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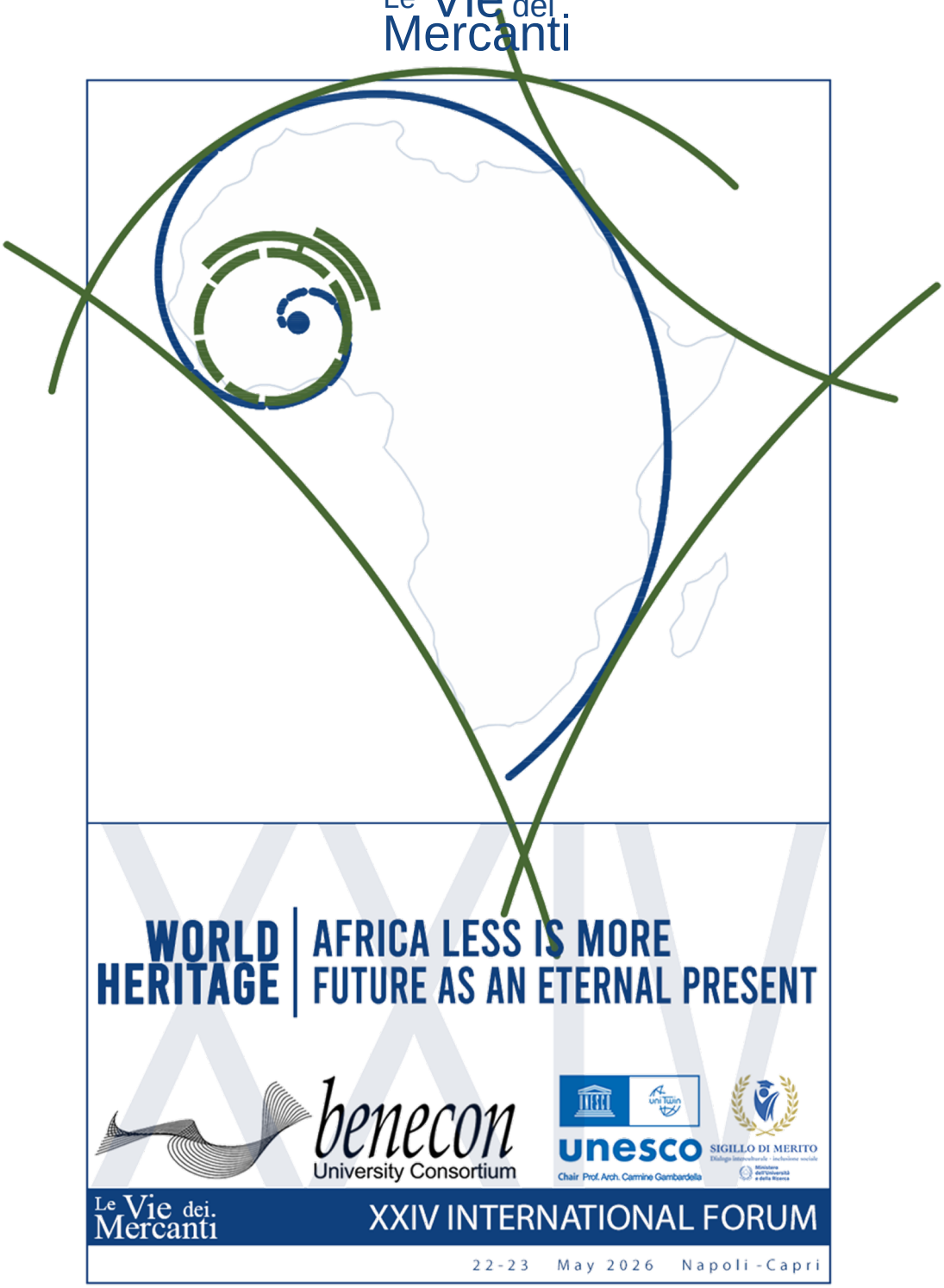
28 November 2026

ARCHITECTURE HERITAGE and DESIGN

Carmine Gambardella

XXIV INTERNATIONAL FORUM

Le Vie dei Mercanti



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Carmine Gambardella
WORLD HERITAGE and FOOD TO FEED
WORLD HERITAGE and FUTURE AS AN ETERNAL PRESENT
Le Vie dei Mercanti
XXIV International Forum

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Peer review

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Conference report

300 abstracts and 400 authors from 20 countries:

Albania, Algeria, Australia, Belgium, Canada, China, France, Germany, Greece, Hungary, India, Iran, Italy, Japan, Morocco, Mexico, Portugal, Romania, Republic of Guinea, Serbia, South Africa, Spain, Turkey, Uganda, United Kingdom, United State of America.

