



## Communicating and learning about the past through experimental teaching: the education of Pleistocene culture to school-age children and young people

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**ABSTRACT** - Teaching in education has historically been based on a single type of transmission/learning method, mainly a frontal model, that encourages listening and discussion, but excludes participation through a purely theoretical approach. In recent decades, new teaching methods have been developed, especially for traditionally undervalued subjects in the school system. The teaching of prehistory provides one such example. Research suggests that having one or more cultural heritage professionals in the classroom who aid the teacher-coordinator fills in gaps in traditional teaching. Through a laboratory approach based on grade-level students, these professionals seek to develop an innovative teaching method to engage students in managing their learning through an educational/functional process. In this paper, we present such techniques, planning, and methods tested by professional associations, together with students and teaching staff of schools in the suburbs of Rome. The study's goal is to develop an adaptable and replicable model, that guarantees a measurable positive impact better than that of the past to provide information about the Pleistocene using the tools of experimental archeology.

**Keywords:** Prehistory; experimental teaching; archeology communication; cultural heritage.

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### 1. INTRODUCTION

History is a highly debated subject in the Italian national education system. Since 2004, ministerial programs for teaching history have undergone significant changes under the impact of the so-called Moratti reform (Law 53/2003 and Legislative Decree 59/2004).

In the first two years of primary school, educators teach preparatory concepts to reinforce general ideas of time and chronology; in the third year, teachers cover the period from prehistory to the discovery of writing; in the fourth and fifth years, students study ancient history, that is, the civilizations of the Near East, Greek and Roman civilizations, up to the advent of Christianity. At the secondary level, the curriculum covers the period from late antiquity to the 21st century. The entire last year is devoted to the 20th century. At the high school level, students repeat the course of study outlined above. In addition, the so-called Gelmini reform (Presidential Decree 89/2010) drastically reduced the hours devoted to history and geography in high schools, beginning with the 2010-2011 school year (Caprara, 2014).

In more than ten years, these regulations have led to a historical de-literacy of the school-age population

and a trivialization of critical learning topics. An emblematic case is the study of the Italic civilizations, which is exhausted by the study of the Etruscans, without providing further insight and a sense of the complexity of this historical period. This dangerous drift is made worse by historical themes used in the media, where the market demands compromise in communication. These two phenomena lead to a mixture of truth and fantasy, which poses the danger that children will no longer be able to deal with historical facts and find it difficult to distinguish fact from opinion. The ineffectiveness of such schooling risks worsening social inequalities because families do not have sufficient economic resources to compensate for these deficits by supplementing the lack of knowledge with external experiences. Such resources are often not equally available to families suffering social and economic hardships.

Based on these premises, and at a crucial time in the precise development of critical thinking in childhood, i.e., between the ages of 8 and 9, when a child passes from irreversible to reversible thinking (Piaget, 1967), educational institutions must effectively transmit knowledge about prehistory through an educational/functional approach (Orefice, 2006 a,b).

To achieve this goal, educators, in recent years, have widely adopted the practice of combining traditional teaching with workshop activities using experimental archeology tools. Non-profit cultural associations, with experts in this field among their ranks, play a crucial role. This work aims to describe the methods and results obtained from the above-discussed activity, with reference to experiments conducted from 2016-2019 in the outskirts of Rome by the *Associazione Culturale Quattro Sassi*. The goal is to stimulate a nationwide discussion about the possibility of creating a model that extends to larger contexts and is replicated in other historical disciplines.

## 2. METHODS AND TOOLS

Archeology didactics is a discipline that disseminates knowledge about archeology through educational methods. Its main goal is to transmit knowledge about archeology and history through engaging and interactive educational activities (Bolla, 2013).

The discipline can target a variety of audiences, including primary and secondary school students, museum visitors, tourists, and adults interested in the subject. Educational activities can include guided tours of archeological sites, hands-on workshops, field trips, simulations, role-playing, research projects, and more.

This educational approach aims to stimulate interest in archeology, promote active learning, and directly involve the public in the discovery and interpretation of archeological finds. It promotes awareness of the importance of preserving archeological heritage through direct experience and interaction with objects from the past, as well as an understanding of diverse cultures and historical contexts.

Furthermore, the integration of innovative technologies such as virtual and augmented reality provides a more immersive and engaging experience in archeological education. For example, museum visitors can use digital devices to virtually explore an archeological site or actively take part in interactive processes through three-dimensional reconstructions of ancient buildings and objects.

