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**EMOTIONAL ENGAGEMENT  
IN CHILDREN'S VISITING EXPERIENCE**

Combining qualitative and quantitative research  
in museum learning settings.

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## A PERSONAL PREMISE

One day, as I was looking for answers to a number of questions, I found inspiration in the article *When I Grow Up I'd Like to Work in a Place Like This: Museum Professionals' Narratives of Early Interest in Museums* (Pock, 2000). The author asked museum professionals to share stories about their childhood memories of Museum Experiences. He collected several personal narratives of how these professionals first became interested in museums and how their imaginations opened to the possibility of working in that field. These stories shared intense memories and strong emotions, still vivid in the moment of telling. The narratives are evidence of the impact of how early Museum Experiences profoundly affect children's lives. Attending to information about the emotional engagement during museum learning activities, this article reminded me of children I had met during my work in Rome in 2013, at the Palazzo delle Esposizioni, for the exhibition *Empire State Building. Art in New York oggi* and at Le Scuderie del Quirinale for the retrospective on Titian. Some of these children, at the end of the museum visit, came up to me and said: "when I grow up, I want to do your job". What ideas came to their minds during the visit? What emotions came into their hearts?

A child receives several inputs during a visit. Pock (2000) says: "My mother took me, after about three days, to the National Gallery of Art. I thought I had died and gone to heaven. I couldn't believe what I saw. I mean, the color and the light. And I would cry and I would just-every painting was just extraordinary. So, I collected-at that time in the National Gallery you would go into the rooms and they would have a piece of paper in the room and it told you, just in like three lines, about... each painting in the room, whether-and you would start at the Van Dyke and you could go around"(p. 20). These words describe all the elements I questioned myself over during my work as a museum educator: interaction with museum space and its objects, strong aesthetic emotions and personal reflection.

Defining Museum Experience, Csikszentmihalyi and Hermanson (1995) call the sensation lived by the visitors during museum visits 'a state of flow'. The curiosity about "flow" and its fluid and undetermined essence, led me to be more determined and inventive in finding a definition of Museum Experience. As a museum professional, I started to challenge myself to experiment with new and effective ways to investigate young audiences during a visit. Questioning "flow", I discovered that this touching memory can be instructive to all of us. Multiplicity and subjectivity are the key concepts of visitor experiences. If we

examine our own recent Museum Experience and we think about the stories we choose to tell relatives and friends, we can learn a lot about ourselves: our sense of beauty, our intellectual inclination, if we are sociable or introverts, how we perceive the space around us.

The year of research on young museum audiences was a great incentive for me, from an academic and professional point of view. I am very grateful because, examining visitors learning and interpretative outcomes, I discovered the richness of human beings, and the privilege of working in a museum environment. As Pock (2000) concluded: "If we examine our own museum memories and think about the stories we choose to tell, they offer important clues to our deepest, but possibly unexamined, professional convictions - what we really believe and how those beliefs can be brought to bear in a more conscious way to shape our work. If revisiting memories of our own childhood experiences reinforces our belief that young people can be profoundly affected by museums, we will be more determined and inventive in finding ways to offer those experiences, and be more effective in advocating for them in our institutions and communities. And if listening to our own stories convinces us, for example, that great objects, stimulating settings, intriguing models, charismatic program leaders, can make a big difference, we will be that much more determined to make them a part of all our museum's offerings." (p. 30).

The ability to provide satisfactory visitor experiences that are both exciting and constructive is now an urgent need for museums: "We need to accept that the visitor may require greater ranges of experience to maintain their engagement. And we must acknowledge that, while the experience is in our control, the visitor outcome is not" (Braden, Rosenthal, Spock 2005, p. 20). This thesis calls for museum professionals to discover the needs of their visitors and provide meaningful Museum Experiences. The existence of a museum is strictly related to the presence of its audience, because a museum acquires value when it fulfills its function effectively: to be the medium for a message. Without an audience, there is no museum.

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# SUMMARY

The thesis aims to analyze the visitor's stream of feelings during the Museum Experience. To do this, reference is made to classical and experimental paradigms of Environmental and Educational Psychology applied to a museum context, combining qualitative and quantitative approaches.

The thesis has seven parts. The Introduction frames the research in the Museum and Visitor Studies field, presenting the topics, the supporting literature and the research design (methods and instruments). Chapter 1 presents the implications of the emergence of new types of audience engagement resulting from French cultural policy, and new educational expectations in visiting museums, looking forward to the adoption of accessible and participatory approaches, enabling the visitor to feel part of a "cultural community". Chapter 2 introduces the concept of Restorativeness within museum environments and discusses the need to redefine their role as facilitators of dialogue amongst young audiences and as containers of the cultural heritage. Chapter 3 analyzes the concept of Emotional Competence, dealing with historical theories of Emotional Intelligence and their impact on the success of museum experience. Chapter 4 seeks to define the notion of emotional engagement in Museum Education, applying Achievement Emotions theory to the museum learning process for children. Chapter 5 discusses the definition of Museum Experience, highlighting the possibility of expanding experience, and the diverse modes of participation according to the visitor's personal preference. Finally, the Conclusion summarizes the research and contributions to Museum Studies, discusses the limits of the work and indicates a direction for future research.

After some recent Museum Studies research, it is known that restorative feelings give the visitor a temporary sense of alienation from reality and subsequent return to the everyday world with renewed awareness: the sensation of being part of "something bigger". Our research seeks to discover the emotional potential of the museum environment, developing an understanding of how, consciously exploited, it can fulfill a social function



**Abstract.** The thesis aims to analyze the visitor's stream of feelings during the Museum Experience. To do this, reference is made to classical and experimental paradigms of Environmental and Educational Psychology applied to a museum context, combining qualitative and quantitative approaches. Specifically, the research project is a pioneering study of the beneficial aspects of museum visits; these include the sense of belonging to a Cultural Community, showing how, behind the aesthetic experience, the visitor gains ethical relief. Museums, in fact, as keepers of Cultural Heritage values, may indeed play an important role in providing an understanding of collective identity and in fostering a sense of belonging to a community.



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# INTRODUCTION

Our research aims to analyze the visitor's stream of feelings during the Museum Experience. Specifically, the research project is a pioneering study of museum visit benefits; these include emotional involvement in Cultural Community practices, showing how, beyond the aesthetic experience, visitors gain ethical relief. As keepers of the Cultural Heritage values, museums may indeed play an important role in providing visitors with an understanding of collective identity and in fostering a sense of involvement with a community (Ambrose and Paine, 2012).

Visiting museums has an emotional impact: observing extraordinary objects, moving in an unusual space, being surrounded by people, friends or strangers, similarly involved in interpreting what they see. Some recent Museum and Visitor Studies articles have shown that these restorative feelings give the visitor a temporary sense of alienation from reality and the subsequent return to everyday life with renewed awareness: the sensation of being part of "something bigger", of belonging to a community (Packer and Bond, 2010). This research seeks to discover the emotional potential of the museum environment, developing an understanding of how that experience, consciously exploited, can fulfill a social function (Hooper - Greenhill, 1999). To do this, reference is made to classical and experimental paradigms of Environmental and Educational Psychology applied to a museum context, combining qualitative and quantitative approaches. An interdisciplinary approach is essential in the field of Museum Studies.

## RESEARCH FRAMEWORK

### Museum Studies

Some clarification of key concepts and vernacular terms in Museum and Visitor Studies are required, with a brief description of the context of our research. Throughout history, museums have undergone many transformations, but certainly from the outset they have been a meeting place for debate and the transmission of knowledge (Alexander and Alexander, 2007). The term "museum" derives from the ancient Greek, "Muses sacred

place", divine identities and protectors of the Arts and Sciences. The Museum of Alexandria, built in the Hellenistic period, was the first museum known to History: a meeting place for the literary and scientific community. The museum also provided educational services to young boys, with schools on its premises. The bond between museums and education comes naturally: a place for the production and transmission of knowledge. But the first example of a modern museum was more recent, when Pope Clement XII in 1734 opened the Musei Capitolini to the public (Alexander, et al. 2007). The relationship between the museum and its audience started here.

Quiccheberg (1565) enriched the vision of the museum and its objects with the idea that Culture asserts itself not only through memory but also the direct observation of objects. After this intellectual position related to recollection and the collection of artifacts, the classification and organization of materials gradually developed. The first term used for the function was Museography, a word that gradually spread during the sixteenth and seventeenth centuries, in parallel with the development of collections and curiosity cabinets by the German aristocratic and intellectual elite. At that time, the distinction between the terms Museology and Museography was blurred, although it is likely that the notion of Museography referred more to classification, and Museology to the description of museums.

The concept of Museology developed considerably in the second half of the nineteenth century and between the two World Wars, with the advance of a scientific posture. In those years the first museum magazines appeared, dealing with various topics in the so-called "Museum Sciences". Nevertheless, no distinction was made between Museology and Museography. In 1948, ICOM – the International Council of Museums - was established, organizing scientific and professional conferences on numerous museum topics. Publications multiplied and a lively debate on museums and their values, role and practices began, beyond the mere technical aspects of the objects exhibited and preserved. In the 50s Rivière officially defined Museology as the science for the study of the museum mission and organization and Museography as a set of techniques related to collection and conservation (Levaillant, 1989).

In 1961, ICOM referred to museums with the legal term "institution", attributing to museums a number of "political" aims. In 1967, Bourdieu published *L'amour de l'art: Les musées et leur public*, highlighting the gap between the elites and the rest of the public in relation to their access to culture. In 1968, along with cultural revolution came a view of

museums as symbols of elitist privilege. Museum professionals espoused this critical stance, challenging museums to change their approach and to attract a new type of public. Education became one of the museum's primary purposes.