From the XXIII FORUM WORLD HERITAGE and FOOD TO FEED
to the XXIV FORUM:
WORLD HERITAGE and AFRICA: LESS IS MORE
WORLD HERITAGE and FUTURE AS AN ETERNAL PRESENT

The **XXIV International Forum "Le Vie dei Mercanti"** continues the path of previous editions by presenting World Heritage as a living organism able to connect memory, identity, and future. After the reflections on "*World Heritage and Food to Feed*," the 2026 edition broadens its focus to Africa and to the idea of the future as a dynamic continuity of the present.

The theme **World Heritage and Africa: Less is More** recognizes Africa as the cradle of humanity and a laboratory of sustainability. Its cultural landscapes and vernacular architectures demonstrate how the integration of environment, traditional techniques, and community life can generate resilient, low-impact solutions. "Less is More" becomes an ethical and design paradigm: enhancement of local resources, natural materials, essential construction processes, circular economy, and community participation. Heritage protection is thus understood as an active process of social and economic regeneration, based on light settlement models attentive to biodiversity and the memory of places.

The theme **World Heritage and Future as an Eternal Present** interprets heritage as a dynamic system, not only a legacy of the past but a living structure shaping the future. Architecture and planning act as mediators between memory and innovation, integrating digital technologies, advanced education, and knowledge dissemination. Sustainability embraces public health, quality of life, and environmental responsibility within an inclusive global vision.

The logo of the XXIV International Forum synthesizes these values: Africa as a universal reference, the golden ratio as harmony between nature and culture, and the cell as a symbol of life and continuity. Heritage thus emerges as a balance between history and design, tradition and innovation.

Prof. Carmine Gambardella
General Chair XXIV Forum 'World Heritage and Africa: Less is More'
and 'World Heritage and Future as an Eternal Present'
President and CEO of the Benecon University Consortium
UNESCO Chair on Landscape, Cultural Heritage
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Dal XXIII FORUM WORLD HERITAGE and FOOD TO FEED
al XXIV FORUM:
WORLD HERITAGE and AFRICA: LESS IS MORE
WORLD HERITAGE and FUTURE AS AN ETERNAL PRESENT

Il **XXIV Forum Internazionale "Le Vie dei Mercanti"** prosegue il percorso delle edizioni precedenti ponendo il patrimonio mondiale come organismo vivente, capace di connettere memoria, identità e futuro. Dopo la riflessione su "*World Heritage and Food to Feed*", l'edizione 2026 amplia lo sguardo al ruolo dell'Africa e al futuro inteso come continuità dinamica del presente.

Il tema **World Heritage and Africa: Less is More** riconosce l'Africa come culla dell'umanità e laboratorio di sostenibilità. I suoi paesaggi culturali e le architetture vernacolari mostrano come l'integrazione tra ambiente, tecniche tradizionali e vita comunitaria generi soluzioni resilienti e a basso impatto. "Less is More" diventa paradigma etico e progettuale: valorizzazione delle risorse locali, uso di materiali naturali, processi costruttivi essenziali, economia circolare e partecipazione delle comunità. La tutela del patrimonio si configura così come processo attivo di rigenerazione sociale ed economica, fondato su modelli insediativi leggeri, attenti alla biodiversità e alla memoria dei luoghi.

Il tema **World Heritage and Future as an Eternal Present** interpreta il patrimonio come sistema dinamico, non solo eredità del passato ma struttura viva che orienta il futuro. Architettura e pianificazione diventano strumenti di mediazione tra memoria e innovazione, integrando tecnologie digitali, formazione avanzata e diffusione della conoscenza. La sostenibilità comprende salute pubblica, qualità della vita e responsabilità ambientale, in una visione inclusiva e globale.

