

TLIC PAPER

# Making Museum Collections Culturally Accessible: A Training Activity for Professionals at the National Roman Museum

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## ABSTRACT

This study was conducted as part of an ongoing Ph.D. project at the National Roman Museum (MNR) in Rome, Italy. The project focuses on promoting mental well-being, social inclusion, and active citizenship for museum visitors, particularly those at risk of marginalization. This contribution aimed to equip MNR personnel with tools to provide inclusive educational activities that are easily applicable to every visit. The study assessed the impact of specific training activities on museum professionals' well-being, 4 C's skills (Communication, Collaboration, Critical Thinking, Creativity), and purpose at work. Museum professionals participated in tours of the permanent collections and were demonstrated how to use Visual Thinking Strategies (VTS), an inclusive teaching and learning methodology. The collected data was analyzed using descriptive statistics and content analysis. The study provides insights into potential ways of enhancing the professional role of museum staff and improving the educational offer of the museum.

## KEYWORDS

visual thinking strategies, well-being, 4 C's skills, museum personnel

## 1 INTRODUCTION

According to the new definition of museums approved by the ICOM Extraordinary General Assembly in 2022 during the 26th ICOM General Conference held in Prague, museums are: “[...] Open to the public, accessible and inclusive, [...] foster diversity and sustainability. They operate and communicate ethically, professionally, and with the participation of communities, offering varied experiences for education, enjoyment, reflection, and knowledge sharing”. The updated museum definition acknowledges their role as catalysts for social change [1], working to combat marginalization. Marginalization isn't limited to individuals with physical or intellectual disabilities [2], minorities [3], [4], rural residents [5], or those with low socioeconomic status [6].

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It also affects individuals with limited education [7], and this is, in fact, a factor of marginalization that often occurs in conjunction with others.

Transverse competencies for lifelong learning are essential for personal fulfillment, a healthy and sustainable lifestyle, employability, active citizenship, and social inclusion [8], countering marginalization. In this perspective, they are fundamental to achieving well-being, described by the World Health Organization [9] as a positive state experienced by individuals and societies. Like health, it is a daily life resource influenced by social, economic, and environmental conditions. Well-being includes quality of life and the ability of people and societies to contribute to the world in a way that aligns with a sense of meaning and purpose. Mental health is defined as a state of well-being in which the individual can realize their abilities, cope with the everyday stresses of life, work productively, and contribute to the community [10]. Furthermore, mental well-being is described as a dynamic state in which individuals can develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their community [11].

As informal learning settings, museums play an educational role and can foster transverse competencies for lifelong learning, thus contributing to achieving the 2030 Agenda for Sustainable Development Goals 3 and 4, which aim to promote healthy living, well-being, and access to education for all [12]. However, making museum collections culturally accessible [13] remains challenging because professionals need up-to-date training to keep up with the new commitment to accessibility and inclusivity. In the Italian context, this is further compounded by the vastness of the Italian cultural heritage and a shortage of personnel.

## 2 METHODOLOGY

### 2.1 Research hypothesis, questions, and objectives

This research is a part of a doctoral project focused on enhancing mental well-being, social inclusion, and active citizenship for various museum visitors, especially those at risk of marginalization. This contribution outlines the progress made towards achieving the first goal of the project, which is to equip the staff at the National Roman Museum (MNR) with tools for inclusive educational activities based on art [14], [15] and easily applicable to each visit. The MNR is a significant institution in Rome with special autonomy [16] and four locations in the city center. It displays the diverse and intricate history of Rome over the centuries. The museum is ideal for conducting this research project due to its commitment to inclusion and active citizenship. It endeavors to engage visitors of all kinds and make its cultural heritage accessible to everyone, both physically and intellectually.

The research hypothesis for this phase of the doctoral project is that providing training activities on cultural accessibility specifically designed for museum professionals can help enhance their competencies and flexibility. This, in turn, can contribute to their mental well-being and the perceived usefulness of their professional roles, giving them a renewed sense of purpose in their work.

Three research questions have been formulated to verify the hypothesis:

- Do training activities for museum professionals impact their mental well-being, and if so, how?
- Do training activities for museum professionals influence their 4 C's skills (Communication, Collaboration, Creativity, Critical Thinking), and if so, how?

