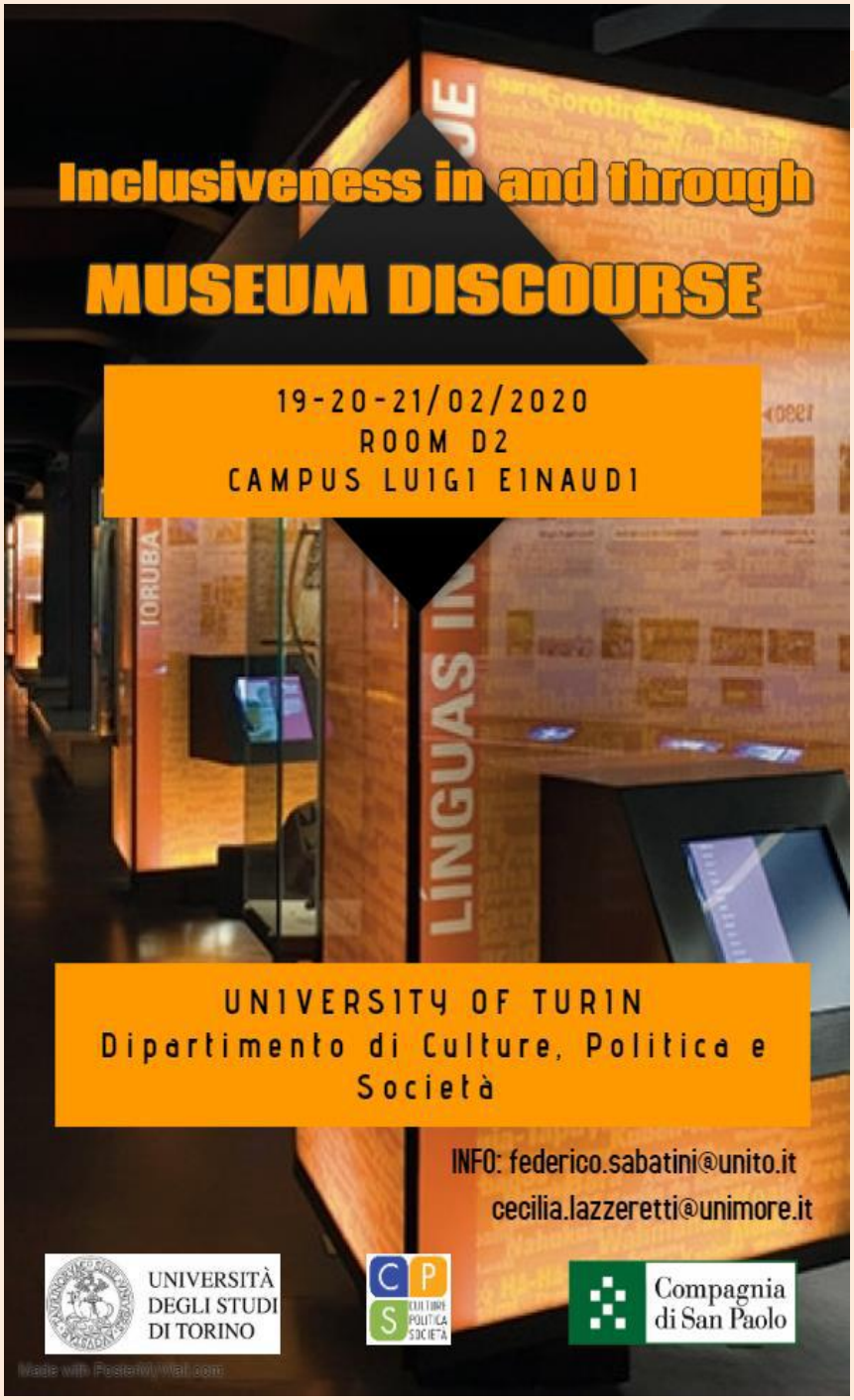


International Conference

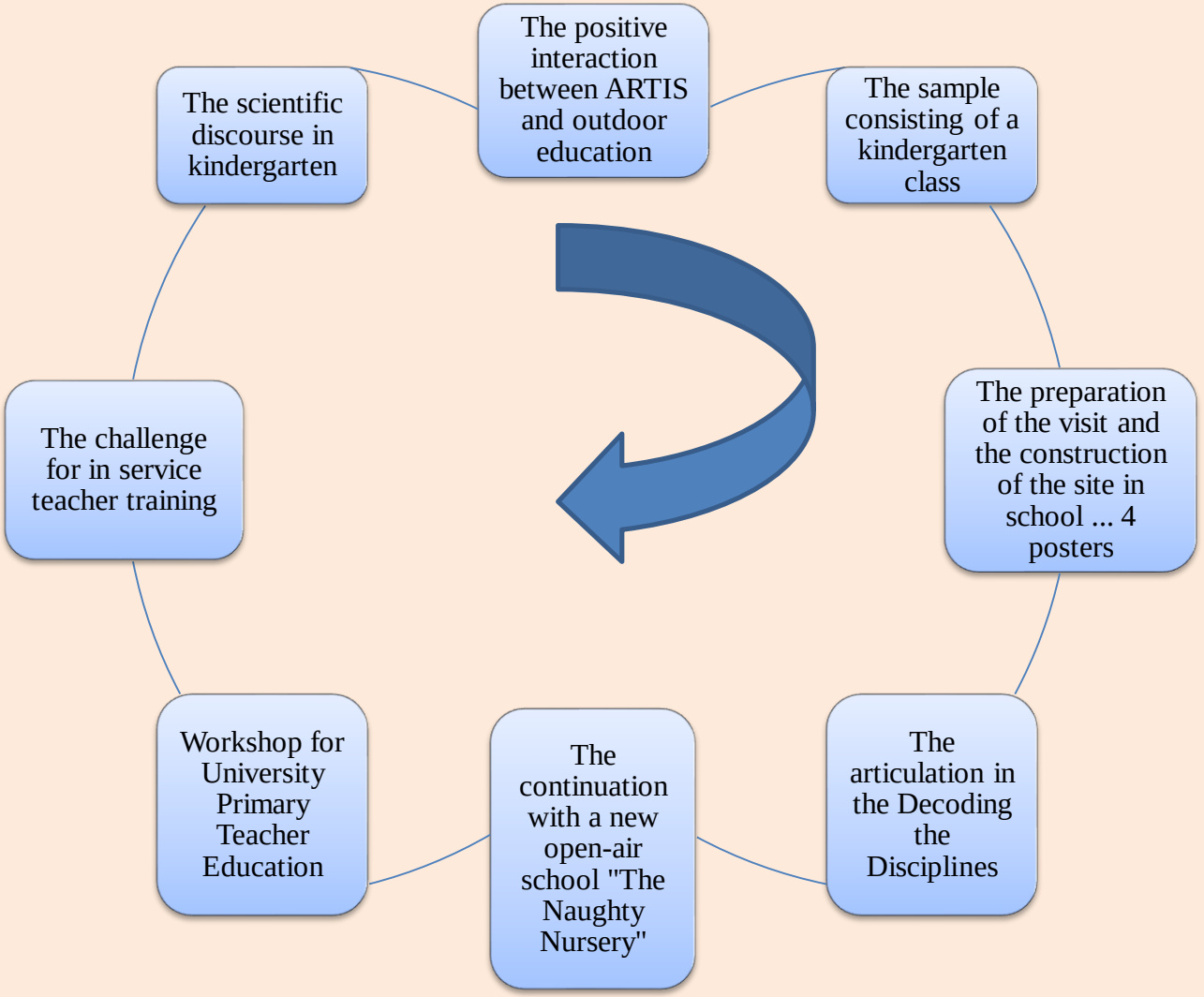
The ARTIS project: towards communicative and cognitive accessibility of museum discourses

Accessibility Roma Tre Project
Technological Innovation Sustainability

The linguistic and pedagogical perspectives

Franca Orletti and Sandra Chistolini

Our Research in brief



Accessibility

- Communicative Accessibility
- Cognitive accessibility
- Sensory Accessibility
- Physical accessibility
- Socio-cultural Accessibility

THE ARTIS PROJECT

Accessibility indicates the **enhancement of a habitat** to guarantee each individual an independent life without foreclosures due to age, knowledge, skills (physical and sensory). The project intends to create a reference center, a laboratory of **communicative accessibility** as an interface between Roma Tre and public, private and third sector institutions to promote a culture of **sustainability**.

The focus lies in the design of cultural and landscape routes in urban and suburban areas of Rome with a significant naturalistic and historical heritage, with innovative IT that can also be managed outdoors to encourage the community to use this heritage.