Since its foundation, the *Associazione culturale Quattro Sassi* has invested half of its internal resources into public archeology efforts, of which archeological education is a sub-area. Public archeology (Pallecchi, 2017) is a field of study and practice that encourages the active participation of the public to enhance archeological heritage. It focuses on communication, education, and public participation by creating “heritage communities.” Public archeology promotes dialogue between archaeologists, those in the field, civil society, and citizens. Public participation creates a sense of belonging and collective responsibility for cultural heritage and its long-term preservation.

In the first two-year phase of work (years 2015 and 2016), the Association used two methods of archeological education that complemented each other yet had

different aims. The first method (Fig. 1) involves planning educational workshops based on groups of children and young people between the ages of 7 and 11. This type of approach includes two phases that take place at an archeological site, museum, or cultural event. A short, guided tour provides participants with the necessary information to cope with a hands-on experience, followed by a thematic workshop related to the site or museum that was the subject of the earlier visit; both activities take place on the same day and last two hours long. One difficulty that may arise with this activity is related to the heterogeneity of the age groups of the participants, requiring the teaching staff to convey their message simultaneously to children of different developmental ages.

The second method (Fig. 2) is related to the Association’s ‘school project’, a broader activity involving whole classes from one or more schools rather than individuals. As part of the school project, each class conducts a three-month program during school hours with three activities on different days: a classroom lecture, a guided tour of a site or archeological museum, and an educational workshop. In this type of activity, unlike the method above, the age of the students is the same because they belong to the same school group. The great challenge of this activity is how to keep participant’s attention for an extended period, while still achieving medium to long-term effects, particularly in terms of academic performance.

The two workshops studied here, held at the Casal de’



Fig. 1 - Model of the first process of archeological teaching activities.



Fig. 2 - Model of the second process of archeological education activities.

Pazzi Museum in the Roman suburb of the same name, belong to this latter method. These activities are for grade three primary, that is, for an age group of 8 to 9 years (Fig. 3).

We examine two workshop activities here:

- Activity 1: Pleistocene food preparation workshop (Fig. 4).

- Activity 2: Pleistocene street art workshop.

The first activity uses the methods of experimental archeology to explore the theme of subsistence strategies in pre-agrarian societies. While this element is of vital importance, it only partially covers the themes of prehistory. Experimental didactic activities, however, should never be used for the complete dissemination of concepts. They should, however, arouse interest and curiosity in the subject by bringing them closer to what daily life was like in such a distant era, thus focusing their attention during the lesson.

The second activity is for children who are reaching the end of their schooling and have already learned the basics of the discipline. Through the creative activity of

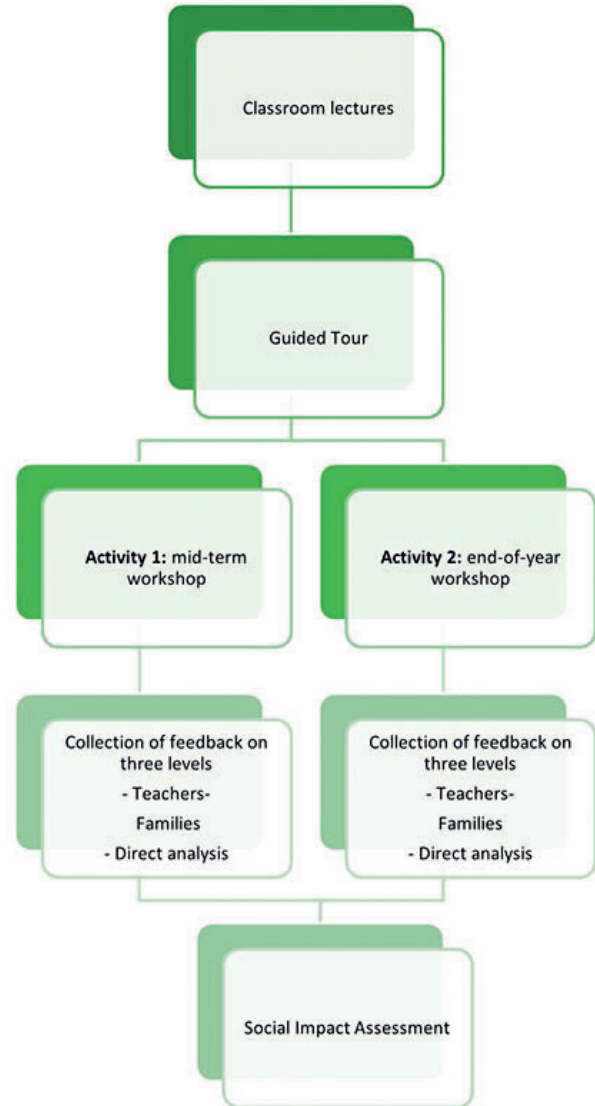


Fig. 3 - Outline of the activity being tested.

reproducing prehistoric art, the child can relate their creative thinking to that of the prehistoric world and find analogies and differences.

