asia but subsequently spread to Europe and developed strongly in the Mediterranean and Balkan regions. Bringing back silk production in vogue by reconstructing a resilient and innovative Silk Route that retraces the European countries and enhances traditions, architecture, tangible, and intangible heritage will demonstrate that silk, as a cultural legacy, can contribute to develop the European economy and enrich our society. In this context, ARACNE covers several sectors linked to content creation, conservation, exploitation, management, fruition, diffusion related to the silk historical, artistic and environmental resources and assets. The ambition of ARACNE will be reached through a set of specific, measurable, achievable, realistic and time-constrained (SMART) specific objectives:

Objective 1: Enhancement of knowledge and memory for the renaissance of a European Silk Innovation Ecosystem;

Objective 2: Co-creation of human-centred and place specific creative silk-based solutions leveraging on digital and cutting-edge technologies;

Objective 3: Implementation of innovative strategies and business, governance and financing models for the involved CCIs organisations and SMEs, building on previous research;

Objective 4: Support the establishment of a cultural European Silk Route, based on the tangible and intangible silk cultural heritage and landscapes;

Objective 5: Raise awareness of ARACNE results and impacts among different stakeholders of the territories and CCIs of the silk sector and raise the expectation for the constitution of a European Silk Route in support to the European silk CH and silk CCIs;

Objective 6: Enhance the European cultural identity and strengthen European competitiveness for a more resilient post-crisis society;

Objective 7: Contribution to the European Green Deal, the New European Bauhaus and the Sustainable Development Goals.

2. Introduction

The didactic format described was initially developed with a pilot class (Classic High School Flaminio in Vittorio Veneto, third year) in order to be subsequently shaped and fine-tuned during the activity in the 2023-2024 school year. This process resulted in the creation of a replicable procedure that can be adapted to the school curricula of the ARACNE project partner states. The activity comprises a field exploration phase with the objective of generating new knowledge on the state of the art. It entails the collection of data on the Silk Cultural Heritage in the local context of the different countries through field research conducted by the students. This phase integrates the knowledge of experts and local communities on tangible and intangible cultural and natural heritage assets through the mapping of heritage sites in different countries. This format is designed to be applied in schools in the different countries participating in the project, with the involvement of

recruited teachers and students interested in carrying out ARACNE activities on a voluntary basis. This didactic format, entitled 'cultural heritage', is combined and merged with the didactic path designed for the collection of mulberry samples, entitled 'agricultural landscape'. The digital maps produced by the participating schools in the project using ArcGIS software will be merged into a single map, designated the 'European Silk Route', and made available on the ARACNE website.

2.1   Objective of the deliverable

This final product is intended to illustrate the format for explaining how schools have been involved in the ARACNE project and how they have discovered the world of European sericulture. It will demonstrate how this has shaped territories, landscapes, arts, culture, genetics, production, industrial heritage and built value through mulberry cultivation and silkworm rearing, silk processing and trade. This teaching format is designed to be flexible and should be adapted to the curriculum of each participating school. The activities conducted in this final product will contribute to the development of the knowledge database for the benefit of the European ecosystem of silk innovation. The objective is to elucidate the methodology employed in the schools, thereby establishing a teaching format that can be applied in subsequent years.

2.2   Document structure

This document is organised into a total of eight different chapters belonging to three main sections, which can be subdivided as follows:

1. The first part of the document describes the ARACNE project and its goals and objectives for this final product.
2. In the central part of the document, the activities carried out to prepare for the teaching activities with the students are described.
3. The third part illustrates how the partners worked with schools in their country.

The aforementioned activities are organised in the following manner:

  i.   Literacy phase
  ii.   Field research
  iii. Mapping (Computer Laboratory)
  iv.   Dissemination and Validation of Results

The document contains links to the cited materials, which are available on the aracneproject.eu website. Acronyms and annexes are provided at the end of the document.

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3. Preliminary operations - preparation of teaching materials

This section of the document outlines the materials prepared to facilitate the standardisation of teaching activities according to a format that can be applied and adapted in schools across the various partner states.

3.1 Setting up web pages

The ARACNE project website (www.aracneproject.eu) contains a dedicated area in the top menu labelled *Education*. This area comprises four sections:

- *Silk story*: this page contains narratives about significant people, events, realities in the field of history, promotion, innovation and growth in the sericulture sector. It is part of the education area because it serves as inspiration for students, as well as being a container of possible stories that emerged during their field research phase.
- *Educational project*: it contains links to two educational paths proposed by the ARACNE project: '*Cultural Heritage*' and '*Agricultural Landscape*'.
- *Teacher area*: all the materials and links useful for carrying out teaching activities can be found here.
- *Museums*: this page contains a list of the project's partner museums, which schools can contact to obtain information and arrange guided tours.

3.1.1 The Agricultural Landscape page

The *Agricultural Landscape* page contains the indications for the proposed educational pathway for schools with a curriculum in agriculture, science and biology. It also contains a brief presentation with a timeline of the activities carried out with students. There are also links to the:

- *Teacher area:* section containing documents indicating guidelines on the use of the *MorusApp*[1]
- *MorusApp*: access link to the login page for using the online mulberry data collection database. Appropriate accounts have been set up for participating schools using e-mail addresses with a domain matching the aracneproject.eu site
- *Entries*: link to an online form that allows the school to apply for the teaching activity of the proposed route.
- *Contact*: this e-mail address is reserved for communications pertaining to teaching activities and is managed by the coordinator. Students and teachers may use this address to receive information about the project activities.