Our target groups: DESIGN FOR ALL

- No distinction between people with different skills and the so called «norm-equipped» people
- The person is seen as a whole and the skills and abilities as a continuum of which young and old, educated and uncultivated, able and not able-bodied are segments. No longer a distinction between "weak" and strong users, but different degrees of strength.
- The DESIGN FOR ALL PARADIGM

This new paradigm requires the collaboration of different disciplines involved since the early stages of the project, in which linguists, experts in communication, cultural heritage, technologies, pedagogists work together

Source: Newell, A.F., 1987

Universal Design for Learning (UDL)

A proactive approach that designs flexible goals, methods, materials, and assessments by anticipating the full range of learner needs from the outset.

Goal: Eliminate unnecessary barriers to learning in order to increase student achievement.

Inspired by the universal design concept of architecture and product development and based on educational research regarding learners varied

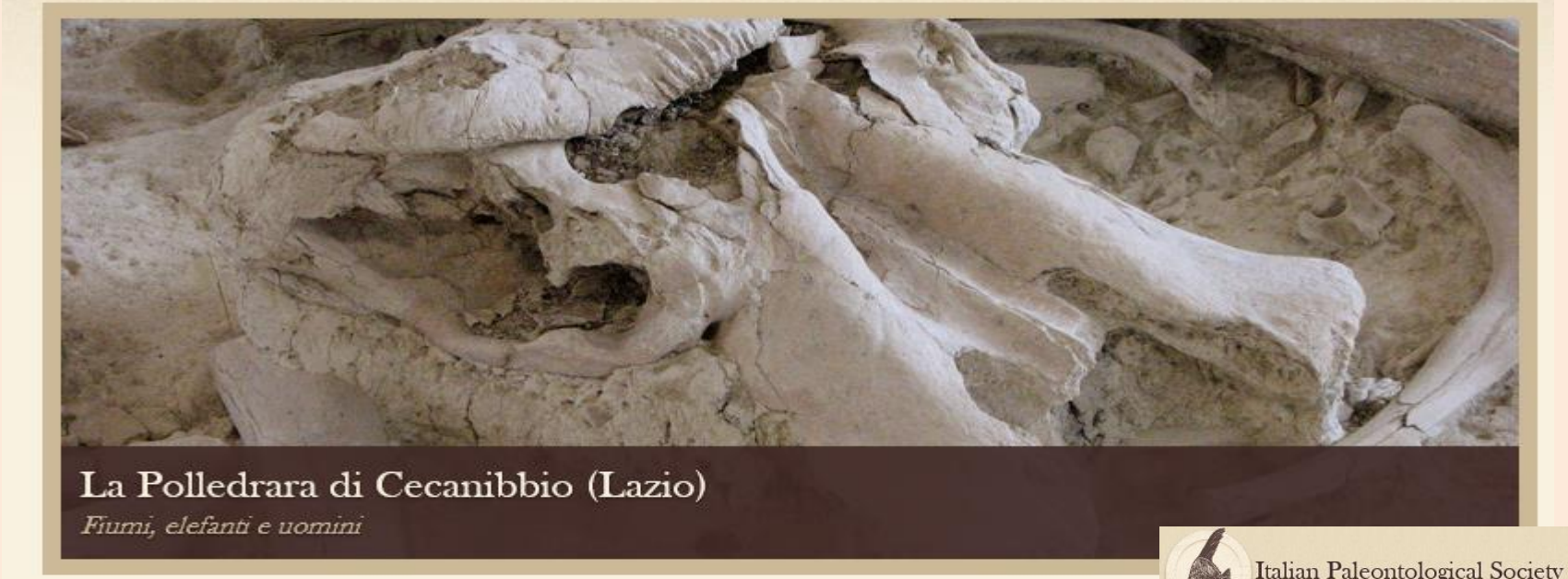
The Intervention Area

- North Western suburban area of Rome, from Aurelia to Cassia.

- The intervention described today concerns the Castel di Guido-Casalotti area, XIII Municipio/District

The Site

La Polledrara di Cecanibbio (Lazio)
Rivers, elephants and men



Source

Italian Paleontological Society

POLLEDRARA DI CECANIBBIO
IL CIMITERO DEGLI ELEFANTI

The Polledrara field , identified in 1984, is one of the richest paleontological sites
The river where elephants got trapped in the mud
320.000 years ago

https://www.coopculture.it/en/heritage.cfm?id=64#

The Polledrara field , identified in 1984, is one of the richest paleontological sites there are . The site is by the Sabatino volcanic hills, 20 km NW from Rome, 83 m above the sea-level. A 900 square metre roof, covers and preserves a great section of the site.