Il logo del XXIV Forum Internazionale sintetizza tali valori: l'Africa come riferimento universale, la sezione aurea quale principio di armonia tra natura e cultura, la cellula come simbolo di vita e continuità. Il patrimonio emerge così come equilibrio tra storia e progetto, tradizione e innovazione.

Prof. Carmine Gambardella
General Chair XXIV Forum 'World Heritage and Africa: Less is More'
and 'World Heritage and Future as an Eternal Present'
President and CEO of the Benecon University Consortium
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The past shapes the future: can cultural heritage boost confidence?

Valeria MINUCCIANI, Michela BENENTE, Gianluca D'AGOSTINO
Politecnico di Torino
valeria.minucciani@polito.it; michela.benente@polito.it; gianluca.dagostino@polito.it

Abstract
Despite the widespread consensus that conveying cultural heritage mainly serves to increase knowledge, the ICOM definition of a Museum from 2022 (that can be adapted to heritage that lies outside museums) also mentions the interpretation and reflection as fundamental processes in the "transformative" relationship with heritage.
Some time ago, Europe highlighted the link of cultural heritage to the future, pointing to the boost in confidence (in a world undergoing continuous and dramatic transformation) as a result of encountering heritage.
The paper illustrates a project, funded under the Horizon Europe program and based on previous experimentations, explicitly aimed at "measuring" the effect of heritage on the public from both a neurophysiological and cognitive point of view. Thanks to the collaboration with three different European museums dealing with archaeological heritage (the Egyptian Museum in Turin, the Archaeological Museum of Catalunya-MAC in Barcelona and the Muséoparc Alésia in Alise-Sainte-Reine), the research team is monitoring visitors' reactions to cultural stimuli and verifying their effect on confidence about individual and collective future. In the second phase, the project aims to verify the effects of different communication approaches and collective co-creation, in a process that is no longer passive.
The paper describes the first results and the tentative conclusions, and indicates directions to consolidate the natural relationship between the heritage of the past and the vision of the future.

Keywords: museum, transformative encounter, empathy, neuroscientific method

1. Introduction
This paper presents the framework and preliminary findings derived from the first year of the EU-funded project META-MUSEUM, which explores the relationship between cognitive and emotional responses to cultural heritage, in order to strengthen citizens' resilience, empathy and confidence in the complex contemporary reality [1]. At both European and global levels, constant and rapid changes increasingly affect people's well-being, generating anxiety and a sense of insecurity [2]. Since change is an inevitable part of society, building resilience – understood as the capacity to adapt, transform, and grow through these difficult periods – is essential [3]. Resilience is strongly linked to the *transformative nature of cultural heritage*, the central focus of the European funding call supporting this project [4]. Cultural heritage evolves as a repository of values and meanings that society reinterprets over time. Historically, this interpretative process has become a top-down model, leaving little room for public dialogue or engagement with historical narratives. META-MUSEUM offers new ways of communicating cultural heritage that directly involve visitors, in the frame of cultural democratization and public engagement. In this framework, co-creation plays a key role in transforming the visitor into a "contributor" who helps shape cultural content and interpretation, effectively redefining the relationship with cultural institutions [5,6]. Redefining cultural heritage as a dynamic process allows citizens to see it as a living reflection of contemporary life and to take an active role in its transformation, fostering the confidence needed to navigate today's complexities.
Given that emotional responses to cultural heritage are underestimated while they strongly affect cultural experiences, META-MUSEUM addresses the archaeological heritage, which is frequently perceived as a quite inaccessible domain reserved for experts.