In the 70s, the number of academic studies in Museology grew considerably, reaching an international scale. It became a respectable academic discipline in universities. The close relationship between museums and visitors was broadly acknowledged. For many researchers, Stránský (1980) in particular, Museology became the study of a specific relationship between humanity and reality, considering the museum a representation of reality itself: "Museology is a self-differentiating, independent scientific discipline the subject of which is a specific attitude of man to reality expressed objectively in various museum forms throughout history, an expression of and a proportionate part of the memory system. Museology, by nature a social science, pertains to the sphere of mnemonic and documentary scientific disciplines, and contributes to the understanding of Man within society" (Desvallées and Mairesse, 2010, p. 55).

A new scientific definition of museums was provided by ICOM in its revised Articles of Association during the 22nd General Assembly (Vienna, 2007): "A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment". Museums became an instrument of social development, giving an active role to the cultural heritage: to facilitate access to collections and related knowledge, and encourage the development of social and cultural consciousness. Museums gradually became a key player in education, focusing on citizens and fostering their sense of citizenship.

### **The Museum's educational role**

The term education comes from the Latin *educere*, "to lead out of" which presupposes the active accompaniment of children in the process of social-cultural transmission. It is connected to the notion of awakening, arousing curiosity, encouraging a questioning attitude and developing the capacity to think. As stated earlier, education is universally considered one of the main aims of a museum. "Museum Education can be defined as a set of values, concepts, knowledge and practices aimed at ensuring the visitor's development; it

is a process of acculturation which relies on pedagogical methods, development, fulfillment, and the acquisition of new knowledge” (Desvallées et al., 2009).

Specifically, the museum is considered a *medium* for the transmission of the cultural heritage (knowledge, meanings and values), and, at the same time, the *message*. "The medium is the message" is a phrase coined by McLuhan meaning that the form of a medium embeds itself in any message it wishes to transmit, creating a symbiotic relationship by which the medium influences how the message is perceived (1967). Museums transmitted to visitors the message of the cultural heritage and its values through cultural practices. Due to this mediating role, Museum Education consists in "Mediation Culturelle" (translated into English as Cultural Mediation or Interpretation). "The general concept of mediation also leads us to think about the institution of Culture itself as the transmission of that common heritage which unites the members of a community and in which they recognize themselves" (Desvallées et al., 2009, p. 47). In French literature, the term mediation is frequently used to refer to "a whole range of actions carried out in a museum context in order to build bridges between that which is exhibited (seeing) and the meanings that these objects and sites may carry (knowledge)" (Desvallées, et al., 2009, p. 47). Mediation seeks to foster the social interactions between visitors, their sharing of experience and the processing of a common interpretation and meaning (Schorch, 2014).

## **THE RESEARCH FIELD**

### **The Visitor Studies field**

In the last thirty years museum education has been more and more conceptualized by museum professionals and academics, for the purpose of creating a theoretical and methodological framework at the service of educational activities in a museum environment (Allard and Boucher, 1998). The term “visitor” refers to the museum users (in other words the public or the audience). The notion of visitor is central to almost all current definitions of museum; in line with the last ICOM definition, a museum appeals to the audience with all its education, study and enjoyment services: “A museum is a non-profit, permanent institution in the service of society and its development, open to the public, [...]” (ICOM, 2007). Starting in the 90s, Visitors Studies investigated museum users, their expectations, motivations and sensations. Sensitivity to museum visitors, determining who they are and how they perceive the visiting experience, was the first step in helping

museum staff to improve the quality of their services. What really motivates visitors to attend museums?

Combs (1999) showed that learning and recreation are the primary reasons behind a museum visit. "Visitors valued museums as places for active, personal learning through the observation of objects (p. 186)". Museum Learning becomes a personal, social, discovery experience. Museum Learning is not only an interesting process, but also pleasant and enjoyable: it provides opportunities for many different forms of socialization. Combs points to Education and Entertainment. Museums slowly accepted that visitors seek experience that crosses the boundaries of seeing, learning, and doing: having "fun" seems to be a necessary part of the visiting experience.

Sachatello-Sawyer (2002) analyzed a large variety of programmes from the perspective of planners, instructors, and participants, profiling four main segments of participants according to their primary motivation for attending museum programmes:

- "Knowledge Seekers", the largest subgroup of adult participants in museum programmes and seek challenging content, a broad array of learning activities and additional resources that allow them to follow up on their interests;
- "Socializers" who attend museum programmes explicitly for social interaction with family members or friends, using the visits as an opportunity to spend time together;
- "Skill Builders" who like to learn by doing and wish to improve specific skills and gain new ones.
- "Museum lovers" who are the core audience for most adult programmes and often also volunteer in several areas of the museum (Radice, 2014, p.52).

Museums felt the urge to categorize visitors, drawing up visitor profiles; a hard challenge since apparently the reasons for going to museums are as varied and multifaceted as the visitors. Falk (2009) identifies five specific identities of museum goers reflecting individual needs and motivations:

- "Explorers" who want to satisfy personal curiosity or a general interest
- "Facilitators" who wish to engage in a social experience
- "Experience seekers" who seek a meaningful experience

- “Professional/Hobbyists” with specific reasons for visiting
- “Rechargers” who wish to experience a physical, emotional and intellectual recharge

At the same time, research started to highlight the way museums think of their visitors. Zahava and Doering (1998) suggested three different attitudes of museums to their visitors:

- Stranger, when the museum believes that its primary responsibility is to the collection and not the visitors
- Guest, when the museum engages with visitors, primarily through learning activities
- Client, when the museum acknowledges that visitors, as clients, have needs and expectations to understand and meet.

The shift from ‘consumers/visitors’ to ‘users’, led Richardson (2010) to introduce the term ‘participants’, encouraging the use of participatory approaches in museums for marketing strategies and exhibitions. While it is unlikely that the use of the word ‘audiences’ will change, currently the main approach of museums is to treat visitors as clients, providing the kinds of experiences they say are the most satisfying, and ensuring a setting in which such experiences are facilitated. The direction seems inevitable and unavoidable, but it should not be considered negative. This is why nowadays Museum and Visitor Studies increasingly resemble Audience Development (Bollo, 2014).

The knowledge of the public - beyond a pure numerical analysis - plays an increasing role in engagement strategies. Today, Audience Development is one of the main challenges for the museum sector. But the term Audience Development does not mean only the quantitative growth of a cultured public, but also involves the diversification of museum services, engaging existing and potential new audiences through service innovation. In Visitor Studies, both quantitative and qualitative approaches are important. The macro dimension provides evidence to support decision-making when museums have to re-think policies, marketing, communication, exhibitions planning and access, but the micro dimension, regarding visitor experience from feedbacks, provides one key to interpreting the phenomenon (Bollo, 2016). Visitor Studies analyzes the public: attitudes, behaviour, motivations, the effectiveness of communication, consumption and cultural practices. At the level of "micro" and "macro" research, the array of tools for analysis and research is still quite embryonic and fragmented. The approaches are profoundly inadequate and

splintered, urgently requiring a common framework for Museum Studies, and the knowledge, theories and methods involved (Bollo, 2014).

## **KEY RESEARCH CONCEPTS**

Our research aims to analyze the visitors stream of feelings and thinking during the visit, in an attempt to find a proper definition of the elements characterizing the Museum Experience and its relationship with the Cultural Community. As stated in the premise, there are multiple and diversified elements: interaction with museum space and its objects, strong aesthetic emotions and personal reflection.

Bases on the existing literature, not only in the fields of Museum and Visitor Studies, but the Humanities in general (Philosophy, Anthropology, Psychology and Pedagogy), this research seeks to find concepts to explore, describe, and measure the dynamics of the Museum Experience, because only a multidisciplinary approach is able to capture the visitor experience in all its nuances. Therefore, the research is based on five strictly related key concepts: the Cultural Community, the Restorativeness of the physical environment, Emotional Competence, Achievement Emotions in a learning environment and the Museum Experience.

### **1. The Cultural Community**

It seems that the visiting experience can lead to long-term affective and cognitive outcomes, especially in terms of social awareness (DeWitt and Storksdieck,2008). In the French literature, there are many examples of the philosophical aspects of Cultural Heritage Education. Inspired by this literature, we try to understand how museum visits can help children to increase their emotional involvement with the Cultural Community. In our specific case, the term Cultural Community means a "community of visitors", individuals who consciously enjoy museum spaces and their contents, creating a situation of debate, interpretation and mediation over the Cultural Heritage. During the Museum Experience, the visitor is involved in a process of discussion, interpretation and negotiation of meaning in relation to the Cultural Heritage; he/she is part of an "interpretative community", where meaning-making is mediated between individual and collective interpretations (Hooper-Greenhill, 2000). In the Museum Studies literature, no scientific research analyzes this process of "negotiation". Because

the Cultural Community is a philosophical and sociological concept, in order to measure it in the methodological paradigm used for this research – i.e. empirical research based on a psychological approach – theories and methods from youth negotiation literature applied to the learning context (Hochhauser, Weiss, and Gal, 2015) proved useful. The research sees Cultural Community involvement via the construct of “negotiation”.

In line with French cultural policy, the bond between the individual and culture is not taken for granted, but is strictly related to the feeling of involvement with the community in which people live. This link should be encouraged and motivated emotionally during childhood. Bourdieu (1967), in his studies dedicated to the culture audience, tells us that we must first create the "feeling of culture" in children, a sense of “affection for cultural heritage”, because it is only when the presence of culture is registered in everyday life that it is missed (or sought) in adulthood.