Inside the museum it is possible to visit the archaeological excavation through a foot-bridge, and it is possible to see both the former river bed and the swamp area where many faunal evidences still are. The river bed section is 35-40 m wide and 1,5 m deep . In the swamp area there was an intense human and animal presence, pointed out by the discovery of many fossil remains, ascribable in a great part to the ancient

Elephant and the primitive Ox. It is possible to see the skeleton of an elephant that got trapped in the mud, with a wolf skull inside its ribs, that probably died in the same way trying to eat the carcass. Together with the faunal evidences more than 500 lithic objects were also collected, such as flint pebbles and siliceous limestone, carried there by man.

Musealization

«A project for the “musealization” of the site started at the end of the 1990s and is still in progress. The metal structure covering the fossiliferous deposit is 900 m^2, and represents a museum where the fossils are exposed in situ.

The fossil remains recovered in this area mainly consist of a carcass of P. antiquus trapped in the muddy swamp area. The carcass is embedded in the uppermost part of the deposit (Fig. 2B) where lithic flakes and artefacts are present, mainly along its right side, associated with long bones intentionally fractured.

.....Most of the bones found in this particular area belong to a single carcass, which is the object of this study. The skull and the mandible are almost complete, whereas most bones of the postcranial skeleton are missing».

Source: Ernesto Santucci [a], Federica Marano [b, *], Eugenio Cerilli [c], Ivana Fiore [d], Cristina Lemorini [e], Maria Rita Palombo [b], Anna Paola Anzidei [a], Grazia Maria Bulgarelli, 2016

Our challenge was:

To render accessible this paleontological site to kindergarten children both from a communicative and cognitive points of view by overcoming the difficulties given by technical language and concepts.

For instance: the difference between elephant and mammoth; or fossil remains instead of bones

THE AIMS

- At the communicative level, understanding and reproduction in speech of a scientific register with specific and collateral terms.
- At the cognitive level, a diachronic vision of the environment and of the functional exchange between the environment and its inhabitants.
- At the social level, the strengthening of the social identification with the territory.
- At the pedagogical level, the outdoor learning allows pupils to become aware of the relationship between man and nature, human life and the river environment: the main focus is to create the basis for an exploration of places of scientific and cultural interest, such as the Pleistocene deposit of Polledrara di Cecanibbio, near Rome and develop the conditions for training in critical thinking (children and teachers).

The linguistic perspective: Lexical aspects of the professional variety

- Specific Terms(Serianni 1989, 2003, 2005)

Are terms not ambiguous used only in technical sense

(ex: *Hyoid bone*, *taphonomy)*

- Collateral Terms

Are terms from the formal register of the language but not from the technical one used to raise the language register

(bogging, *lithic industry)*

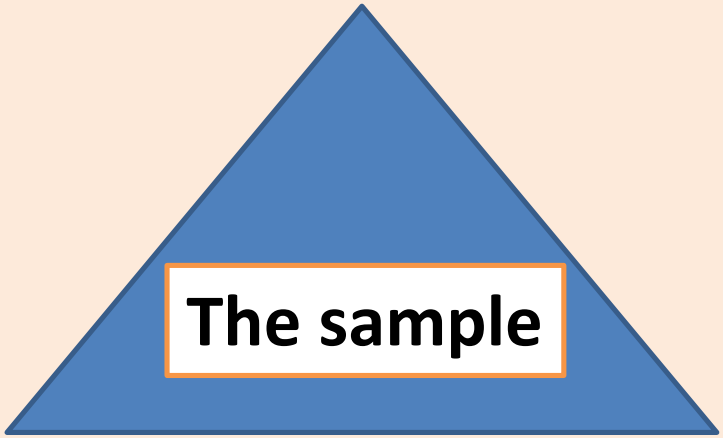
Source: Institute for Outdoor Learning (2020, February 2). What is Outdoor Learning? *About Outdoor Learning*. Retrieved from https://www.outdoor-learning.org/Good-Practice/Research-Resources/About-Outdoor-Learning,

"Outdoor Learning is a broad term that includes discovery, experimentation, learning about and connecting to the natural world, and engaging in adventure activities and outdoor sports".

ARTIS and Outdoor Learning

Children had
Outdoor education for 3 years

Children know how to beware in a outdoor learning situation



Children scientific access is possible

FOUR STEPS – FOUR POSTERS

FIRST POSTER

THE PREPARATION OF THE VISIT STARTED

IN THE CLASSROOM WITH

TEACHERS AND CHILDREN

WORKING ON THE PALENTOLOGICAL AGE

HOW WERE THE ELEPHANTS?