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[1] Online database for the mulberry tree census

3.1.2 The Cultural Heritage page

The structure of the *Cultural Heritage* page is similar to the previous one. The timetable for teaching activities for history and humanities curricula is presented. There are also links to the:

- *Teacher area:* this section contains documents and useful links to the activity.
- *Entries*: it contains a link to an online form allowing the school to apply for the teaching activity of the proposed route.
- *Collect data*: link to an online form that allows to enter the information needed to indicate a point of interest to be geolocalised in the digital map. The form can be used as a guideline in collecting the necessary information and to categorise points of interest according to their various types.
- *Contact*: this section contains the email address dedicated to communications relating to teaching activities and managed by the coordinator. This is an appropriate channel for students and teachers to write to for clarifications, suggestions, explanations and feedback during the course of their activity. It can also be used to request information useful for planning the activity in a new school.
- *Gallery*: this section provides a link to the gallery site to support the activity of entering data in the digital map.
- *ArcGIS:* link to the login page for access to the online application chosen for the digital map creation activity.

3.2 The Teacher Area page

The *Teacher Area* page has been created to provide teachers and students with access to a comprehensive range of teaching materials. The page comprises a variety of content types, including:

- *Video*: this section contains tutorials and video lessons prepared to introduce the topics and explains the use of the applications.
- *Documents*: these contain printable text documents, such as the disclaimers to be signed by students and people involved in the fieldwork, and the guide to use the geolocation application, translated into the languages of the partner states that carried out the activity.
- *Link*s: this section contains links to the main online platforms and websites that are useful for carrying out the activities.
- *Presentations*: the page contains presentations in slide format that were used to present the topics and guidelines for carrying out the activity.
- *Bibliography*: this section contains publications that may be useful to students for reference.
- *For editing*: it contains useful materials for editing the videos and photographs produced by the students.

3.3   Setting up the ArcGIS platform

The *ArcGIS Online* application was chosen for digital mapping. The choice fell on this resource because it can be used without the need to install software or applications on the devices. Moreover, use is possible from any device (PC, tablet, smartphone). Compared to the software, the online version is simplified, and the interface is more intuitive. *ArcGIS Online* offers greater customisation possibilities thanks to the *sketch layer tool*, which was chosen for the geolocation of points of interest because it allows the creation of a pop-up[2] containing a tab in which text and multimedia materials can be inserted. The further advantage of using the online application is the possibility of sharing the results obtained in a more direct way, thanks to the creation of working groups and collaboration among organisations. The ArcGIS package provides other applications that are useful, if not indispensable, for the dissemination and presentation of the maps created, giving the possibility of navigating among the points of interest identified by the students using PCs or mobile devices.

It was decided to provide the schools with an account through a licence owned by the Lead Partner to allow easier management and monitoring of the activities, limiting the difficulties for the schools in activating the bureaucratic procedures to obtain the licence.

As a consequence of the activities conducted with teachers and students, some institutions have expressed interest in acquiring the software with the intention of reintroducing the format independently.

The principal issues encountered in utilising the application can be summarised as follows:

- The software does not permit simultaneous editing of the same map by accessing it with the same account on multiple devices. The solution adopted was to create a map for each working group and then to merge the layers created through sharing into a single final map.
- It should be noted that the application does not require confirmation when using the 'delete' command. Consequently, it is important to exercise caution when entering data to prevent the inadvertent deletion of layers or features.

Overall, the students rapidly overcame the initial awkwardness of the approach, rapidly becoming proficient in the use of the tools for creating the map, utilising the guide (translated into the languages of the partners who initiated the educational path with the schools) and the dedicated videotutorial (for which subtitles were included in the languages of the participating schools). The user guide provides a comprehensive explanation of all the steps from login to finalisation and sharing of the maps. The video tutorial illustrates the process of creating and editing map points using the *sketch layer* tool.

3.4   Setting up the web gallery site

In order to include the multimedia materials in the pop-ups of the geolocated points in the digital map, it was necessary to find an online space to act as a hosting service[3]. A website

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[2] Window that opens on the computer screen while surfing the Internet

[3] A network service that permits hosting the pages of a website or web application on a web server, thus making it accessible to the Internet and its users.

was set up on a CREA server in which to host a gallery for uploading the images. In this way, the images produced by the students are stored in a protected space, accessible only through an accredited account. Using a service on a site owned by the Lead partner makes it possible to respect the copyright of the images without sharing the information with external services and creates an archive of the media produced by the students. The images are only viewable to the public by browsing the digital maps.

The gallery site contains 4 sections:

- *Homepage*: explains the function of the site and links to the official project site
- *Contact*: contains contacts and links to the ARACNE project socials
- *Upload media*: is the area where the tools for uploading images to the gallery are located
- *Image Gallery*: contains the folders with the images from which it is possible to copy the URL to be pasted into the appropriate ArcGIS command

For the use of the gallery, accredited accounts were created and provided to the schools. In order to train the students on the procedure of uploading images, a videotutorial showing the individual steps was made available (subtitled in the languages of the countries that activated the educational project).

3.5 Setting up the YouTube playlist

As with images, it was necessary to identify a hosting service for video media. It was decided to utilise the project's social account and to create a dedicated playlist within the YouTube channel. The videos produced by the students were uploaded to the playlist with the setting 'unlisted' in order to restrict their use to teaching activities. The videos can only be viewed from the project website via the dedicated link in the teacher area and from the digital maps.