## **2. Restorativeness**

Some places, called "restorative environments", can be considered an escape, a refuge, a break from the routine of daily life and provide the opportunity to restore attention after mental fatigue. Many researchers have shown that natural environments have greater regenerative power than so-called "built environments", such as urban settings (Kaplan, 1995). Nevertheless, many authors in the field of Museum and Visitor studies have shown that museums too, although not natural environments, offer opportunities for restorative experience (Kaplan, Bardwell, and Slakter, 1993). Packer and Bond (2010) have focused in particular on the benefits perceived by the visitor within the museum. Parker (2008) describes the feelings that emerged during a museum visit experience, such as psychological well-being, autonomy, personal growth, environmental mastery, purpose in life, positive relations and self- acceptance.

## **3. Emotional Competence**

During a museum visit people feel different emotions freely: are they able to express them clearly to each other? Exploring the social dimension of museum learning, Packer (2005) suggests that this dimension is an important aspect of museum visiting. Contemporary psychological studies focus on how people can learn to recognize



emotions and gain in social awareness (Denham, 1998). Our study considers the museum environment as a place of Social and emotional learning (SEL). This approach is an absolute novelty in contemporary Museum Studies and Visitors literature. SEL is a process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. In this research, we drew from The Collaborative for Academic, Social, and Emotional Learning (CASEL) guidelines, an organization promoting integrated social and emotional learning for all children from preschools to high school.

#### **4. Achievement Emotions**

Through many similarities, the museum context can be considered a place of learning on a par with schools. To investigate the dynamics that link emotions and the learning process, the visiting experience is a field test for the theoretical models of museums as already widely used in school learning contexts (defined as "traditional" i.e. the classroom). According to "control-value theory" (Pekrun, 2006), the appraisal of control and values are central to the prompting achievement emotions, including activity-related emotions such as enjoyment, frustration, and boredom experienced during learning, as well as outcome emotions such as joy, hope, pride, anxiety, hopelessness, shame, and anger relating to success or failure. Learning is linked both to the value that the child attaches to a task, and to the control that he/she can exert over the task itself. These two aspects result in different emotions (defined, in the specific case, as achievement emotions), which affect performance. Within the framework of the Museum Experience, the emotional outcomes of the visitor's learning processes are examined.

#### **5. The Museum Experience**

The visitor's mood was described above as a "flow", a specific quality of experience that involves total immersion in an activity, where the self can be freely and fully expressed, a process of learning about the self, its capacities and relationship to the external world (Csikszentmihalyi, and Hermanson, 1995). The article *Exploring Satisfying*

*Experiences in Museums* (Pekarik, Doering, and Karns, 1999), a milestone in Museum Studies, provides a clear categorization of feelings experienced by the visitor during a museum visit. No more "flow", a process of indistinct and confused elements, but a framework with four categories of satisfying experience: Objective, Cognitive, Introspective and Social. Packer (2008) has demonstrated that Satisfying Experiences in museums provide benefits for visitors beyond the experience itself, highlighting the importance of the restorative aspect of a museum visit. In this study, with a qualitative approach, we seek to verify the type of Museum Experience lived by children. To achieve this and provide an overview of children's Museum Experience, two experiences are added to the four above: Emotional and Environmental experience.

### **Combining qualitative and quantitative research in museum learning settings.**

This research was prompted by thinking about my professional experience as a Museum Educator. When I wrote the first draft of *Emotional engagement in children's visiting experience*, I was aware that the idea may have been valid for me, but what did other people think? I had an educational background in Cultural Anthropology and saw that a straight qualitative attitude was no longer sufficient for me. For Tracy (2010), high quality qualitative methodological research is characterized by rigour, sincerity, credibility, resonance, significance, ethics, and meaningful coherence. What caught my attention most was *rigour*. My research idea involved complexity and abundance. I needed to challenge or reinforce qualitative theories, practices and methods in terms of their credibility, transparency and scientific contribution.

From my previous studies I was aware of the potential effects on reflexivity of the researcher's position (e.g. gender, age, social status), personal experiences, political and professional beliefs, because "reflexivity is a major strategy for quality control in qualitative research" (Berger, 2015). I tried to develop an understanding of my position, and discovered that the research idea brought together two different points of view, one academic and one professional. I was a Museum Educator and researcher in Museum learning: the first emotional involvement in the visiting experience that I acquired was my own. As a researcher, I thought that engagement with the research subject risked objectivity: I was a conscious insider of museum experience. I didn't need autobiography, auto-ethnography, and reflexive ethnography methods or practices to look inside myself

(Pensoneau-Conway and Toyosaki, 2011). Consequently, I needed to increasingly focus on others' knowledge and sensitivity in the museum visit experience, carefully monitoring the impact of emotions, beliefs, feedback and personal experiences; encouraging the role of other visitors in building up project knowledge. I wanted my personal and general experience to coincide and so decided to take responsibility for my position and look for a mixed approach, through both qualitative and quantitative research.

The use of quantitative instruments from Psychological literature is very common in Museum and Visitor studies and helped me to identify personal, contextual, and circumstantial data within the visiting process; qualitative analysis contributed to the understanding of the potential from visitors' findings. Since qualitative and quantitative methods are often presented as opposite and sometimes conflicting approaches I paid particular attention to their potentially complementary nature in my research. Qualitative research in psychology is uncommon, although qualitative articles are now published increasingly in psychology journals. For this reason, *Emotional engagement in children's visiting experience*, which aims to analyze the visitors stream of feelings during the museum experience, uses both qualitative and quantitative methods and refers to well-established, conventional and experimental paradigms of Cognitive and Environmental Psychology, now applied on to museum context. The combined approach is the basis for this research project. Reading Jonsen and Jehn (2009) on *Triangulation*, showed how complementary techniques can help to minimize subjectivity, integrating multiple methods in order to compare results, decrease distortions, and increase the validity of the findings (Scandura and Williams, 2000). Originally, triangulation was a military term from navigation, using multiple reference points to pinpoint an object's exact position. Triangulation in qualitative research assumes that if two or more data sources, theoretical frameworks, types of collected data or researchers lead or come to the same conclusion, this lends weight to that conclusion (Denzin, 1978).

The table below summarizes the key concepts discussed in this research, with the qualitative and quantitative instruments adopted.

Theories		Methods	
Construct		Sub dimension	Instruments
Cultural Community/ Negotiation (Hochhauser, Weiss, and Gal, 2015)	CC/N	Self-confidence Cooperation Communication Compromise Conflict resolution	Negotiation Observation grid <i>(ad hoc</i> measuring instrument)
Restorativeness (Kaplan, 1995)	R	Being away Fascination Coherence Scope	Perceived Restorativeness Scale -children (PRS-ch) (Berto, Pasini and Barbiero, 2015)
Achievement Emotions (Pekrun, 2006)	AE	Positive activating Positive deactivating Negative activating Negative deactivating	Graduated Achievement Emotions Set (GR-AES) (Raccanello, Brondino and Pasini 2014).
Emotional Competence SEL- Socio Emotional Learning model (CASEL)	EC	Self awareness Self management Relationship skills Social awareness Responsible decision making	Emotional Competence Observation grid <i>(ad hoc</i> measuring instrument)
Museum Experience (Pekarik, Doering and Karns, 1999)	ME	Objective Cognitive Introspective Social	Museum Experience classification grid <i>(ad hoc</i> measuring instrument)

Table 1. Key concepts, their acronyms, dimensions, and qualitative and quantitative instruments adopted.

## RESEARCH AIMS

As already indicated, this research has a number of objectives. After examining the extensive literature, the selected key concepts were deepened in order to gain a better understanding of the process by which the museum visiting experience enhances children's awareness of involvement in a Cultural Community. For this purpose, a primary school audience was asked to engage in some museum learning activities.

Our study investigates through empirical research what the Museum Experience is for children, and how this experience increases their involvement in the Cultural Community life (Figure 1). The aim is also to explore the role played by three factors in this process: perceived Restorativeness during the visit, the Achievement Emotions associated with the learning experience during the visit, and children's Emotional Competence before the visit.

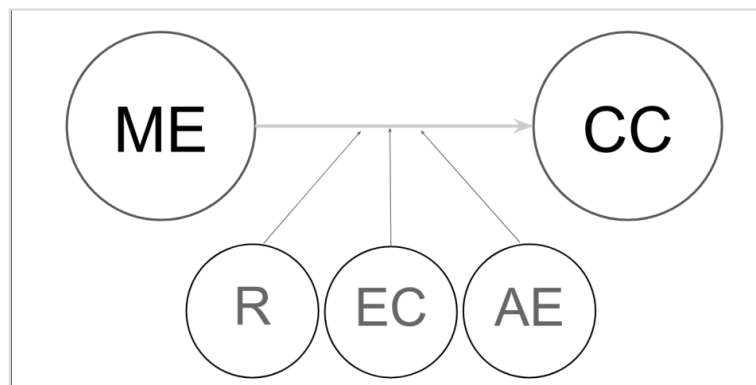


Figure 1. The research model

After reviewing theory and methodologies, I sought to adapt them to the specific needs of this research. Hence, not all the underlying dimensions of the key concepts were taken on board, but only the most useful to this study. Table 2 sets out the key concepts of this study, summarizing the dimensions of each construct and the research questions associated with each construct. Figure 1 briefly describes the research aims.

Construct		Analysed Sub dimension	Aims
Cultural Community/ Negotiation (Hochhauser, Weiss, and Gal, 2015)	CC/N	Communication Compromise Cooperation	Verify the effect of ME on CC, analyzing the improvement of children Negotiation (N) before and after the visit (Chapter I).
Restorativeness (Berto, Pasini and Barbiero, 2015)	R	Being away Fascination Coherence Scope	Describe the R level during the visit, distinguishing among regenerative factors. Analyze the role of moderation of R on the effect of ME on CC (Chapter II).
Achievement Emotions (Raccanello, Brondino and Pasini 2014).	AE	Positive activating Positive deactivating Negative activating Negative deactivating	Detect the AE type during the visit. Analyze the moderation role of AE tested during the visit on the effect of ME on CC (Chapter IV).
Emotional Competence SEL - Socio Emotional Learning model (CASEL)	EC	Self awareness Relationship skills Social awareness	Measure children EC before the visit. Verify the moderation role of EC on CC (Chapter IV).
Museum Experience (Pekarik, Doering and Karns, 1999)	ME	Objective Cognitive Introspective Social Environmental Emotional	Categorize children ME feedbacks in line with the Museum Experience definition (Chapter IV).