- Do training activities for museum professionals affect the perceived usefulness of their work tasks, and if so, how?

The research hypothesis is operationalized into objectives for each research question. They are as follows:

- Create and provide inclusive and art-based training opportunities that enhance well-being and the 4 C's skills and are relevant to the job of museum professionals.
- Assess and evaluate the participants' well-being, 4 C's skills, and the perceived usefulness of the training activity for their work tasks.
- Explore how these training activities can contribute to museum professionals' competencies and adaptability in their roles.

## 2.2 Participants

Museum staff members were briefed on the research project's goals, the activities they would participate in, and how data would be collected, stored, and analyzed in compliance with the University and MNR policies. Seventeen MNR employees wanted to participate in the training activity. Five were male, and twelve were female. Most participants, a total of seven, were aged between 31 and 40. Two were between 41 and 50, while four were between 51 and 60. Three were over 60, and only one was younger than 30.

In terms of educational background, only one participant had studied archaeology, and only one had a background in pedagogy. Six participants achieved a high school diploma, while four had a background in Humanities, two in Arts, two in Restoration, and one in Architecture. Furthermore, 14 participants were assistants to the fruition, welcome, and vigilance (AFAV), for which admission qualification is a high school diploma. There were also two communication officers and one technical assistant.

None of them had previously experienced Visual Thinking Strategies (VTS), neither as learners/visitors nor as educators.

## 2.3 Materials and methods

Museum staff members participated as learners in tours of the museum collections that employed the inclusive teaching and learning methodology of VTS so that they could experience firsthand how the VTS routine is applied. VTS are a teaching and learning method that revolves around art and promotes inclusivity. It was developed in 1991 by Abigail Housen, a cognitive psychologist, and Philip Yenawine, a museum educator [17]. Since 2014, VTS have also been employed by the research group VTSItalia [18]. Three guide questions serve as prompts that allow the method to be put into practice:

- What is happening in this picture?
- What details do you see that make you think that?
- What else can you find?

This inquiry-based teaching method encourages learners to actively describe, analyze, and interpret visual art through thoughtful observations and inclusive discussions [19]. VTS empower individuals of all ages by giving them the freedom to wonder and helps develop their independence [20], thus being adequate for adult

learning, too [21]. VTS promote the development of the 4 C's skills and aesthetic thinking, particularly among learners who struggle with traditional text-based or lecture-based learning environments [20], [22], [23], [24]. The method has also proved helpful for deaf and hard-of-hearing people [25]. Furthermore, VTS can promote empathy [26], [27], a crucial aspect for today's society. Additionally, many aspects of VTS align with the Object-Based Learning (OBL) practice [28], making this methodology a viable option for OBL when handling museum objects is impossible due to preservation reasons.

Three 45-minute facilitated tours were designed and offered by the Author, one for each of the three locations currently open to the public. The selected museum objects included sculptures, ritual pottery, personal ornaments, weapons, and a chariot, providing diverse artifacts for triggering group discussions. Priority was given to lesser-known objects to encourage fresh and original reflections. After the practical session, participants received a theoretical framework of the VTS methodology, online resources, and a reference list for further independent study, all prepared and provided by the Author.

The study assessed the well-being levels, the 4 C's skills, and the perceived usefulness of the experience. The Italian translation of the UCL Generic Well-being Questionnaire, a full 12-item version [29], was utilized to measure well-being. The questionnaire was distributed through a Google form, and participants completed it immediately after the practical VTS session. The tool employs Likert measurement scales to evaluate the well-being levels resulting from museum activity participation. It gauges an individual's psychological well-being by focusing on self-reported changes in mood and emotion. The scale ranges from one, indicating the total absence of a given mood or feeling, to five, indicating its constant presence. The tool was selected for its user-friendly nature and adaptability, making it suitable for diverse museum audiences of all ages and needs.

During the practical VTS session, the 4 C's skills were observed and evaluated as they emerged while participants interacted with each other. An adapted evaluation grid based on Poce's research on developing transverse skills through cultural heritage [28] was utilized. The same scoring system as in the original study was used, ranging from one (lowest competence) to three (highest competence). Some indicators were slightly adjusted to match the specific activity in this research project (see Table 1).