3.6 Graphic Arrangements

In order to standardise the work and ensure consistency with the graphic style of the site, a number of tools and web applications were made available for free use by students, who were able to utilise them for the creation of multimedia materials, particularly for video editing. Additionally, instructions for creating subtitles were provided. Furthermore, a set of icons was selected for use in the geolocation of points of interest on maps, with the objective of ensuring that the graphic appearance of the work produced by each school was consistent. The categories highlighted for the icons are as follows:

- historic building
- company
- museum
- institution
- farmer
- park (botanical garden, collection)
- agricultural landscape
- artwork
- witness

- document: text
- document: multimedia
- other

4. Teaching activities

This section of the document presents an analysis of the stages of the activities and paths implemented in the project schools in order to illustrate the teaching format.

4.1   Background

The format was developed based on the experience gained from experiments in multimedia didactics conducted by the University of Padua (FISPPA department). The use of geolocation platforms for didactics has its most complete precedent in the experience of the 'Great War Project' pathway, for which several secondary schools in north-eastern Italy worked on the digital mapping of memory places linked to the First World War from 2013 to 2018.
The format developed for activities with students is characterised by the following attributes:
- Flexibility of the format, which must be declined on a case-by-case basis, depending on the curriculum of the participating school.
- In October/November the terms of engagement with the schools were defined, preparing the appropriate agreements with the partners so that the students would have all the authorisations to carry out the activities (releases, reference tutor(s), technologies available at the school, e.g., a computer lab with access to the HGIS platform). In Annex I - II there are two examples of agreements prepared by the University of Padua - FISPPA Department for the activation of PCTO pathways with Italian schools, one for the *Cultural Heritage* pathway and the other for the *Agricultural Landscape* pathway.
- Each partner contacted its local school(s). Some schools proposed their candidature for the next school year after learning about the ARACNE project activities or at the suggestion of teachers who participated in the activity in the year 2023/24.
- The activities were aimed at a class group (20-25 pupils) of High school (16-19 years old students); they can obviously be multiplied depending on the number of participating classes/schools
- Once the rules of engagement and an outline timetable had been defined, the activity was launched, divided into 3 + 1 macro sections: literacy; field research; creation of the HGIS map; dissemination

The maps created by school students are designed to provide an illustrative experience of the *modus operandi* of the scientific researcher, as well as to serve as a training and professional orientation activity. It should be noted that these maps do not possess any scientific validity within the ARACNE Project unless verified by ARACNE experts themselves. Some of the materials produced by the students may be reworked to create Silk Stories for the appropriate section of the site.

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5. Literacy Phase

CREA in its role of coordinator of this initiative identified a reference tutor to provide training to the partner tutors and the teachers who were assigned to oversee the activities of the class group that had enrolled in the educational pathway. Online meetings were held during which the objectives of the ARACNE project were outlined, the didactic pathway was explained, and the mapping tools were demonstrated to the partner tutors and the referring teachers for the schools.

Furthermore, the anticipated outcomes were presented by the students of the pilot class who participated in the experimentation for the production of the DemoMap[4].

5.1   Meeting with experts

The partner organisation, through its tutor, organised the meetings between the participating class and local experts for both the *Cultural Heritage* pathway and the *Agricultural Landscape* pathway. The choice of experts was a challenging phase because we sought to enhance the specificities of each territory by identifying a figure who could introduce the students to the topics relating to silk culture in the geographical area of the humanities-oriented institutes. For the institutes with an agronomic orientation, a lesson was organised to give the historical basis of the spread of mulberry cultivation and to provide students with the tools to recognise and analyse mulberry specimens for data entry in the MorusApp. The Italian Federation of UNESCO Associations and Clubs – FICLU – provided free-of-charge assistance.

In addition to the students, each meeting included the presence of the tutor and the teacher-referent. The meetings were held partly in presence and partly in telematic mode and covered the following topics:

- Presentation of the research project to the class, with the presence of the ArcGIS mapping expert who briefly illustrated the functioning and potential of the map in relation to the objectives of the research activity.
  For the *Agricultural Landscape* path, the MorusApp for collecting data on old mulberry trees was also presented.
- A meeting with a history expert, with a focus on the history of mulberry cultivation in the institute's area for the *Cultural Heritage* path. Introduction of a historical nature also for the *Agricultural Landscape* path, with an in-depth agronomic study of the mulberry plant and the characteristics to be analysed for the compilation of the forms in the MorusApp.
- Meeting with a local expert to direct students to preliminary sources from which to develop research (*Cultural Heritage* path only).

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[4] Map demonstrating the envisaged results and made by the pilot-class

5.2   Guided tour

During the fieldwork phase, the schools independently arranged the necessary permits and contacted the locations for the organisation of numerous guided tours. The students were able to visit various places related to the world of silk production, processing and conservation. During the visits, the students produced multimedia materials to be processed for inclusion in the digital map, such as video interviews.

For the *Agricultural Landscape* route, the students proceeded to search for ancient mulberry trees following the instructions of the teachers. In some institutes, the students independently visited the individual plants several times to collect morphological and phenological data. In other institutes, the students were accompanied to the research locations by the teachers as a whole class group.

5.3   Identification of research topics/group work

The meetings with the experts are intended to guide the students in defining the topics of their fieldwork. On the basis of the proposals that emerged, the tutors and teachers shared their fields of expertise with the students and divided them into working sub-groups (maximum 5 members per sub-group). Each team was responsible for mapping several points on the map. The pupils worked by classifying the information according to one of the following criteria

- Geographical area
- Cultural theme
- Type of structure
- Historical period

6. Field research

Each subgroup reached consensus on the subjects to be investigated during the fieldwork phase and organised the sources to be reworked.