Table 2. Key concepts, analyzed sub dimensions and acronyms.

## RESEARCH IMPLEMENTATION

A true Museum Experience cannot be reproduced in a laboratory. To guarantee data validity it was necessary to implement the study inside a museum as a real School learning program. DeWitt and Storksdieck (2008) demonstrated that cognitive and affective learning

can occur as a result of class visits to out-of-school settings, such as the Museum Experience. They highlight that "learning outcomes are fundamentally influenced by the structure of the field trip, setting novelty, prior knowledge and interest of the students, the social context of the visit, teacher agendas, student experiences during the field trip, and the presence or absence and quality of preparation and follow-up" (p.182). Students, teachers and parents appreciate the opportunities of field trips to museums because of their affective and social benefits, learning outcomes, cognitive skills exercise and awareness of lifelong learning community (Csikszentmihalyi and Hermanson, 1995; Hooper-Greenhill, 1991).

With MART Education Office approval, we created a special learning programme called "EMOZIONI IN MOSTRA!", included in their annual programme for local schools. This inclusion undoubtedly contributed to promoting the initiative, encouraging enthusiasm and support from all participants: parents, teachers and students. The local schools were contacted in January 2016, through mailing lists held by the City of Rovereto Educational Office and MART Educational Department. Each school received the "Emozioni in mostra!" poster, a detailed description of the research (goals, methods, schedule of activities), and an invitation to parents, teachers and principals, explaining privacy and parental consent.

The school programme was developed in line with the school curricula and teachers' goals; it is well-known that teacher involvement is an important factor for the success of a school programme (DeWitt and Storksdieck, 2008), so teachers were encouraged to:

- visit the museum on the day of the presentation to the school familiarize themselves with the institution
- share learning objectives with the museum learning staff and study researchers
- encourage students and parents to adopt the proposed School programme
- plan inside their classroom pre-visit activities in line with the contents of the visit
- plan inside their classroom post-visit activities to reinforce the visit experience
- attend a museum conference on "EMOZIONI IN MOSTRA!" with feedback about the School Learning programme offered.

## Educational aims

The study is based on the evaluation of Museum experience as positive, profound and enriching. Every Learning School Programme includes educational objectives relating to acquiring skills, knowledge, aptitudes etc. The educational goals shared by our research group, the museum staff and schoolteachers are set out below.

<p><b>To acquire art history notions and concepts by "Leaning by doing".</b></p>	<p>Encouraging the use of the senses to view Futurist artworks and grasp the artist's message.          Learning to recognize in Futurist artworks, forms and colour schemes that suggest the idea of speed, movement and dynamism.          Recognizing and describing the meaning of sound for Futurist artists.</p>
<p><b>To understand the environmental characteristics of MART, specifically nature, neutrality and participation.</b></p>	<p>Explaining the role of the Architect, the characteristics of Architecture and interior design.          Encouraging the use of the senses to perceive the museum environment          Improving children's vocabulary to describe the architecture of Mario Botta</p>
<p><b>To help children develop an idea of Cultural Heritage.</b></p>	<p>Defining what "Cultural Heritage" is...          Explaining the meaning of Museum, Visit, and artworks.          Inviting the children to live a museum experience inside MART.</p>
<p><b>To engage children in the life of Cultural Communities.</b></p>	<p>Exercising learning skills such as listening and the assimilation of knowledge.          Involving children in interpretation and the meaning-making process.          In the group visit, fostering social skills among and across children, mediators, teachers and visitors.</p>
<p><b>To encourage children to develop an idea of scientific research dynamics.</b></p>	<p>Explaining the aims of our scientific research.          Describing the importance of data collection          Learning how to fill in a questionnaire</p>



## **Learning activities**

The research design was very complex. Six different learning activities were included at three different times:

- Pre-visit
- Visit
- Post-visit

Pre- and post-visit activities involved children in their classrooms. The Visit activities were held at the museum. Activities were structured in order to achieve the research aims and the assessment of all key concepts (see Table 3), using a qualitative or a quantitative approach. The Cultural Community (CC) concept was assessed twice, involving the children in the same activity: a negotiation game inspired by active citizenship theories, the first time during the Pre-visit (CC1) and the second during the Post visit (CC2). Assessments were made during the Pre-visit of Emotional competence (EC) and during the Post visit of the Museum Experience (ME). During the Visit, the classes were involved in two different museum tours: during the two tours, the children were assigned specific learning activities so we could collect some of the research data. The first was a tour designed to test Restorativeness (R) and its benefits during museum visitation. The second was a tour to assess the Achievement Emotions (AE) felt by children during museum learning tasks.

Topic		Activity	Time	Setting
Cultural Community	CC1	The Negotiation drawing "The school"	Pre visit	School
	CC2	The Negotiation drawing "The museum"	Post visit	School
Restorativeness	R	The tour "Mario Botta's architecture"	Visit	Museum
Achievement Emotions	AE	The tour "Colours and shapes of Futurism"	Visit	Museum
Emotional Competence	EC	Educard "Mime your emotions!"	Pre visit	School
Museum Experience	ME	Silent book "What are you thinking about?"	Post Visit	School

Table 3. Pre - visit, Visit and Post-visit activities, structured in line with the key concepts.

The project was made possible by the cooperation of the G. Veronesi Primary School. Between March and May 2016, the research involved 41 children from two primary school classes in Rovereto (Italy): mean age 8.3 years, 20 males, 21 females. Each of the two classes, group A and group B, was involved in the research process as described in Figure 2.

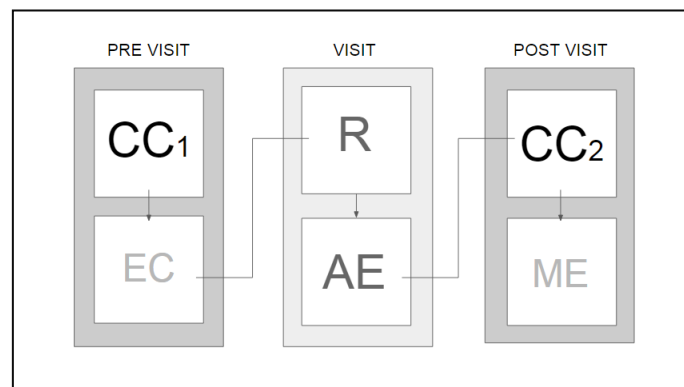


Figure 2. Pre- and Post-visit activities in chronological order.

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# Chapter I. THE CULTURAL COMMUNITY

## Being part of a Cultural Community

### INTRODUCTION

In French sociology literature, there are many examples of the philosophical aspects of education in relation to the Cultural Heritage (Grefe and Pfliger, 2009). In 1966, Bourdieu published *L'amour de l'Art*, a series of works on cultural practices, which occupied an essential part of his sociological work in the following decade. He highlighted the fact that Culture is first of all "participating". "Culture", as a reality, does not exist without a Cultural Community that makes it real. The individual who participates in Cultural Community life contributes to keeping Culture alive. Inspired by this work, and the motto "je participe à la participation" ("I participate in participation") (Bourdieu and Darbel, 1966), we try to understand how museum visits can help visitors become involved in Cultural Community life (Villagordo, 2008). In our specific case, the term Cultural Community means a "community of visitors", individuals who consciously enjoy the museum setting and its learning contents, creating a situation of debate over the Cultural Heritage.

During the Museum Experience, the visitor is involved in a process of discussion, interpretation and negotiation of meaning about the Cultural Heritage; he/she is part of an "interpretive community", where meaning-making is mediated by individual and collective interpretations (Hooper-Greenhill, 2000). In Museum Studies literature, there is no scientific research analyzing this process of "negotiation".

Kelly, Cook, and Gordon (2006) explore the theory of "communities of practice" and how this concept could be applied to museum learning settings. They suggested that, with this approach, some museums have developed valid relationships with their local communities. Lave and Wenger (1991) first put forward the idea of communities of practice to describe learning as a process of co-participation. "Learning is a process that takes place in a participation framework, not in an individual mind" (Lave and Wenger, 1991).

The psychology literature concerning the development of interpretation and mediation skills includes an interesting concept: Negotiation, a process by which people who have opposing interests seek agreement and settlement (Johnson and Johnson, 2014). The same authors, in the article *Making Cooperative Learning Work* (Johnson and Johnson, 1989) give a definition of effective cooperative learning, dividing the learning group into: the pseudo learning group, the traditional classroom, cooperative learning groups and high performance cooperative learning groups. The school setting is one of a traditional classroom learning group, where children are assigned work together and accomplish set tasks. Assignments are structured so that children are evaluated and rewarded individually as students, whereas the museum learning setting ideally corresponds to a cooperative learning group: "Students work together to accomplish shared goals. [...] Students discuss material with each other, help one another understand it, and encourage each other to work hard" (Johnson and Johnson, 1994, p. 88).

Cooperative learning is also a favourable environment for the development of positive relations such as friendship (Newcomb and Bagwell, 1995). In line with Rousseau's vision (1762), through education the child learns not only general knowledge but also how to act in a society, in other words, how to be a citizen, a member of a community. The bond between the individual and culture is not taken for granted, but is strictly related with the feeling of involvement with the community in which people live. That link should be encouraged and motivated emotionally during childhood. In his culture studies, Bourdieu (1966), says we must first create the "feeling of culture" in children, a sense of "affection for cultural heritage" because only when culture is acknowledged in everyday life can it be missed and sought in adulthood. Investing in Cultural Heritage Education is an investment in the future of culture (Donnat and Cogneau, 1990).