**Table 1.** 4 C's skills and related indicators

4 C's Skills	Indicators
Communication	Participants interact effectively in different communication situations, respecting the interlocutors and the rules of conversation Participants shall act with a register appropriate to the context Participants ask relevant questions to colleagues and the mediator Participants make linear interventions understandable to the interlocutors Participants are attentive when colleagues speak Participants are attentive when the mediator speaks Participants actively participate in the experience Participants do not exclude colleagues in carrying out the experience Participants can collaborate by offering their point of view Participants can recognize different points of view

*(Continued)*

**Table 1.** 4 C's skills and related indicators (*Continued*)

4 C's Skills	Indicators
Collaboration	Participants work effectively with each other Participants listen with interest and patience to interlocutors Participants shall not interrupt interlocutors Participants relate to almost everyone/everyone Participants show respect for the ideas of the interlocutors Participants accept input from interlocutors The participants help each other Participants wait their turn to speak Participants analyze and evaluate the ideas of the interlocutors Participants know how to present their ideas The participants get along well Participants do not resort to forms of aggression Participants know how to manage their emotions
Creativity	Participants offer personal food for thought Participants use information given by the interlocutors and creatively rework them Participants identify new links between information and elements provided by them or their interlocutors and revise them in an original way
Critical Thinking	Participants can identify the most essential elements Participants can connect various information Participants can re-evaluate their claims when they conflict with each other or with evidence Participants can explain their point of view by giving reasons Participants know how to correct themselves Participants understand the different points of view, although different from their own Participants ask questions to clarify different points of view

In order to assess the perceived usefulness of the experience, the focus group technique was utilized. This technique allows for more in-depth data collection compared to personal interviews [30]. It also creates a permissive, non-threatening environment [31]. The three final focus groups aimed to gain a deeper understanding of how the VTS training activity had impacted the well-being and 4 C's skills of museum professionals, how they believe they can effectively apply this methodology at the MNR to promote greater inclusivity, and how it can offer a new perspective on their professional roles. Conversations during the focus groups were recorded and transcribed. Non-verbal aspects and group dynamics were also noted and included where relevant.

Descriptive statistics were used to analyze quantitative data from questionnaires and observations, while content analysis [32] in ATLAS.ti software was applied to qualitative data from focus groups.

### 3 RESULTS

#### 3.1 Well-being levels

According to the data analysis on well-being levels, all seventeen participants reported medium to high levels of well-being due to their participation in the VTS tour. In particular, the visits were highly enjoyed (4.79), generated significant interest in cultural heritage (4.71), and were carried out in a manner that made individuals feel comfortable (4.57), safe and secure (4.50) and allowed them to appreciate the company of other people (4.50).

The high mode and median values and a slight standard deviation (see Table 2) confirm these results for each item.

**Table 2.** Well-being levels measured via the UCL generic well-being questionnaire full 12-item version: central tendency and dispersion measures

Item	Mean	Median	Mode	SD
I felt happy	3.86	4.00	4.00	0.77
I felt engaged	4.36	4.00	4.00	0.63
I felt comfortable	4.57	5.00	5.00	0.76
I felt safe and secure	4.50	5.00	5.00	0.85
I enjoyed the company of people	4.50	4.50	4.00	0.52
I talked to other people	4.07	4.00	4.00	0.83
I was interested	4.71	5.00	5.00	0.47
I enjoyed it	4.79	5.00	5.00	0.43
I was amazed	3.21	3.00	3.00	1.05
I was entertained	3.79	3.50	3.00	0.89
I felt confident	4.14	4.00	4.00	0.77
I felt healthy	4.71	5.00	5.00	0.47

### 3.2 4 C's skills levels

An overview of the data analysis regarding the 4 C's skills indicates high scores for all three groups. Communication is rated at 2.90 for all three groups; Critical Thinking at 2.86 for Group A and 3.00 for Groups B and C; Collaboration at 2.85 for Groups A and B and 2.77 for Group C; and Creativity at 2.50 for Group A, 2.00 for Group B, and 3.00 for Group C.

As for the case of well-being levels, mode and median values are high, and the standard deviation is slight (see Table 3).