6.1   Organisation of on-site activities

Each group proposed a timetable of activities for their research to the teacher. In some schools, the groups worked independently and moved around the area individually. In other schools, educational trips were organised to take the whole class to each of the sites analysed by each working group.

6.2   Production of multimedia materials

Each subgroup autonomously organised the work of producing the media materials and collecting the sources by subdividing the roles of the research team internally: photography, cartography, interviews, archive materials, production of media elements, production of

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texts, insertion in the map. The materials of interest were reprocessed and digitised in order to be transformed into media suitable for the geolocation platform.

6.3   Digital standards

- Photos: jpg format with a maximum size of 3Mb
- Video: MP4 format with horizontal orientation 16:9, minimum resolution Full HD (1080p)
- Audio: MP3 stereo format, recommended resolution 128 Kbps, 44.1 kHz

Other multimedia formats have been suggested to the students:

- Animated GIF: for presenting multiple images in a slideshow format
- Presentations: for creating in-depth content in slide format

6.4   Organisation of the materials

The online form provided by CREA was used as a guide for data collection by the schools. It was not used for data entry, as the students' preference was to have more direct feedback, through constant communication with the partner tutor. In this way, it was possible to continuously monitor the information collected by the students and guide them to go deeper into the issues identified.

The students organised the collected materials according to an online repository, divided into sub-folders by type: one folder per group with a sub-folder for each dataset containing at least one multimedia and one text document. The materials were shared with the tutors of the project partners in order to monitor the sources and create an archive.

7. Mapping

Once the fieldwork had been completed, the subgroups, with the assistance of the tutor, the reference teacher, and the ArcGIS expert, selected and refined the most compelling materials for inclusion in the map and the route (waypoints, storytelling).

7.1   Learning to use the HGIS map

- Setting: the computer lab is equipped with a tutor and an HGIS expert (see 1.2).
- Learning by doing: the students were instructed on how to create and insert records in the map through a combination of verbal explanations and the use of a video tutorial available in the teacher area of the website.
- Re-elaboration of materials in multimedia: in accordance with the established guidelines, the students proceeded to utilise the application independently to create the map.
- Following the guidelines: the students independently used the application to create the map and proceeded to:
  - Locating the georeferenced point on the map
  - Inserting the point of interest icon with the specified parameters

- o Inserting text and multimedia materials in the pop-up tab of the record
- o Inserting external links and references to sources

7.2 Editing and inserting data into the ArcGIS map

Building on the insights gained during the inaugural meeting, wherein the utility of the map was introduced, each subgroup proceeded to independently organize the creation of records. This entailed writing texts, selecting images and other digitised materials, standardising records, and inserting records.

Frequent discourse between the students, the tutor, and the teacher was essential for monitoring and directing the work on the map. Several monitoring meetings were held, both online and in person, with the entire class and/or individual work groups. The information was reworked in a multimedia key, adapting the contents to a smart type of communication designed for use from mobile devices by a heterogeneous audience. Each point was elaborated both in the mother tongue and in English.

7.3 Finalising the map

A work session was held during which the expert explored the created map with the students, highlighting and correcting any errors, recommending additions and changes. A subsequent revision phase will be implemented by the CREA expert during the phase of merging the maps into a single map, designated as the '*European silk route*'.

7.4 Dissemination and validation of results

The dissemination phase was postponed until the beginning of the new school year for the following reasons:

- − To avoid the dispersion of students and families due to the beginning of the vacation period.
- − To use the presentation of the map as the inauguration of the new school year and as a presentation of the expected results to the schools that will be starting the educational journey.

This choice was dictated by the experience gained with the pilot class of the Marcantonio Flaminio High school in Vittorio Veneto (Italy), which had the opportunity to present the DemoMap on several occasions:

- • The first presentation was organised at the High school at the end of the school year: it was aimed at the students of that institution and had limited feedback.
- • The second presentation took place at the Esapolis Museum in Padua on 28 November 2023, on the occasion of the celebrations for the centenary of the Sericulture Experiment Station in Padua. The students presented the map to the audience in the hall and streamed it to the schools that would undertake the teaching activity in the new school year (news on the website).

- The third presentation was held at the Silkworm Museum in Vittorio Veneto on 24 February 2024. It was addressed to the local community and attracted a large attendance (news on the website).
- - Press-release: New Millennium Bug: Past, Present, and Future of Sericulture in Veneto - Il Piave
- - Press-release: The silkworm between tradition and future strategies - Il Gazzettino
- - Press-release: The "Flaminio" in the European Silk Route - La Tribuna

The Vittorio Veneto Silkworm Museum disseminated information about the event via its communication channels, thereby making the DemoMap available for consultation on its institutional website.

Figure 1 - Presentation of the digital DemoMap by the students of the Flaminio Classical High School

The work carried out with schools has been the subject of other news items on the site in the dedicated section.

- - News: Traditional and cultural association visits the IMIDA Silk Museum
- - News: School visit to IMIDA Silk Museum
- - News: School activities for the ARACNE project at the Silk Museum of PIOP
- - News: Visit to the silk museum by students – Soufli
- - News: ARACNE Project Revitalizes the Interest in Bulgarian Sericulture

8. Involved schools

Not all the partner countries were able to find appropriate schools to participate to the project for the academic year 2023/2024, because it was difficult to explain to teachers the logic underlining the activity, and many of them felt inadequate notwithstanding the on-line and in person presentation made by the CREA staff to teachers, students, the same

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partnership, to explain all the steps of the cooperative research and the granted assistance to create the online maps.