In line with the American Alliance of Museums, a museum becomes "a centre where people gather to meet and converse and an active, visible player in civic life, a safe haven, and a trusted incubator of change." Museums are recognized as places of civic or community engagement (Long, 2013). *In the Social Work of Museums*, Silverman (2010) suggests that museum professionals should see themselves as social workers, helping museums to have a real and measurable impact on their communities.



## OVERVIEW

### The French Cultural Policy perspective

As stated above, in the 70s museums became places that encouraged participation and the active interpretation of Culture contents, meanings and values, contributing to the civic involvement in the community, a Cultural Community (Bourdieu and Darbel, 1966; Bordieu, 1984). Hence museums were politicized places facilitating the meeting of young citizens and culture. In the 60s, the principle of “*Démocratisation de la culture*” came onto the French political scene, seeking to expand access to culture to the broadest possible public (Urfalino, 1996). Why, and how did this new necessity arise? At that time, cultural events, venues, contents and knowledge were accessible to a small cultured segment of society, able to understand and appreciate them through their education and social status. Culture was exclusive and elitist. Culture with a capital "C" was experienced as a privilege, above the masses, an aristocratic affair (Greffé et al., 2009). This point of view was confirmed and supported by sociological studies. Pierre Bourdieu was one of the pioneers of research into cultural differentiation by social class. He noted the indisputable distance between ordinary citizens and culture (1984). This gap was of political interest for the French government, which sought to create a homogeneous population with the same cultural values and attitudes, a community sharing one spirit of involvement with culture, a compact governable nation. Thus, “accessibility” is the watchword of the era of “*Démocratisation de la culture*”.

In the 80s, the defects of cultural democratization led to a new political paradigm and “*Democratie culturelle*” took the place of “*Démocratisation de la culture*” (Greffé et al., 2009). The idea of an elitist culture shared by various population segments, was replaced by the idea of cultural pluralism: not only a French culture, but the coexistence of several cultures, participating in their own way in the construction of a national culture. It should be remembered that, before the 1960s, the phenomenon of sub-cultures was unfamiliar and minority manifestations were an alternative to the dominant culture. But with the 1980s, came the idea that culture must no longer act as a factor of social discrimination, an *habitus* of some, excluding others. Faced with new immigration, culture was seen as a *habitus* that everyone has in themselves. If the watchword of “*Démocratisation de la culture*” was accessibility, the buzz word for “*Democratie culturelle*”, or the equal coexistence of all

cultural expressions, was "participation": everyone was to have the opportunity to participate in culture, or better still, to help to create a common culture.

In this regard, Villagordo (2008) has described the ideological governance of the Lang Ministry. An increasing number of cultural institutions provided educational services to museum visitors. Culture was to meet the public not only by introducing describing and explaining the Cultural Heritage, but above all by encouraging the public to experience culture, to participate in a concrete way. The mission was to give students a cultural posture from their childhood: to develop their curiosity, a questioning and critical sense, passion and openness to culture. This leads to the real incorporation of culture in the interior world of the individual, comprising sensations, questions, doubts, confrontation, projection, a real affection which the child will probably never give up. For the state, it is an investment in long-term culture.

### **Visiting as an act of active citizenship.**

This research considers Museum Education as an instrument for the construction of identity and citizenship. Enjoying cultural institutions, such as museums, is an act of active citizenship. Besides being a place of/for Cultural Heritage, a museum is above all a politicized space in which the child learns not only Beauty and Art, in Rousseau's vision (1762), but also how to act in a society, in other words, to become a citizen. During the visit, the child learns the elements of culture in which he/she lives, interprets or assimilates them critically and experiences how to interact with society. The museum becomes the place of culture not only in the material sense but also immaterial, with reference to the sphere of cultural transmission and reproduction or the transformation of meanings (Hooper-Greenhill, 1995). It is recognized that individual meaning is mediated among and between communities of interpretation. "That is, the making of meaning (which is one way of describing learning) is a social or collective challenge, even though meaning is produced by individuals, with interpretations of experience being tested and validated through the communities that shape our lives (school, family, workplace or leisure communities)." (Hooper - Greehill, 2007, p. 42). Visiting is participating in culture, celebrating culture, sharing a common system of cultural interpretation.

Lister (2007) unpacks the various citizenship attributes and considers what it means for children: membership and participation, responsibilities and equality of status, respect. In opposition to Bourdieu, Lister discusses the extent to which children are actual, not

"potential" citizens, "citizens of the future", "citizens-in-waiting," "learner citizens". Isin and Turner (2002) describe citizenship as a social process, where the emphasis is on practices, meanings, and identities. Werbner and Yuval-Davis (1999) argue that citizenship is a kind of "lived citizenship", an active and participatory practice. Jansen, Chioncel and Dekkers (2006) focused on sociological conditions for the rise of active citizenship: formal and informal learning processes with clear educational objectives and the adoption of a lifelong learning perspective. Newman, McLean and Urquhart (2005) wrote an article to determine the role of museums in combating social exclusion through facilitating active citizenship. Analyzing the experiences of museum-based exhibitions and community development projects, their study concludes that museums were able to overcome many of the barriers to active citizenship. Museums provide a context for constructing a sense of collective identity. Museum learning can be the framework for a participative model of social participation (Scandinavia, 2007).

### **Social learning in Museum Experience**

Dewey (1938) was the first to talk about education from both an individual and social perspective. The philosophical and pedagogical thought of Dewey is based on a conception of experience as a relationship between an individual and the social environment, where the individual is not a passive spectator, but an active player. Learning is a social experience. Experience is genuinely educational when it produces the expansion and enrichment of the individual, leading him/her towards self-improvement as well as the improvement of the social environment. For Dewey, a social environment is a plurality of views from different individuals or groups, interacting with each other, promoting the gradual development of the community. Dewey argued that sharing common experience was the key to learning. This way of thinking could be applied to every learning context: inside a society, a family, a school and in the museum as well. Museum learning is a social and shared experience. Vygotsky (1978) shows that the museum represents a place of positive social interaction for children's learning. Museums are ideal places where group learning is encouraged and enhanced (Falk and Dierking, 1992; 2013). Hooper-Greenhill (2000) describes how individuals are part of an "interpretive community", "where meaning making is both personal and mediated through a range of interpretive communities with a shared common language and frame of reference" (Kelly, 2007, p. 14). Visitors make their own personal meaning based on prior knowledge and experiences, and filter them within the context of

an interpretive community. The result is social interaction that tests individual ideas and meanings, creating a common frame of reference (Hooper-Greenhill, 2000). Vygotsky (1978) suggested that learning is a social-mediated process where learners, both adults and children, are jointly responsible for their learning, even in museums. Learning is characterized as ‘meaning-making’, and this is a key concept in the explanation of learning in museums. Leinhardt (2003) proposed a sociocultural definition of museum learning: “learning as meaning construction, a socially mediated phenomenon that was a consequence of dialogue among the curatorial premise, the supporting tools of signage and other symbol systems, and the visitors themselves” (Leinhardt, 2003). Learning is a process of active involvement with experience. All research studies provide strong evidence that museums capture the enthusiasm of children. In part, this enthusiasm stems from being able to make an individual emotional investment in a Museum Experience which results in a personalized response to a collective event. Personalized responses lead to the development of individualized relevance – ideas, objects, relationships, events become meaningful (Hooper-Greenhill, 2000). The museum’s responsibility was to guide the process, but not to control it: museum staff assumes responsibility for guiding the process and visitors learning to participate in the management of their own learning (Baker-Sennett, Matusov and Rogoff, 1992).

Hooper-Greenhill (2004) claims that children exhibited more positive learning identities after visiting a museum, particularly when they engaged in active learning experiences. Kidd (2002) identified three forms of identity:

- Individual identity – the unique sense of personhood held by each person in their own right.
- Social identity – a collective sense of involvement with a group, identifying themselves as having something in common with other group members.
- Cultural identity – a sense of involvement with a distinct ethnic, cultural or subcultural group.

## AIMS

As indicated, our research aims to empirically verify how, in children, the Museum Experience (ME) increases personal involvement with a Cultural Community (CC). To achieve this aim, the first difficult problem we faced was how this could be measured.

During the Museum Experience, cultural knowledge and meaning are mediated by children, and the class becomes a community of interpretation. Museum learning is a collective challenge, because meaning is produced by individuals, but tested and validated through negotiation with other individuals and meanings (Hooper - Greehill, 2007). A person who is part of a CC is actively involved in a collective process of discussion, interpretation and negotiation of cultural meanings. The process of meaning-making in a CC is strictly associated with the capacity of individuals to share their interpretation, to discuss, mediate and negotiate cultural meanings with others, so that collective interpretations can arise.

We are aware that measuring an individual's involvement in a CC is a hard challenge. However, some behaviour can be considered good indicators of this aptitude. We measured the construct after considering some pre-conditions, specifically the ability to discuss and interpret, to negotiate ideas and meanings in a group setting. In this chapter, and throughout this study, we use children's negotiation skills (N) as an indicator of their involvement with the CC.

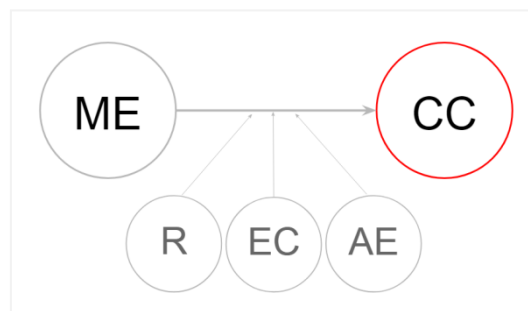


Figure 1.the role of the Cultural Community (CC) in our research.