**Table 3.** 4 C's skills scores per group: central tendency and dispersion measures

Group	Skill	Mean	Median	Mode	SD
A	Communication	2.90	3.00	3.00	0.32
	Collaboration	2.85	3.00	3.00	0.38
	Creativity	2.50	2.50	3.00	0.58
	Critical Thinking	2.86	3.00	3.00	0.38
B	Communication	2.90	3.00	3.00	0.32
	Collaboration	2.85	3.00	3.00	0.38
	Creativity	2.00	2.00	2.00	0.00
	Critical Thinking	3.00	3.00	3.00	0.00
C	Communication	2.90	3.00	3.00	0.32
	Collaboration	2.77	3.00	3.00	0.44
	Creativity	3.00	3.00	3.00	0.00
	Critical Thinking	3.00	3.00	3.00	0.00

### 3.3 Perceived usefulness of the training activities

The co-occurrence analysis of the data gathered from the focus groups indicates that promoting the 4 C's skills among the participants significantly impacted their cognitive (25) and emotional (19) engagement. This approach allowed them to discover or rediscover aspects of the artifacts they may have missed before (16), making them feel good (6) (see Table 4).

**Table 4.** Co-occurrences between the 4 C's skills and other categories. Gr stays for code frequency or "groundedness." It shows how many quotations are linked to a code

Code	Collaboration (Gr = 18)	Communication (Gr = 23)	Creativity (Gr = 5)	Critical Thinking (Gr = 14)
Enrichment (Gr = 7)	1	2	1	2
Approaching other cultures (Gr = 4)	0	0	0	2
Well-being (Gr = 10)	2	2	0	2
Cognitive engagement (Gr = 29)	6	8	3	8
Emotional engagement (Gr = 24)	5	7	2	5
Comparing perspectives (Gr = 7)	5	5	2	4
Enjoyment (Gr = 2)	0	1	0	0
Empathy (Gr = 4)	3	2	0	0
Impression (Gr = 4)	2	2	2	2
Inclusion (Gr = 7)	2	1	1	1
Interest (Gr = 14)	2	3	0	3
Introspection (Gr = 1)	0	1	0	1
Memory (Gr = 4)	1	1	0	0
Discovering cultural heritage (Gr = 13)	4	5	0	7
Feeling free to express themselves (Gr = 8)	4	5	2	1
Sympathy (Gr = 1)	0	0	1	1
Stimulus (Gr = 8)	6	6	2	5

Additionally, participants linked their sense of well-being with increased job flexibility (1), better educational opportunities provided by the MNR (1), the chance to explore cultural heritage in depth based on the interests of both staff and visitors (1), and an overall improved professional role for the AFAVs (4) (see Table 5).

**Table 5.** Co-occurrences between well-being and other categories. Gr stays for code frequency or "groundedness." It shows how many quotations are linked to a code

Code	Flexibility (Gr = 4)	MNR Educational Offer (Gr = 3)	Diverse Foci on Cultural Heritage (Gr = 9)	Renewed AFAVs' Role (Gr = 12)
Well-being (Gr = 10)	1	1	1	4

Conversations raised multifaceted aspects of the experience, revealing different themes that are often interrelated. Below are some excerpts of the conversations, translated by the Author.

Regarding participants' well-being, comments were positive. In particular, P13 felt "Very good [...] learning many things, many details [she] never noticed". P11 voiced: "Maybe I felt valued. Since I'm here, apart from giving information to tourists, I don't do anything else. I studied so much in my life, and at least today, I used it [...]. It would be nice always to have an approach like this". Furthermore, P1 felt that by using VTS, she got "closer to the works of art, it was simpler, more approachable like this" and that "the life experience remains, the experience of visiting, the experience of the museum."

Reflecting on the VTS methodology and the implications of its adoption at the MNR, various considerations emerged. P17 stated that VTS are "A way to allow the visitor to enter the work of art and then to connect the various references" and also "Create the coordinates that give meaning to what people are seeing." According to P12, "It makes you want to discover more," while P1 commented, "You come to realize that culture encompasses many different sectors. As a result, when people share their impressions, it reveals a whole series of notions that you may not have known before. This can enrich you in unexpected ways." P9 considered that "We need to entice normal people, and this methodology does so much more." P1 also believed that VTS "Could be a beautiful compromise to learn more with a warmer method [...] and quite flexible." P6 added, "For the museum, I think it would welcome more people [...]. It is a bit special. The visitor understands the artifacts better and appreciates them much more." P16 concluded: "One feels more involved [...], I speak as an AFAV. It is a way to give more, to offer something different that [...] allows you to enhance particular experiences."