8.1   Italy

Italy had a very high number of demands of participation, both from High schools and Agriculture Technical schools, therefore it was decided to select three High schools from different parts of Italy (two in the Northern part and one in the South) and three Agriculture schools (two in the Northern part and one in the Southern Part). Thanks to a special kind of subscription to ArcGis by CREA, it was possible to give them the free access to the software. All the schools were provided with general material, disclaimers, instructions, assistance in map creation. The Agriculture Technical schools ('*Agricultural Landscape'*) in Italy were visited by two mentors (one for the Northern part, one for the Southern), expert in moriculture and were introduced to the use of the Mulberry App by the CREA researcher (Dr. Gianni Fila), who gave also further assistance on this point. Different mentors were also provided for 'in loco' lessons, among experts of proved experience (for example, the Unesco club president) for the '*Cultural Heritage*' path.
The schools that have completed the *Cultural Heritage* path are:

-    Istituto d'Istruzione Superiore Enzo Ferrari, Chiaravalle Centrale (CZ)
-    Liceo Fabio Filzi, Rovereto (TN)
-    Liceo Artistico Statale Michelangelo Guggenheim, Venezia.

8.2   Greece

Greece was also heavily involved with the two partners (NKUA and PIOP) in organising the participation of the Junior High School/High School students of Soufli, Greece, in the school activities.

Figure 2 - Mary from the PIOP Silk Museum showing students how to make earrings

Two on-site visits to the Junior High School/High School of Soufli were made (late August 2023/January 2024) to organise the material collected by the students. Free access to ArcGIS was arranged through mediation with the private company that holds the license for ArcGIS in Greece and the Ministry of Education to license the use of the software by the students. Archival material, photographic evidence and interviews on historical aspects of silk production in Greece were provided to the students at the Junior High School/High School

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of Soufli to assist them in their school activity. Furthermore, an assessment questionnaire was prepared by NKUA and translated to Italian, Slovenian, Greek and English to provide feedback assessment on the school activities. Additional assistance in map creation was provided by PIOP and the Italian tutor.

8.3   Slovenia

Two high schools located in Maribor (Slovenia) joined the activities in collecting information on historical points of interest and to create new materials based on silk artefacts or inspired by the tradition of silk rearing and processing. At the Anton Martin Slomšek Grammar School in Maribor (Slovenia), the participating students studied historical points of sericulture in Slovenia. The students performed their tasks under the guidance of two mentors from the field of history and biology under the supervision of ARACNE partners from the Faculty of Agriculture and Life Sciences at the University of Maribor. The historical points proposed for the research were previously selected on the basis of collected data on the history of sericulture in Slovenia.

At the High School of Design in Maribor, teachers from various research areas organised workshops for students in cooperation with the ARACNE partners from the Faculty of Mechanical Engineering UM. They painted silk scarves inspired by historical garments and explored the felting of silk scarves, combining historical heritage with sustainability. Students were also introduced to the shibori technique, which creates vibrant scarves decorated with geometric patterns. Workshops were also organised to design textile patterns with motifs such as threads, silkworms and mulberry leaves. Another group of students created "SILK" posters depicting the history, production process, beauty and influence of silk in fashion. Photo albums combining bookbinding and graphic design were also created. The students also made jewellery from cocoons and a stand from mulberry wood, demonstrating an innovative use of materials. The materials created were exhibited at Galerija Vetrinski Dvor and Galerija Sodni stolp.

8.4   Bulgaria

The Bulgarian partner was not able to recruit schools for this kind of work, but in 2023 SCS – Vratsa organized through ARACNE project the visits and training of 266 students from primary schools at the National agricultural museum in Sofia and the Scientific Center on Sericulture in Vratsa (see the above mentioned News). France, Spain and Georgia planned the activity for the school year 2024-2025 and translated all the necessary material to do so.

8.5   Final questionnaire for statistical purposes

A final questionnaire (see Annex III) was given to the students for statistical purposes to collect feedback on the activity in terms of their knowledge, skills and interest. This will make it possible to better calibrate the activities for the next school year and to intervene in the most critical areas.

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8.6 Engagements for the 2024/2025 academic year

With regard to the forthcoming academic year, applications from some educational institutions have already been received via the registration form on the website and through direct contact with the partner tutors. In light of the experience gained and the examples of maps produced, the other partners have also initiated the recruitment of schools within their respective geographical areas. Currently, there are already five schools expressing an interest in undertaking the route in the 2024/2025 academic year.

9. Conclusions

The engagement with educational institutions represents a valuable contribution to the development of the ARACNE project's innovation ecosystem. The enthusiasm of students in exploring the world of silk through a contemporary lens and the integration of digital technologies has been a source of encouragement for the project's partners. This approach has proven to be an effective method for transmitting traditions and knowledge, as well as for engaging with future innovators in the sector. Unfortunately, the temporal discrepancy between the project reporting period and the conclusion of the academic year precludes the presentation of comprehensive outcomes from the inaugural year of the project. An update of this deliverable is scheduled for the beginning of 2025. While the results have not yet been fully completed, a substantial corpus of material on the website attests to the methodology employed and the initial experiences of the students. The decision of the Veneto Region, as expressed in its law on sericulture, to reinforce this activity towards educational institutions is a significant step towards the long-term sustainability of this work on the silk sector in education. This is of particular importance to students, as it has implications for a multitude of disciplines.