## METHOD

### Participants

The research involved 41 children from two primary school classes in Rovereto (Italy), mean age 8.3 years (20 males, 21 females).

### Measures

As stated in “Aims”, we explored the construct of personal involvement in a Cultural Community using negotiation skills as an indicator.

Based on youth negotiation literature, negotiation attitudes and behaviour has five dimensions (Hochhauser, Weiss, and Gal, 2015):

1. self-confidence: the confidence in oneself;
2. cooperation: the willingness to cooperate or work together;
3. communication: the sense that one can communicate interests and positions effectively;
4. compromise: the willingness to give something up, make exchanges, and address others' needs in order to achieve one's goals;
5. conflict resolution: the willingness to talk out a resolution to a problem rather than fighting.

For the purpose of this study, we chose to focus on three of the five: Communication, Compromise, and Cooperation. These three aspects are more relevant because they exactly match the kind of skills used by children during museum learning activities. They were measured by an *ad hoc* instrument during the “Negotiated drawing” learning activity: an observation grid with 10 questions (see Appendix 1).

The "Negotiated drawing" (Cox, Cooke, Griffin, 1995) consists in drawing in pairs, on the same blank sheet, each child using three colours which cannot be exchanged between them. In this way children have to discuss what to draw and how to do the drawing. Specifically, they need to cooperate in completing the figures they wanted to draw, alternating in the use of the colours provided. This method is also used in active citizenship school games.

The observation grid was for each desk (10 in total), placed on the side of the sheet. A researcher led the activity, giving the children the instructions and activity time. The teachers were present, watching the group and making sure the children did not speak during the game. Three researchers were instructed to observe and listen to the pairs and, based on their behaviour, they filled in the observation grid. A fourth researcher was in charge of filming the activity. At the end of the class action, the research team analyzed the observation grids together, comparing the data collected by the observation grid, by photos, videos and drawings. The observation concerns three Negotiation skills categories:

1. Communication (Questions 5, 6),
2. Compromise (Questions 7),
3. Cooperation (Questions 10, 11, 12).

Before drawing, each couple had to discuss and try to answer together the following questions: “Whose is this place? What do I learn in this place? How do I feel in this place?”. The place was the school in the class activity before the Museum Experience, and the museum in the class activity after the Museum Experience. The observers used a 3-point scale to rate the level of discussion and communication about each question (1=no, there was no discussion; 2= yes, the couple demonstrated quite a good level of discussion/communication; 3= yes, the couple demonstrated a high level of discussion/communication). Finally, the observers used a 3-point scale to assess the level of agreement the children reached after the discussion of the three questions (1=no, children in the couple did not reach agreement; 2=yes, children in the couple reached quite a good level of agreement; 3=yes, children in the couple reached a very high level of agreement). The mean values were computed as the level of “Communication skills”.

Observers also used a 3-point scale to assess whether the children in each couple were able to decide together the subject of the drawing (1=no, the couple did not decide together; 2=yes, the couple compromised; 3=yes, the couple agreed). This rating was considered a measure of “Compromise skills”.

The last measure concerns “Cooperation skills”. In this case, observers used the 3-point scale to rate the children drawing activity, evaluating three aspects: the children’s ability to “dialogue” without words during the activity; their ability to draw alternately on the same sheet; their ability to respect the graphic ideas of the other child in the couple. In this case

too, the observers' evaluations of these aspects were averaged together in a single measure of "Cooperation skills".

## Procedure

During the visit, children were involved in two learning tours: "L'architettura di Mario Botta", walking around the museum spaces and "Forme e colori del Futurismo", with some Futurist artworks. During each tour, the class followed the usual young visitor itinerary whilst listening to some learning content and performing a few specific tasks. They took part in all the activities commonly referred to as Cultural Community life: assimilating new information, developing a personal interpretation, discussing content with other visitors, and sharing collective meanings. At the end of the visit, back at school, children were involved in a class activity, "Negotiated drawing" (Cox, Cooke, Griffin, 1995). The children were engaged in the class activity twice, before and after the MART visit, to evaluate the improvement of Negotiation skills following the Museum Experience. The activities (pre-visit, visit and post-visit activities) covered a total period of six weeks.

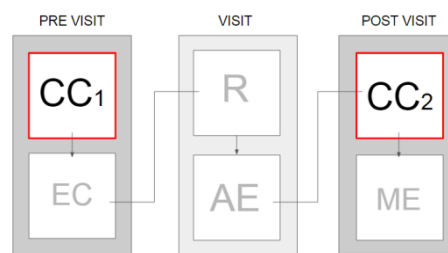


Figure 2: the position of the Cultural Community (CC) in the research procedure.



## **PRE- AND POST-VISIT ACTIVITY, “The Negotiated Drawing”.**

### ***PRE - VISIT***

#### **The Negotiated drawing - "The School"**

Before the class activity, we asked the teachers to divide the children into pairs based on their personalities. We were looking for "temperamentally balanced" twosomes. At the beginning of the activity we welcomed children into a class with ten desks, then each couple was allocated one desk. The researchers explained to the children what the "Negotiated drawing" activity was about, and asked them to draw their school, to help them understand "how children spend their time in school". The "Negotiated drawing", evolved in three phases:

#### **Communication**

The aim of this first phase was to encourage five minutes of discussion between children and test their Communication skills. The researcher invited children to debate the topic "School" with three questions:

- Whose is the school? Think of all the people you are used to meeting at school...
- What do I learn at school? Think of all the things you learn at school...
- How do I feel at school? Think of the emotions you feel at school...

Each pair had to think, discuss the questions and come up with an answer. A unanimous response was not allowed here. Children in the same couple could give two different answers. Each child could express an answer to another child sincerely, and consider the other's opinion.

#### **Compromise**

The aim of this second phase was to encourage children to find a compromise and test their Compromise skills. At the end of the discussion they had a minute to decide together what to draw. Each child had a graphic idea, proposals and suggestions, but finally the couple had to agree a single idea. Each child could give up a little of his/her own idea by accepting the other child's suggestion. The fact that they had very little time to decide, only

one minute, before starting the drawing, encouraged the children to find a compromise quickly.

### **Cooperation**

The aim of the third phase was to evaluate the children's Cooperation skills during the drawing activity. The couple had to draw together, simultaneously, on the same sheet, but were not allowed to speak. Each child was given three colours, and could not exchange them with his/her mate. The child had to suggest to his/her companion when and where he/she needed one of his/her colours to complete the drawing: this required cooperation. The children had to negotiate not only what to draw but how to do the drawing, using which sheet and colours. Behaviour had to be balanced, and the drawing had to reflect a homogeneous use of the colours. The "Negotiated drawing" partially reflected the success of the cooperation. Every child was invited to appreciate when it was his/her turn to draw and when it was the other's turn, so together they could get to the result. Afterwards, each couple was asked to give a title to their drawing: "La scuola é..." ("School is...").



### ***POST- VISIT***

#### **The Negotiated drawing - "The museum"**

After the visit, children repeated the activity. The only change was the object of the discussion, no more "the school", but "the museum". The questions changed as follows:

- Whose is the museum? Think of all the people you meet in the museum...
- What do I learn in the museum? Think of all the things you learn in the museum...
- How do I feel in the museum? Think of the emotions you feel in the museum...

Afterwards, each couple was asked to give a title to their drawing: "Il museo é..." ("A museum is...").

## RESULTS

The mean values and standard deviation in the three aspects of negotiation skills (communication, compromise and cooperation) before the visit and after the visit are shown in Table 1 and Figure 1. Communication skills significantly increased from a starting level of 2.6 to a final level, after the Museum Experience, of 2.8. A paired sample t-test showed that these two means are significantly different ( $t(40)=2.365$ ;  $p<.05$ ), supporting the hypothesis that the museum visiting experience had an effect on increasing communication skills in children.

No differences were found for Compromise or for Cooperation skills.

Table 1. Means and Standard Deviations (in brackets) of the children's negotiation skills.

	<b>Before the Museum Experience</b>	<b>After the Museum Experience</b>	<b>p-value*</b>
<b>Communication</b>	2.6 (.6)	2.8 (.4)	.022
<b>Compromise</b>	2.3 (.8)	2.5 (.8)	.421 (n.s.)
<b>Cooperation</b>	2.7 (.6)	2.6 (.6)	.352 (n.s.)

\*paired sample t-test

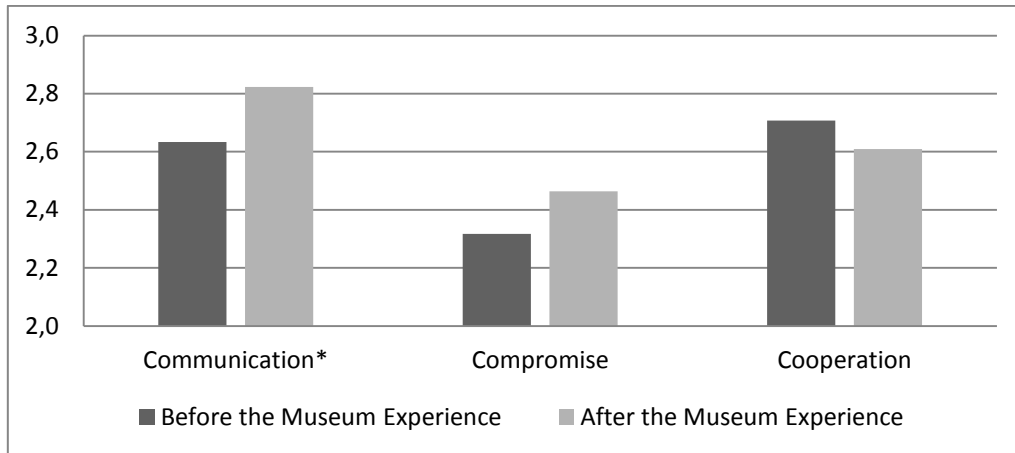


Figure 1. Negotiation level before and after the Museum Experience

## DISCUSSION



Museum visitation increased the children's Negotiation skills, in particular their Communication: the ability to express themselves freely, clearly and confidently. The ability to communicate opinions and positions effectively is an important requirement for participation in a Cultural Community.