2. Neuroscience in museums

The experimental core of META-MUSEUM investigates unconscious and conscious responses during cultural experiences through the collection of neurophysiological parameters and cognitive responses, to better understand how people are emotionally involved. A first campaign of experiments has been implemented in the three Associated Partner museums: the MAC-Barcelona, the MuséoParc Alésia and the Museo Egizio in Turin, but more will be conducted also in hospitals and urban contexts, to involve a diverse audience. Supported by neuroscientific research, META-MUSEUM examines cultural heritage encounters as "transformative" experiences designed to foster citizen resilience, empathy, and future-oriented confidence. Measurements conducted in spring 2025 analysed the *status quo* by monitoring participants' responses (emotional and cognitive) without introducing any additional stimuli beyond the existing museum exhibits. In a second session, participants will be offered cultural experiences also through physical and digital prototypes designed by META-MUSEUM to provide narrative solutions and participatory experiences to generate empathic responses in visitors, encouraging active participation and calling on them to interpret and co-create content, also to involve people who do not usually visit cultural places.

The experiments carried out involved nearly 300 volunteers across Spain, France and Italy. Thanks to the precious support of museums staff, some rooms and exhibits were selected driven by curators' interests, research potential, and technical constraints due to equipment and experimental protocols. At MAC, the *IMPERIVM: Roman Histories* exhibit was selected, focusing on: the *Otium* video (telling the story of a gladiator), the mosaic of the Circus (depicting a chariot race likely held at Rome's Circus Maximus), and the final video, titled *Hereditas* (focused on the recurrence of historical processes and the erosion of individual and collective memory). At MuséoParc Alésia, the study tested three key points of the visit: the introductory video titled *The Imaginaries* (depicting in engaging way the bias before the visit); the central video displaying the siege of Alesia, titled *-52 BC: The Face to Face* (telling the dramatic story of Romans's siege) and, finally, the conclusive room known as *The Myth Lives On, the Gauls Resist* (showing the reinforcement of the Gallic myth over the last century and its endurance in collective memory. At Museo Egizio, two rooms of the first floor were selected: room 6 – Deir el-Medina and room 7 – Tomb of Kha and Merit. Here some elements of interest were identified to carry out the neurophysiological data collection, such as the famous Strike Papyrus (bearing witness to the earliest recorded strike in history, documented by a scribe in the work journal of the Valley of the Kings) (Figures 1,2,3,4).



Fig. 1: Experiments at MAC in Barcelona (*OTIUM* video).



Fig. 2: Experiments in the first room of MuséoParc Alèsia.



Figg. 3-4: Experiments at Museo Egizio in Turin: questionnaires administration (left) and experiments in Deir el-Medina room (right).

The *status quo* campaigns evaluated the overall visitor experience by measuring real-time engagement (Approach-Withdrawal index), emotional impact (Emotional Arousal), and the cognitive effort (Workload). The experimental protocols included two questionnaires, administered pre- and post-visit, designed to profile participants and their cultural habits, and to assess expectations and feedback. By comparing conscious responses from questionnaires with unconscious and bodily reactions – measured with a mobile EEG headset and galvanic skin response sensors – the study assessed how deeply the cultural encounter fostered reflection and confidence. Ultimately, these measurements highlighted how different types of audiences responded to the current museum environment, revealing the alignment between what visitors felt and what they reported.

3. Findings and results

Without going into detail on all the results obtained, this initial experimental phase confirms that cultural experiences within a museum environment trigger measurable physiological response which, when related to conscious feedback, lead to interesting interpretations. Depending on the specific exhibitions and experimental protocols adopted, nevertheless several key observations emerge, such as:

- actually, something *happens* during the encounter with cultural heritage;
- the cognitive effort is higher when many objects and information are displayed, while emotions are very low;
- the presence of other visitors (even if not a *crowd*) does not significantly affect the emotional response (Figure 5);
- the boredom (lack of involvement) is measured increasingly in the middle of a room or a task: the arousal index presents «U» tendency: higher values observed at the beginning and at the end of the visit or the task;
- the surprise effect and the expectations contrast boredom and increase emotion;
- women and men, elderly and youth don't react differently in significant way, but nevertheless, there are trends in the perception of the experience;
- women tend to have lower confidence in collective future, adults and older visitors tend to have higher confidence in collective future than youth;
- there are not significant differences depending on cultural habits. Nevertheless, there are trends in the experience perception: those with lower role of culture in life declared highest knowledge gain after the visit, while those with higher role of culture in life declared higher confidence in collective future;
- after the cultural encounter knowledge increased, but confidence remained almost unchanged (it's very low);
- not always people are aware of their own reactions: conscious and unconscious responses not always are aligned (Figure 6).