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ACRONYMS

[ACR]	ACRONYM
[GIF]	Graphics Interchange Format
[JPG]	Joint Photographic Experts Group
[MP3]	MPEG-2 + Audio Layer-3
[MP4]	MPEG-2 + Audio Layer-4
[PCTO]	Paths for Cross-Curricular Skills and Guidance

Annex I

Paths for Cross-Curricular Skills and Guidance: Agricultural Landscape

DIPARTIMENTO DI FILOSOFIA, SOCIOLOGIA, PEDAGOGIA

e PSICOLOGIA APPLICATA (FISPPA)

UNIVERSITÀ DEGLI STUDI DI PADOVA

Padova, 29/09/2023

OGGETTO: Attivazione PCTO 2023-24

PROPONENTE: MANLIO PIVA (Ricercatore L-Art/06, Dip. FiSPPA)
Contatti: manlio.piva@unipd.it +39 3289091702

Titolo

Tracciare il Passato, Salvaguardare il Futuro: una mappa HGIS e la MorusApp per i Gelsi secolari.

Motivazioni

La storia della seribachicoltura in Italia è secolare e anima le esperienze di intere comunità almeno fino al secondo dopoguerra. Si lega indissolubilmente alla coltivazione del gelso, i cui alberi sono tuttora testimonianza della storia del territorio. Toponomastica, archeologia industriale, lessico famigliare, foto e musei provano a raccontare ancora oggi alle nuove generazioni l'importanza di un'economia che ha visto l'Italia come stato trainante in Europa. Ma nuove ragioni spingono a tornare con rinnovata energia e nuove strategie comunicative e didattiche su questa storia sociale, economica, culturale.

Il baco del nuovo millennio. Prima di tutto la sensibilità verso la green economy e le strategie per metterla in atto, attraverso l'educazione all'ecosostenibilità e alla (ri-

)scoperta di pratiche economiche circolari: la seribachicoltura non è una pratica del passato ma si sta rivelando un eccellente volano per l'economia green; il *bombyx mori* non è più solo sinonimo di tessuti pregiati ma trova applicazioni nella chirurgia, nella cosmesi, nella nutrizione animale e umana ed è al centro di ricerche nelle nanotecnologie e nei superconduttori. La gelsicoltura procede di pari passo e non è più solo al servizio dell'allevamento, ma oggetto di studi per applicazioni che toccano anche l'ambito alimentare, medico e cosmetico.

Una storia locale e globale. L'epopea del baco da seta in Italia costituisce un eccellente esempio di un'economia integrata all'interno di piccole comunità contadine che partecipa attivamente a una fiorente industria che fa per secoli dell'Italia il secondo produttore al mondo di seta dopo la Cina. Grazie all'esportazione dei filati e dei tessuti in seta la regione conserva a lungo un accesso diretto ai più importanti centri del commercio globale del tempo. Un'epopea che parla di economie di sussistenza e baratto che trovavano nell'allevamento dei "cavalieri" uno dei pochi, se non l'unico, introito di denaro, integratore prezioso dell'attività agricola, leva per la nascita della piccola borghesia del nord Italia; ma anche di rapidi processi di innovazione, come l'introduzione su larga scala dell'uso del microscopio per combattere le malattie del baco nel tardo Ottocento. Lessico, pratiche sociali, riti, luoghi e soprattutto alberi secolari raccontano ancor oggi il territorio e le sue comunità. La schedatura di questi preziosi esemplari di gelso ha anche lo scopo di recuperare un patrimonio genetico che si è dimostrato resistente nei secoli e può diventare fondamentale per una gelsicoltura che si trova ad affrontare le odierne sfide di un ecosistema in continua evoluzione.

Strategie didattico-educative. Per le ragioni addotte, il tema si presta a essere affrontato ricorrendo a tools e applicazioni tecnologiche avanzate (georeferenziazione, multimedia, digital storytelling, data base management) a integrazione di attività sul campo, testimonianze, visite guidate, laboratori. Aggiornando le pratiche e gli strumenti didattico-educativi a disposizione degli insegnanti, attraverso la Didattica Digitale Integrata (DID) e favorendo negli studenti un approccio "smart" all'apprendimento e alla ricerca.

Target
Studenti delle scuole secondarie di II grado: laboratori ed esperienze di ricerca assistita a studenti del ciclo secondario II grado (PCTO)

Discipline coinvolte
Storia, geografia, italiano, educazione civica, tecnologie, informatica, scienze della terra, biologia.

Temi collegati
Toponomastica, storia e testimonianze (orali, letterarie, fotografiche), cultura immateriale (lessico, pratiche sociali, mestieri, ruolo delle donne), biologia, scienze, innovazione tecnologica, ecosostenibilità, cittadinanza, turismo sostenibile.

Risorse umane

Il proponente si impegna a mettere a disposizione il personale docente e i formatori esperti.
Il personale docente sarà costituito da docenti che si occupano di Pedagogia, Tecnologie per la didattica, Discipline artistiche e mediali, Storia, Antropologia culturale, Agronomia.
Il proponente curerà i rapporti con i partner esterni (scuole, professionisti, ricercatori, enti territoriali, aziende) al fine di offrire ai discenti visite guidate, testimonianze, approfondimenti storici e scientifici in situ e a distanza.

Partner dell'iniziativa:
Progetto europeo ARACNE - CREA di Padova.

Risorse finanziarie

Le attività previste per l'Anno Scolastico 2023-24 saranno svolte A TITOLO GRATUITO.