During the meetings, attendees suggested ways to incorporate VTS into the MNR educational programs. Some proposed ideas included scheduling VTS tours at specific hours or making them available for booking, identifying personnel in the rooms who are available for VTS activities, and making them recognizable to visitors. This would encourage visitors to interact with them if interested. Furthermore, participants expressed interest in combining VTS tours with workshops and technological solutions and applying the methodology to social media communication.

Regarding the museum staff's professional role, P8 remarked: "If they allowed us to change our professional role a little, many of us would be happy." P4 observed that listening to visitors during VTS sessions "could help to understand from which side of the story the museum must continue," meaning that the museum could better understand which aspects of a collection are most meaningful and exciting to people, thus gaining insights on how to narrate its collections more organically and understandably. P11 added, "If you visit the museum, it is like a matryoshka. As you approach, the whole matryoshka gradually opens up. What seems distant, you know, is still part of your daily life. The problem is that someone should help you to disassemble the matryoshka." P11 also suggested that using the VTS makes it possible to "break down barriers and create a more human relationship between individuals, whether between museum visitors or between visitors and museum staff." This can be achieved by "temporarily getting off the pedestal and engaging in a collaborative discussion where everyone's opinion is valued. It's nice to see people get involved and be interested in listening to each other. This approach fosters a horizontal relationship between people at the museum, rather than a traditional

hierarchical one.” This thought opened the group discussion to further reflection on how VTS could foster empathy.

## 4 DISCUSSION

Regarding the high levels of well-being, participants felt engaged and confident because of the VTS methodology but also because, as expressed during the focus groups, it was an activity specifically designed for them as museum professionals.

As for the results on Communication and Collaboration skills, these were influenced by the methodology’s effectiveness and, as stated by participants, by the individuals’ character and the fact that they were in a group of people who, in part, already knew each other. The atmosphere was serene and collaborative, even though some colleagues interacted informally while others formally. Creativity is perhaps the most challenging skill to measure without creative workshop activities. However, the number of participants in the group and its composition can influence it. Group B was the smallest and consisted of high school graduates, while Group C was the largest. Within the latter was the only archaeologist, who immediately took a leading role in communicating personal insights and new ideas to participants, reformulating them for the benefit of all as others contributed. High levels of Critical Thinking may have been partially influenced by the fact that they are adult participants and employees of the museum, even though not all of them have a consistent education about the museum’s topics.

The feedback on the perceived usefulness of the training activity was positive. Due to the space constraints, just one aspect will be briefly highlighted that demonstrates the effectiveness of the experience and its potential positive impact on society through the adoption of VTS within the MNR’s educational activities: the promotion of empathy. It is worth noting that even though participants recognized, during group discussions, how VTS could enhance empathy, they were not informed by the Researcher about the scientific literature supporting the validity of such a methodology in fostering empathy. This suggests the depth of the training activity’s impact.

## 5 CONCLUSION

This study explored how specific training activities for museum professionals can help them improve their competencies and flexibility, contributing to their mental well-being and the perceived usefulness of their professional role. The number of participants was small. However, considering the service needs and the significant personnel shortage, it is possible to consider the number of participants achieved adequate.

Although the study’s results cannot be generalized due to the small number of participants, there are indications of the effectiveness of the VTS methodology in mediating the MNR collections in culturally accessible ways, stimulating the 4 C’s skills, and promoting the well-being of participants. Preliminary evidence suggests that it is possible to effectively integrate VTS among the tasks of the MNR staff, particularly by redeveloping the role of AFAVs and giving them a new sense of purpose. This research phase still needs to be completed. After discussing the results with participants and the MNR director, the most suitable ways to

include VTS activities in the museum's educational offerings will be determined. The ultimate goal is to make the MNR's collections more culturally accessible to everyone.

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