We argue that this result is due to the "meaning-making" process the children were involved in during the visiting experience. We talked extensively about the visitor's active role in creating meaning during a Museum Experience, influenced by the factors of self-identity, companions, and leisure motivation (Silver, 1995). As a result, children find personal significance in museum interpretation in a balance of individual and community points of view. Therefore, we assume the improvement in Communication skills was related to the interpretative process. Hooper Greenhill (2007) describes the "interpretative

community", which involves the attribution of meaning-making and establishing of a relationship between a museum and its audience and within the audience, the relationship between the visitors. Through the activities of interpretation (using objects, paintings, photographs, models and texts), museums produce resources for learning. "Today, 'learning' as a concept is not usually used to refer to knowledge or scholarship; 'learning' is used to refer to learning processes, and implicit in the more recent interpretations of 'learning' is the idea that learning processes can occur in many different kinds of locations, and can be very diverse in character and in outcome" (Hooper Greenhill, 2007, p. 14). In our research, we seek to demonstrate that museum learning is meta-learning: the real thing that children learn is to take part in a process of interpretation within an interpretive community. "Social learning theory suggests that even though exhibition visitors may not wish to learn the facts the exhibitions may wish to communicate, other forms of learning will be taking place."(Hooper Greenhill, 2007, p. 27).

It is unclear why the improvement in Communication skills did not lead to a subsequent improvement in Compromise and Cooperation skills. The children did not change their way of negotiating, the behaviour relating to deciding what to draw or the dynamics within the couples. It would be interesting to explore this to understand the cause. Highlighting the research sample limits, clearly the study involved children in an identical pre- and post-visit activity separated by one month only, but the improvement cannot definitively be ascribed to a "maturing" effect. To overcome this limit, future research should use a control group.

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# Chapter II. RESTORATIVENESS

## Benefits of the museum's restorative environment

### INTRODUCTION

Many researchers have shown that natural environments have a regenerative power that is clearly superior to so-called "built" environments, such as in the city; specifically, Kaplan's Attention Restoration Theory (ART) (1995) suggests that the ability to concentrate may be restored by exposure to natural environments (Kaplan and Kaplan, 1987; 1988; 1989). Nevertheless, based on the same theory, these and other authors of Museum and Visitors studies have shown that museums, although not natural environments, also offer opportunities for regenerative experience (Kaplan and Bardwell, 1993; Packer and Bond, 2010). Despite the range of studies on restorative environments, little is known about physiological and psychological benefits to children of restorative environments (Berto, Pasini, Barbiero and 2015). In this study, inside MART, we tried to understand the Environmental effect of the museum on visitors, especially children taking part in museum learning activities. Environmental effect can be described as how the physical place and social context influence an individual's emotions, actions and outcomes (Roe, 2008).

### Developing Museum Affection

How do children develop an involvement with the Cultural Community through a museum visit? What are the dynamics by which individuals become engaged with a particular place? This research assumes that museums can be places of emotional attachment. Most of the emotions that bond us to significant places are positive: happiness, excitement, surprise, fascination, pride. But bonds with a place go deeper, and include both emotional and cognitive components. Cognitively, as we become attached to a place, we develop a mental representation of that place, we feel in a special way visiting or thinking about that place. We assume that children develop an attachment to the museum environment through the positive outcomes of the visiting experience. We refer to the term "place attachment" as the cognitive-emotional bond that individuals develop towards places (Gifford, 2007;

Scannel and Gifford, 2010). The reason we assume children can develop place attachment for the museum environment involves three different dimensions: person, process and place. Place attachment is a process related to the “person” given that the place is meaningful for personal reasons, at an individual level. In addition, the “process” is an important component of place attachment: how we develop and increase our attachment through experience, cognition, and behavior, knowledge, memories and beliefs. The third dimension is the “place”: the social and physical qualities of the place that stimulate appreciation. An individual, consciously, a museum visitor, becomes involved in a “place identity” process: the incorporation of a place into the larger concept of self, close to the concept of place identity insofar as that coincides with individual identity. In the research carried out at MART, we investigated how these three dimensions influence the visitor involved in the act of visiting. We assumed that the Museum Experience leads the individual to identify himself as a visitor and part of a larger visitor community enjoying the Cultural Heritage. Museums are the framework for this individual and collective process (Gifford, 2007):

Person ---> Visitor

Process ---> Visit

Place framework ---> Museum

This research concerns the "sense of involvement with a Cultural Community". One of the most commonly mentioned benefits of place attachment is the sensation of "belonging": feeling comfortable in a place, fitting in and connecting with others. A place facilitates belonging when it symbolizes a social group or offers an opportunity to meet up with others.

## **OVERVIEW**

Peoples' emotional state affect their problem-solving abilities. When individuals feel good, they do better at learning, creative thinking, brainstorming, and examining alternatives. In contrast, when individuals feel stressed, their attention narrows, making them less able to develop creative solutions (Nasar, 2008). Most previous Restorativeness research has focused on natural environments, however, our research explores the extent to which museum environments also provide access to restorative experiences. We argue that a

restorative condition can be extremely helpful for visitors involved in a museum learning process. Originally, Attention Restoration Theory was developed by Rachel and Stephen Kaplan (ART, Kaplan and Kaplan, 1989). ART says people can focus better in nature, or looking at representations of nature. According to Attention Restoration Theory, the capacity to continually focus attention, in a condition of mental fatigue, produces mental exhaustion. This state, called directed attention fatigue, can give rise to irritability, anxiety, anger, frustration, inability to perform cognitive tasks and increased errors in performance. Nevertheless, attention fatigue can be overcome in environments where fascinating stimuli are present, evoking effortless attention (Berto, Baroni, Zainarghi and Bettella, 2010).

The study suggests that performing an attention-orienting task in a state of attentional fatigue is less arduous in a state of fascination than in its absence. In the former, attentional shifts are facilitated unconsciously (Berto, et al., 2010).

Natural environments arousing Fascination and particularly soft fascination, abound: a condition in which a person can reflect in a state of effortless attention. Fascination is the main attribute an environment requires to be considered restorative: it plays a crucial role in attention restoration theory (Kaplan, 1995). Fascinating stimuli are attractive, prevent boredom and, most importantly, enable people to function without direct attention (Kaplan and Kaplan, 1981). Associated with this theory, the Perceived Restorativeness Scale (PRS) was developed, based on ART, to measure an individual's perception of 4 restorative factors:

- Fascination: places that require little or no attentional effort,
- Being away: taking a break from the daily routine,
- Extent (Scope and Coherence): a place that is rich and coherent enough to be explored,
- Compatibility: the extent to which an environment supports your inclinations and aims.

In recent decades, the Perceived Restorativeness Scale (PRS), has been used frequently in the scientific literature (Pasini, Berto, Brondino, Hall and Ortner, 2014), sometimes showing that it is not only nature that provides restorative experience. Some built or urban environments also have a high potential for Fascination. An approach to understanding the process and effects of restorative environments on psychological well-being is provided by

Berto (2005); the author suggests that, mindful of restorative factors when designing spaces, outdoor and indoor urban environments (schools, hospitals, museums, etc.) can be rendered more 'fascinating'. Kaplan, Bardwell and Slakter (1993) returned to past research and re-analyzed focus group comments about the Museum Experience, finding evidence of Fascination, Being away, Coherence/Scope and Compatibility attributes, as well as others outcomes in line with restorative experience, such as calm, peaceful, reflective and positive sensations (Berto, 2005). Through an additional study, the researchers expanded the range of restorative outcomes to include feeling refreshed, restored, thoughtful, relaxed, and not feeling tired or worried.

Hidalgo, Berto, Galindo and Getreivi (2006) identified categories for attractive and unattractive urban places. The research involved residents from two European cities who were asked to identify the most visually attractive and unattractive place in their city. The five main categories investigated via the visitor sample were: cultural-historical places/landscapes, recreational places for leisure and/or walking, places with a view, housing areas, industrial places. Historic-cultural (48.27%) and recreational places (32.75%), were experienced as more aesthetic and restorative. The authors affirm: "Traditionally, a strong preference for natural environments versus urban ones has been observed. However, it seems that within the urban environment there are still some favorite places. Interestingly, these are the scenarios or categories poorly represented in most studies on urban environment preferences" (Hidalgo, et al., 2006, p. 130). These results have several implications. First, the study suggests that a museum environment is a restorative place due to its "historic-cultural" vocation and role; second, in relation to museum learning services for the visitor community, its value is increased by its recreational function. Moreover, "Culture" and "Recreation" are two of the most important attributes to describe the visiting process in general. Paker and Ballantyne (2000) analyze the restorative attributes and benefits described by visitors in some important public learning institutions: art galleries, botanical gardens, parks, zoos, aquaria and historic sites. On the basis of the study, the authors drew up a list of motivations that bring visitors to these cultural and recreational places:

- "Learning and discovery (the desire to discover new things, expand knowledge, be better informed and experience something new or unusual);

- Passive enjoyment (the desire to enjoy oneself, to be pleasantly occupied and to feel happy and satisfied);
- Restoration (the desire to relax mentally and physically, to have a change from routine and recover from stress and tension);
- Social interaction (the desire to spend time with friends or family, interact with others and build relationships);
- Self-fulfillment (the desire to make things more meaningful, challenge abilities, feel a sense of achievement and develop self-knowledge and self-worth)” (Paker and Ballantyne, 2000, p. 189).