Tempistiche

Febbraio 2024 – Giugno 2024: PCTO di 40 ore (indicative)
Programmazione e contenuti
Percorso per le Competenze Trasversali e per l'Orientamento (PCTO)

Titolo:
- *Il Gelso e la sua importanza per la gelsibachicoltura in Italia: la MorusApp e la mappa HGIS*

Modalità di erogazione:
- Attività online e sul campo

Target:
- Studenti del III e IV anno scuole secondarie di II grado
- Max 25 partecipanti
- Indirizzi: Liceo Scientifico, Liceo delle Scienze Umane, Istituti agrari.

Obiettivi: creazione di una mappa geolocalizzata HGIS e utilizzo della MorusApp per censire gli esemplari di gelso secolari.

Il PCTO sarà strutturato in 5 fasi:

Inverno 2024
Fase 1 (2 incontri online per totali 4 ore): *Affinamento delle conoscenze e competenze*
- Lezione 2 ore: Per un approccio storico alla seribachicoltura in Italia: metodi, fonti, strumenti, il ciclo vitale del gelso e le sue caratteristiche (tema indicativo, da concordare con la scuola ospitante)

- Lezione 2 ore: Reperire testimonianze, produrre documenti fotografici sulla gelsibachicoltura: metodi, fonti e strumenti (Dott. Manlio Piva, L-ART/06, FiSPPA - Unipd)

Febbraio- Aprile 2024
Fase 2 (22-24 ore): *Ricerca sul campo*

- Gli studenti, divisi in gruppi sviluppano una ricerca di documenti e testimonianze sul territorio; archiviano attraverso registrazioni e trasferimento in digitale di documenti analogici (mappe storiche, foto, pellicole, documenti d'archivio pubblici e privati), compilano il database attraverso la MorusApp analizzando le piante di gelso secolari nelle varie fasi del loro ciclo vitale.
- Ciascun gruppo sarà seguito da un tutor/docente della scuola di riferimento
- Si prevedono periodici incontri di condivisione, monitoraggio, assistenza da parte del tutor universitario

Maggio 2024
Fase 3 (6-8 ore): *rielaborazione, collazione e pubblicazione dei materiali raccolti*

- 2-3 incontri online e in presenza di abilitazione degli studenti all'utilizzo della MorusApp e della mappa geolocalizzata ArcGIS e inserimento nella stessa dei documenti esito della ricerca.

Inizio Giugno 2024
Fase 4 (2 ore): Evento pubblico di presentazione dei risultati

Possibili partner dell'iniziativa:

- Uffici pubblici (anagrafe, catasto ecc.) dei comuni del territorio in esame
- Musei pubblici e privati dedicati alla seribachicoltura del territorio in esame
- Archivi privati di storia locale del territorio in esame
- Aziende agricole, del tessile e della seta presenti sul territorio in esame

Il proponente, Dott. Manlio Piva – FiSPPA Unipd

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Annex II

Paths for Cross-Curricular Skills and Guidance: Cultural Heritage

DIPARTIMENTO DI FILOSOFIA, SOCIOLOGIA, PEDAGOGIA

e PSICOLOGIA APPLICATA (FISPPA)

UNIVERSITÀ DEGLI STUDI DI PADOVA

Padova, 29/09/2023

OGGETTO: Attivazione PCTO 2023-24

PROPONENTE: MANLIO PIVA (Ricercatore L-Art/06, Dip. FiSPPA)
Contatti: manlio.piva@unipd.it +39 3289091702

Titolo
New millenium bug. Passato presente e futuro della seribachicoltura nel nord Italia

Motivazioni
La storia della seribachicoltura nel nord Italia è secolare e anima le esperienze di intere comunità almeno fino al secondo dopoguerra. Toponomastica, archeologia industriale, lessico famigliare, foto e musei provano a raccontarla ancora oggi alle nuove generazioni. Ma

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nuove ragioni spingono a tornare con rinnovata energia e nuove strategie comunicative e didattiche su questa storia sociale, economica, culturale.

Il baco del nuovo millennio. Prima di tutto la sensibilità verso la green economy e le strategie per metterla in atto, attraverso l'educazione all'ecosostenibilità e alla (ri-)scoperta di pratiche economiche circolari: la seribachicoltura non è una pratica del passato ma si sta rivelando un eccellente volano per l'economia green; il *bombyx mori* non è più solo sinonimo di tessuti pregiati ma trova applicazioni nella chirurgia, nella cosmesi, nella nutrizione animale e umana ed è al centro di ricerche nelle nanotecnologie e nei superconduttori.

Una storia locale e globale. L'epopea del baco da seta nel nord Italia costituisce un eccellente esempio di un'economia integrata all'interno di piccole comunità contadine che partecipa attivamente a una fiorente industria che fa per secoli dell'Italia il secondo produttore al mondo di seta dopo la Cina. Grazie all'esportazione dei filati e dei tessuti in seta la regione conserva a lungo un accesso diretto ai più importanti centri del commercio globale del tempo. Un'epopea che parla di economie di sussistenza e baratto che trovavano nell'allevamento dei "cavalieri" uno dei pochi, se non l'unico, introito di denaro, integratore prezioso dell'attività agricola, leva per la nascita della piccola borghesia del nord Italia; ma anche di rapidi processi di innovazione, come l'introduzione su larga scala dell'uso del microscopio per combattere le malattie del baco nel tardo Ottocento. Lessico, pratiche sociali, riti, luoghi raccontano ancor oggi un territorio e le sue comunità.