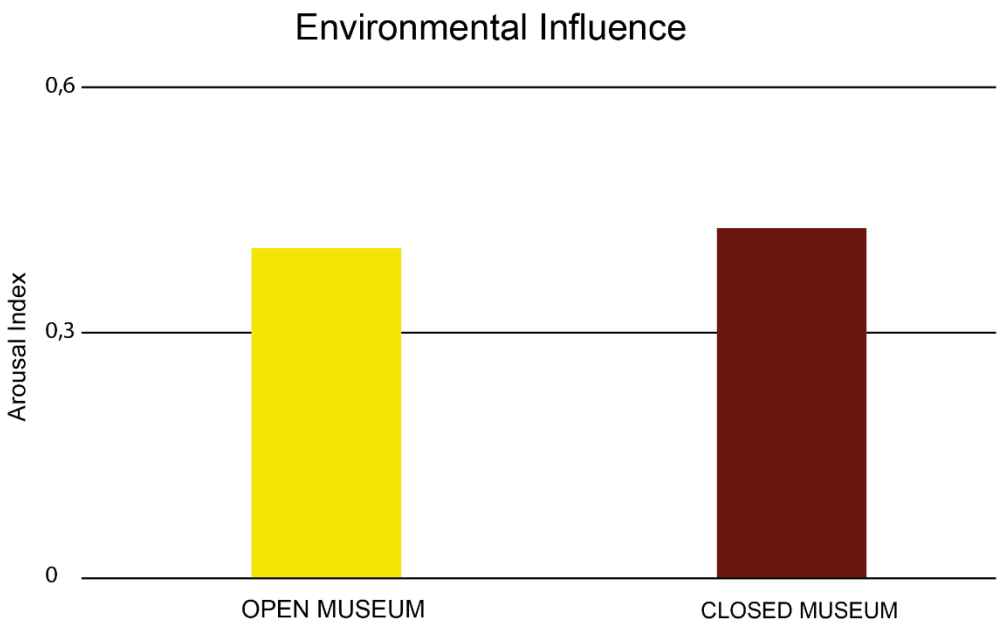


Fig. 5: Environmental influence at Museo Egizio in Turin: the presence of visitors does not significantly affect the emotional response.