HOW ANIMALS AND HUMANS WERE LIVING?

HOW WAS THE LIFE NEAR THE RIVER?

I have drawn the mammoth because we had to go and see the bones of elephants and the ancestors

Emma 6 years old

SECOND POSTER

VISIT TO THE POLLEDRARA SITE

AND THE EXPLANATION OF THE

PALEONTOLOGIST

I have drawn that we go out in the row to go to the cemetery of elephants

Giuseppe Maria
6 years old

THIRD POSTER

School work, bone factory and site reconstruction

The site was born from the river the water was gone and the mud remained, the elephants trapped inside and then the bones were found

Greta 6 years old

FOURTH POSTER

The real site (left) and the reconstructed one (right) children make bones and put them in the sandbox

We saw the big face of the elephant, we saw the horns of the ox and the elephant tusks, some huge and some small. I loved going to the bus

Giordano 6 years old

Children codify science

We made the bones with glue, cornmeal and oil.

Flavia, 6 years old

The small ropes are used to make a group where there are bones to dig and discover them as paleontologists do.

Mattia, 6 years old

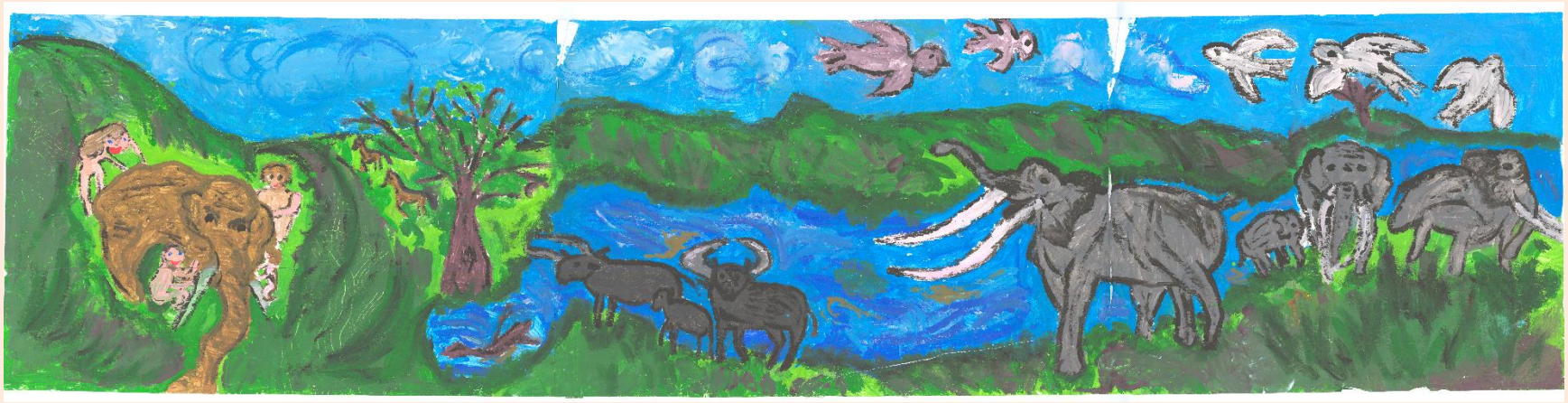
They are the bones of the elephant mired in the mud.

Giuseppe, 6 years old

We made the space with sand

Gabriele 6 years old

We made Polledrara the elephant cemetery we covered the elephant bones and buried them and then we put the cap to recognize the place of the elephant bones



The results

- The children acquired an understanding of prehistoric environment
- The ability to reproduce it through different artifacts
- The ability to describe it with a technical lexicon, they acquired a professional register
- Sense of identity with one's territory and pride of belonging to it
- Children were «budding paleontologists»