Strategie didattico-educative. Per le ragioni addotte, il tema si presta a essere affrontato ricorrendo a tools e applicazioni tecnologiche avanzate (georeferenziazione, multimedia, digital storytelling) a integrazione di attività sul campo, testimonianze, visite guidate, laboratori. Aggiornando le pratiche e gli strumenti didattico-educativi a disposizione degli insegnanti, attraverso la Didattica Digitale Integrata (DID) e favorendo negli studenti un approccio "smart" all'apprendimento e alla ricerca.

Target
Studenti delle scuole secondarie di II grado: laboratori e esperienze di ricerca assistita a studenti del ciclo secondario II grado (PCTO)

Discipline coinvolte
Storia, geografia, italiano, educazione civica, tecnologie, informatica, scienze della terra, biologia.

Temi collegati
Toponomastica, archeologia industriale, storia e testimonianze (orali, letterarie, fotografiche e cinematografiche), cultura immateriale (lessico, pratiche sociali, mestieri, ruolo delle donne), biologia, scienze, innovazione tecnologica, ecosostenibilità, cittadinanza, turismo sostenibile

Risorse umane

Il proponente si impegna a mettere a disposizione il personale docente e i formatori esperti. Il personale docente sarà costituito da docenti che si occupano di Pedagogia, Tecnologie per la didattica, Discipline artistiche e mediali, Storia, Antropologia culturale.

Il proponente curerà i rapporti con i partner esterni (scuole, professionisti, ricercatori, enti territoriali, aziende) al fine di offrire ai discenti visite guidate, testimonianze, approfondimenti storici e scientifici in situ e a distanza.

<u>Partner dell'iniziativa</u>:
Progetto europeo ARACNE - CREA di Padova.

<u>Risorse finanziarie</u>
Le attività previste per l'Anno Scolastico 2023-24 saranno svolte A TITOLO GRATUITO.

<u>Tempistiche</u>

Novembre 2023 – Giugno 2024: PCTO di 40 ore (indicative)
<u>Programmazione e contenuti</u>
Percorso per le Competenze Trasversali e per l'Orientamento (PCTO)

<u>Titolo</u>:
- *L'epopea del baco da seta nel nord Italia: una mappa HGIS multidisciplinare*

<u>Modalità di erogazione</u>:
- Attività online e sul campo

<u>Target</u>:
- Studenti del III e IV anno scuole secondarie di II grado
- Max 25 partecipanti
- Indirizzi: Liceo Classico, Liceo delle Scienze Umane, Liceo Scientifico, Liceo Artistico, Istituti tecnici e per il turismo, Istituti per la moda e il design, Istituti agrari.

<u>Obiettivi</u>: creazione di una mappa geostorica HGIS

<u>Il PCTO sarà strutturato in 5 fasi</u>:

Autunno 2023
Fase 1 (3 incontri online per totali 6 ore): *Affinamento delle conoscenze e competenze*
- Lezione 2 ore: Per un approccio storico alla seribachicoltura nel nord Italia: metodi, fonti, strumenti (tema indicativo, da concordare con la scuola ospitante)
- Lezione 2 ore: Per un approccio antropologico-culturale alla seribachicoltura nel nord Italia: metodi, fonti, strumenti (tema indicativo, da concordare con la scuola ospitante)

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- Lezione 2 ore: Reperire testimonianze e documenti audio e visivi sulla seribachicoltura: metodi, fonti e strumenti (Dott. Manlio Piva, L-ART/06, FiSPPA - Unipd)

Febbraio- Aprile 2024
Fase 2 (22-24 ore): *Ricerca sul campo*

- Gli studenti, divisi in gruppi sviluppano una ricerca di documenti e testimonianze sul territorio; visitano Musei ed enti pubblici e privati inerenti; archiviano attraverso registrazioni e trasferimento in digitale di documenti analogici (mappe storiche, foto, pellicole, documenti d'archivio pubblici e privati).
- Ciascun gruppo sarà seguito da un tutor/docente della scuola di riferimento
- Si prevedono periodici incontri di condivisione, monitoraggio, assistenza da parte del tutor universitario

Maggio 2024
Fase 3 (6-8 ore): *rielaborazione, collazione e pubblicazione dei materiali raccolti*

- 3-4 incontri online e in presenza di abilitazione degli studenti all'utilizzo della mappa geolocalizzata ArcGIS e inserimento nella stessa dei documenti esito della ricerca

Inizio Giugno 2023
Fase 4 (2 ore): Evento pubblico di presentazione dei risultati

Possibili partner dell'iniziativa:
- Uffici pubblici (anagrafe, catasto ecc.) dei comuni del territorio in esame
- Musei pubblici e privati dedicati alla seribachicoltura del territorio in esame
- Archivi privati di storia locale del territorio in esame
- Aziende del tessile e della seta presenti sul territorio in esame

Il proponente, Dott. Manlio Piva – FiSPPA Unipd

References

1. Manlio Celso Piva, 2015, Geolocalizziamo la Grande Guerra. Piattaforma didattica per la georeferenziazione del fronte italo-austriaco in Teach Different! Proceedings della multiconferenza EMEMITALIA2015, a cura di Marina Rui, Laura Messina, Tommaso Minerva, p.559 link.
2. Daniele Agostini, Manlio Celso Piva, 2018, Progetto di sperimentazione didattica: "Geolocalizziamo la Grande Guerra". Percorsi e trincee sul fronte del Monte Grappa e del fiume Piave in Per un atlante della Grande Guerra, a cura di Carla Masetti, p.109.