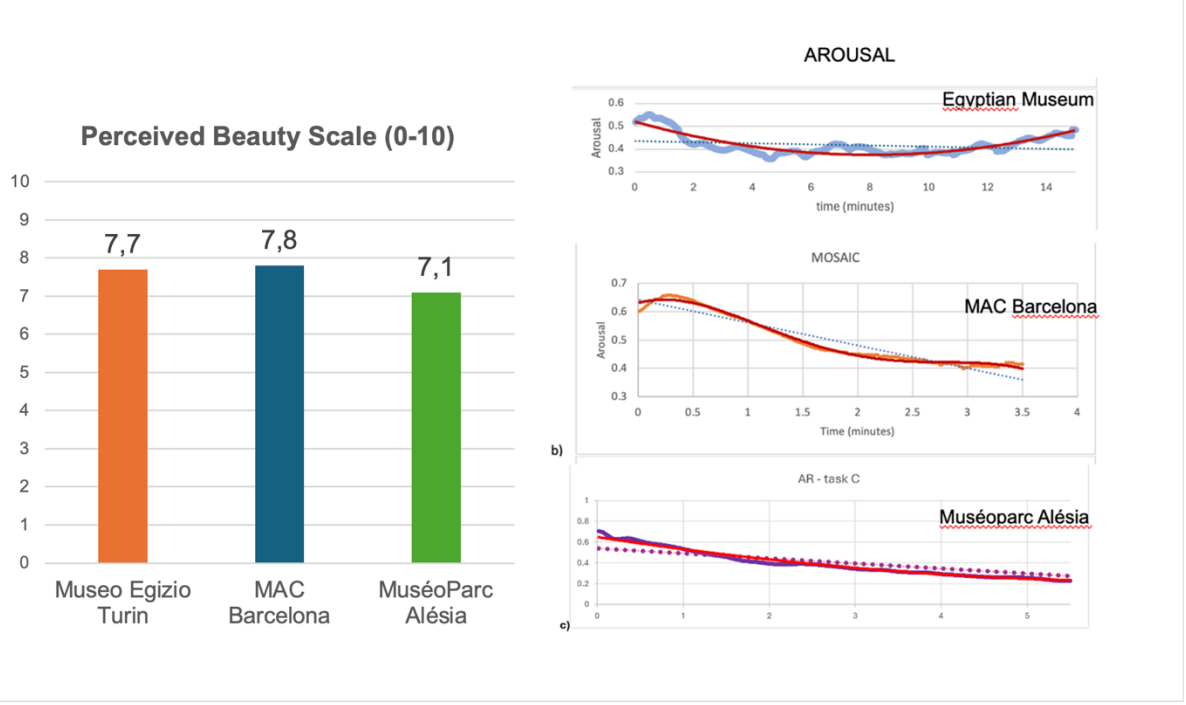


Fig. 6: Comparative analysis of high perceived beauty (average 7.5/10) versus emotional arousal across the three museum case studies.

4. Conclusions

Current findings shows that cultural encounters led to an increase in knowledge gain, while visitors' confidence – both individual and collective – remained nearly unchanged and consistently lower (Figure 7). Consequently, new strategies must be developed to ensure that cultural heritage not only informs and improve learning but also builds and trigger major confidence. These preliminary findings, interpreted within the project's theoretical framework, have informed the ongoing development of digital and physical prototypes to be integrated into the three museums: these will be subject to a second measurement campaign designed to evaluate the effectiveness of the proposed communication strategies, aimed to improve personal involvement and reflection, as well as emotional responses.

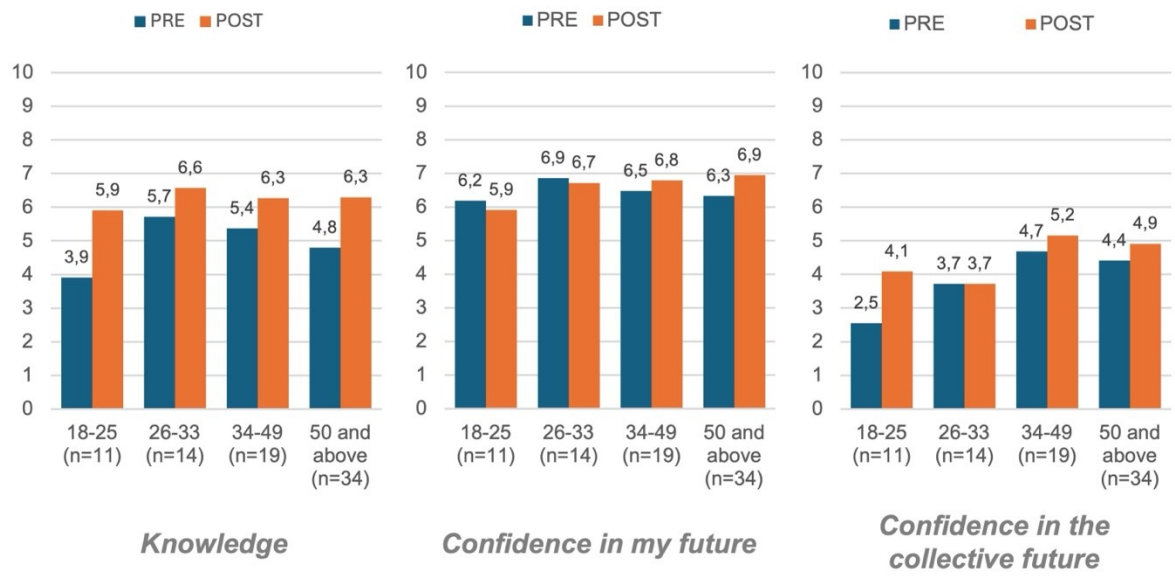


Fig. 7: Comparative analysis of gains in knowledge and confidence levels between pre- and post-visit surveys, categorized by age group, at MuséoParc Alésia.

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