The meaning of Inclusion as Challenge for a Museum Discourse

We can underline 3 meaning of inclusion

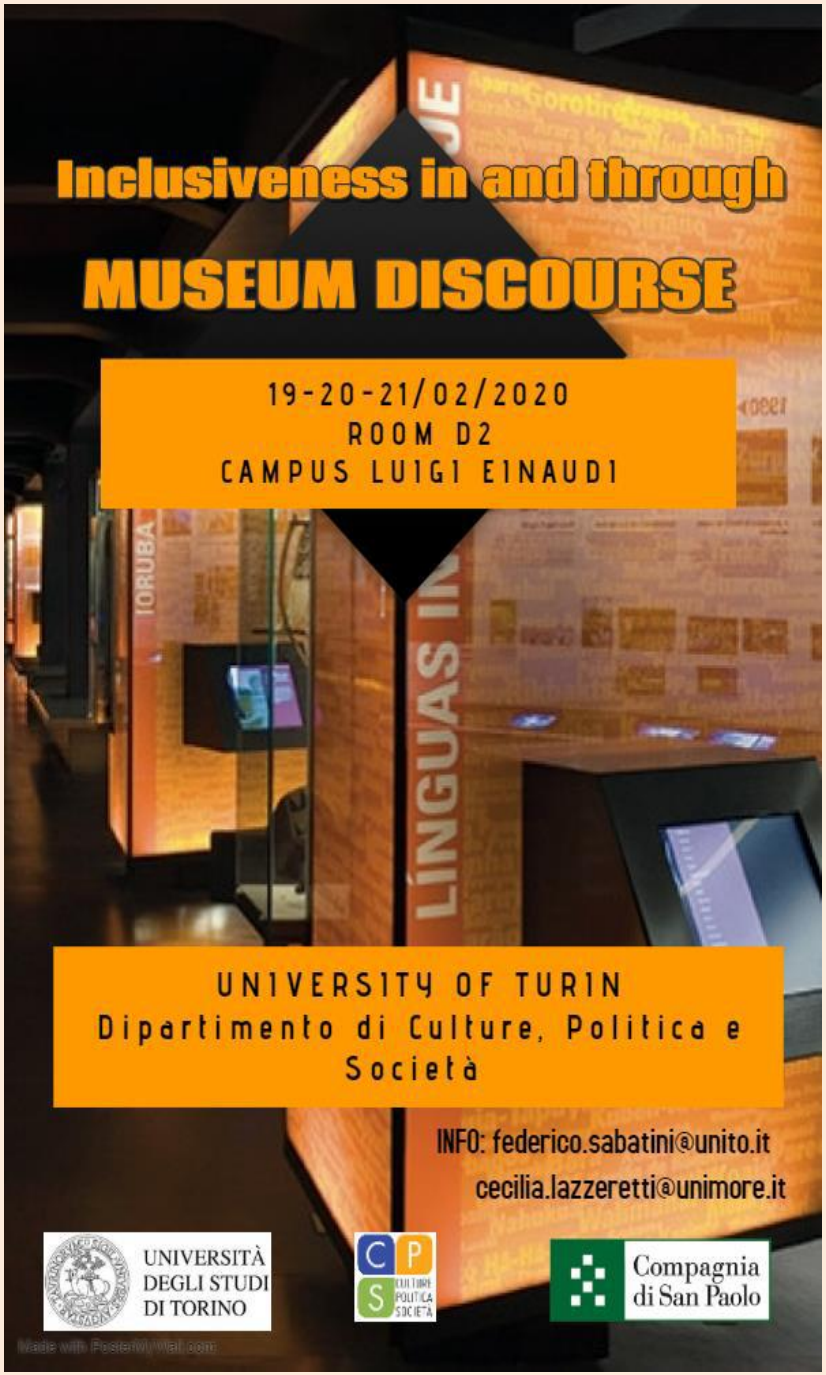
1. **Political Inclusion** of the local authorities: XIII Municipality of Rome Aurelio
2. **Structural Inclusion** of Infant School
3. **Pedagogical Inclusion** of an area rich in natural resources and therefore able to accommodate a pedagogical and didactic innovation like outdoor learning.
4. **Linguistic Inclusion** of the Children they learned to use specific technical terms in their speech and control the professional variety

From our point of view the «Museum Discourse» is the active participation of the school in design the context in terms of language, places, artefact. Discourse is a new interactive communication, with a new experience, new words, new narration. Discourse does not separate intellectual production from practical creation. Discourse encourage the continuity of the development: cognitive, sensorial, emotional, spiritual of the child.

Children learn to call things, to think the situation, to build a product, to create a community which shares the new knowledge.

Perspectives for the future: New Project 2019-2020

In November we will go to Polledrara with a new school and a new class of 25 children, 5 years old, 5 teachers and 30 students of Primary Education who will accompany the children during the visit and work at school.



Thank you very much!

franca.orletti@uniroma3.it
sandra.chistolini@uniroma3.it