Both activities focus on the relationship between the child and historical reality, bringing the latter closer to a more tangible and recognisable environment for the learner.

For the first core of activities, approximately 30 children took part; for the second core of activities, 34 children took part.

### 3. ANALYSIS OF RESULTS

The study used three assessment tools to analyse the results of these workshops:

- 1) on-site analysis of the users and their comments on the diagnostic behaviour during the teaching activity,
- 2) teachers' feedback at the end of the activity and six months later, and

3) short-term feedback from participants’ families and long-term feedback from Association members.

Qualitative-quantitative questionnaires helped to inform this empirical analysis for other archeological teaching activities in the years following.

The following ex-post evaluations emerged from this method, partially confirming the impact predicted in



Fig. 4 - Pleistocene food preparation workshop activity.

the planning stage (Fig. 5). Some problems included difficulty with face-to-face lectures; the presence of a previously unknown teacher helped to mitigate this for all the children. Guided tours and workshops registered high-average proactivity in this age group compared to others.

In the two educational workshops, users often related the hands-on experiences to their everyday lives, thus achieving the goal of creating a historical-functional connection.

In the medium term, parents who maintained relationships with the Association found that children often remembered the experiences well beyond the classroom (even after six to twelve months). In some cases, in two-thirds of the feedback, the museum concept was perceived as livelier and not only as an educational place, which increased its attractiveness.

Teacher feedback revealed that children increased their knowledge in prehistoric subjects on average in the medium term with a tendency to continue this growth in the year following their educational experience. Considering the timing of the school year and the target age-group, it was not possible to prove with absolute certainty how much of an increase in acquisition there was, for instance through testing.

4. CONCLUSIONS

From the experiences described thus far, the potential of archeology didactics as a support tool for traditional teaching is high. The study showed how the development of a hybrid classroom-laboratory model successfully provides sustained critical thinking instruction for human prehistory disciplines. Much has been said in recent years about the ability of initiatives such as this to bring archeology to diverse audiences (Senatore et al., 2022). However, more needs to be done in social

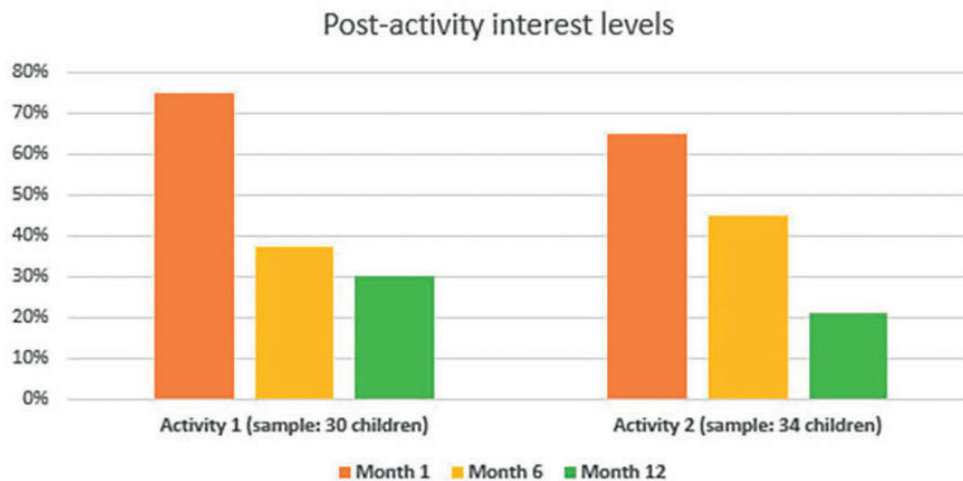


Fig. 5 - Framework of post-activity interest levels.

analytical terms to explain this impact. The efforts of this initial analytical work are intended only as a starting point to introduce an increasingly scientific approach to the social science analysis of ex-post evaluations for this type of activity.

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