Gradually the authors extended their research with other studies specifically focused on Restorativeness and museums. Packer and Bond (2010) noted a significant overlap between museum attributes and those suggested by Kaplan (1995) for restorative experience. The findings set out in the article *Museums as Restorative Environments* indicate that for some people, museums are at least as restorative as natural environments, providing insights into the factors that contributing to the visitor’s well-being. The phenomenon of restoration was further explored by questionnaires collected after a visiting experience and the author discovered that most visitors reported having attained “a sense of relaxation, peace and tranquility, or thoughtfulness as a result of their visit, and some reported having gained a renewed ability to deal positively with life”. (Packer et al., 2002, p.4).

### **Effect of Restorative Environments on children**

Although we have an understanding of how Restorativeness affects adults, few studies have sought to describe the relationship between children and urban places, or how this relationship could help to rethink the learning environment. In our research, which focuses on the museum environment during a children’s learning activity, we investigated if a museum, through its fascination attributes, can induce in children a condition of effortless attention and facilitate their learning. In relation to learning settings, researchers highlight that providing children with access to environments that enhance and not merely support restorative processes, and which facilitate or optimize development and performance, is clearly beneficial to children. For this purpose, Bagot, Allen and Toukhsati (2015) say that an analysis of the specific factors contributing to children’s benefits is necessary. "Children's preference or favourite place" research provides indicators of which factors

contribute to the children's restorative experience. Using open-ended questions, Korpela (2002) asked children about their favourite places. The preference was for locations where activities and social interactions are available.

Some studies investigate issues concerned with psychological restoration in children, specifically whether children perceive the difference between the restorative value of a natural and a built environment (Berto, Pasini, and Barbiero, 2015). For this purpose, children filled in the Perceived Restorativeness Scale and children performed the test in three different conditions: in the classroom, at school and in an alpine wood. The results show that children distinguish between environments with different degrees of restorativeness.

### **MART: general design characteristics**

MART was designed by the Ticino-born architect Mario Botta, in collaboration with Giulio Andreolli, an engineer from Rovereto. The building is famous for its large glass and steel dome above the central access piazza to the Museum. The guided tour of MART architecture focused on three different environments: the Dome, the Bridge and the Gallery. These three locations were considered representative of MART architecture: open spaces, white colour pattern, abundance of light (preferably natural). Other characteristics considered related to the three dimensions of space: height, width and depth. We chose environments with evidence of shapes inspired by Nature. According to Nasar (1994), some of the general characteristics that a beneficial environment requires are attributable at the MART environment. They include:

*Visual quality:* A space that is interesting, but not confusing, where its intriguing points are not immediately obvious but are revealed as people move through the space. MART is a majestic, varied building comprising several environments (library, cinema, multiple learning spaces and spacious galleries). The galleries are spread over several floors and the exhibition rooms are rather far-flung, large and without partitions, although they are clearly interconnected.

*Balance of order and complexity:* individuals tend to like spaces that are ordered and only moderately complex (Nasar, 1994). A space is complex when there is variety in the spatial elements arranged without much pattern; too much colour variation in a space creates excessive visual complexity. MART spaces are entirely white, following the architect's wish

to create a neutral environment. White does not distract the visitor from the artworks which are often the only elements with colour, volume and movement in the environment. This balance of order and complexity influences the visitor's visiting strategy, choosing a trajectory according to what attracts him/her.

*Naturalness*: Naturalness is another fundamental design attribute in Mario Botta's vision of the MART environment. Nature surrounds the museum with large windows providing a view of mountains in the galleries and from the garden. The architecture also imitates natural elements. The stairways are like a tree and its branches. The glass dome originally allowed in the sunlight and rain. The light is as natural as possible. Interior lighting influences individuals in many ways, including their perception of space (Nasar, 1994).

Individuals tend to prefer openness to enclosure (Nasar, 1994). Museum design is fundamental for a successful Museum Experience. A Museum visit unfolds through movement in space: the environment determines how visitors explore, engage, contemplate, reflect and understand exhibitions. The entire educational message depends on the perception of space.

## AIMS

As indicated, our research aimed to verify through an empirical study how, in children, Museum Experience (ME) increases their involvement with the Cultural Community (CC): in this chapter, we investigated the role of the perception of Restorativeness (R) in museum learning settings, measuring its attributes: Fascination, Being-Away, Coherence and Scope. We also explored the moderating role of Restorativeness (R) in the change in involvement in the CC from time 1 to time 2 (see chapter I).

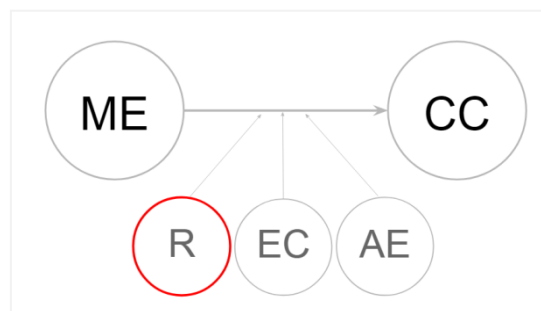


Figure 1.the role of Restorativeness (R) in our research model.

## METHOD

### Participants and procedure

The research involved 41 children from two primary school classes in Rovereto (Italy), mean age 8.3 years (20 males, 21 females).

Children were involved in an activity called "The judges", unrolled during the tour "L'architettura di Mario Botta". We asked the children to imagine themselves as a group of architecture specialists, called to evaluate the facilities at MART. Children were guided in an architectural walk through three different museum spots: "the Dome", "the Bridge" and "the Gallery." The three locations had different locations: outdoor (Dome), outdoor-indoor (Bridge), indoor (Gallery).

We asked the children to respond to the restorativeness test (children's version) in each spot. They were asked to think about how true each statement was for them and to tick the number corresponding to their judgment. The three tests were taken at 15-minute intervals, during which the class followed the visit listening to some learning contents and doing specific tasks.

At the end of the visit, back at school, the children were asked to draw their "Museum Experience", and the choice of which environment they decided to draw was compared with the Preference levels indicated inside the PRS test (children's version).

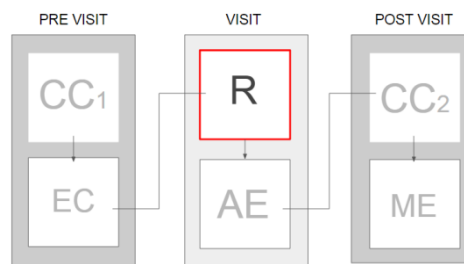


Figure 2: the position of Restorativeness (R) in the research procedure.



## Stimuli

“Feelings about the interior can influence feelings in the place, and these feelings can affect behavior and performance. Several studies confirm that the perceived quality of an interior influences people’s feelings in it, and those feelings affect the way people feel about others in the interior. People in an ugly interior tend to have higher levels of negative feelings in general, as well as negative feelings about the space and other people in it” (Nasar, 2008, p. 24). Jeong and Lee (2006) consider three categories of environmental attributes, the exhibition environment, ambient environment and museum size, concluding that emotional affect is positively influenced by the exhibition environment (methods and contents of exhibition, lighting and rest areas) and negatively influenced by the ambient environment (density of visitors, noise, complexity of the building). Museum size is the factor that exerts the greatest influence on fatigue (Jeong, et al., 2006). In light of these interesting guidelines, our children’s visit was as follows:

### Exhibition Environment

*Visit schedule:* the total duration of the visit was 60 minutes. During this time, the group stopped three times in different museum environments (Dome, Bridge, Gallery). At each spot, the activity was carried out in the same way: 7 minutes of architectural explanation, 3 minutes of "physical exercise", 5 minutes to complete the PRS-ch scale, and 5 minutes to get to the next place. The expression "physical exercise" means brief motor activity to engage the children: walking, running, throwing an object, sitting down. Asking the children to do one of these things in the space heightened their perception of the museum environment and of themselves within this environment.

*Exhibition contents:* The contents of the visit were created starting from two “unofficial” essays about the architecture of Mario Botta (property of MART’s Educational Office). The first was chosen for its interviews with Mario Botta, the second because it was written by the architect himself. Both books include the words of the architect of MART. In them, he describes in detail the vision and stylistic choices underlying the museum design. All contents were summarized and simplified for the children and the quotations were chosen

and presented verbatim. In addition, the books contain original sketches of the project, which were used to create a visual support for the visit (Figure 1).

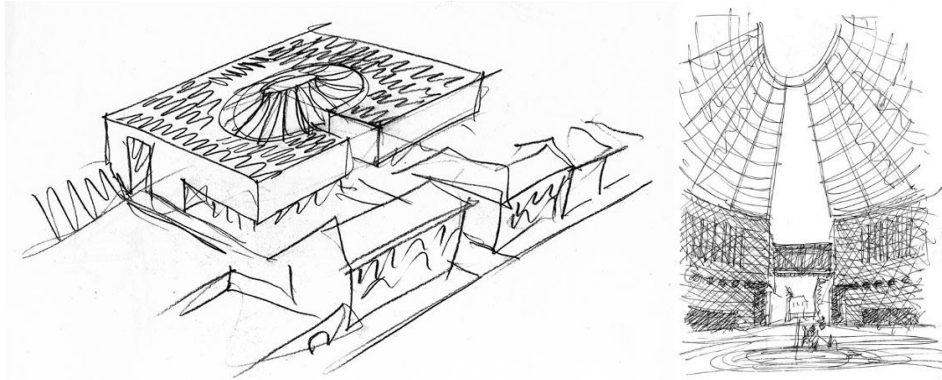


Figure 1. Some original sketches of MART designed by Mario Botta. These and other sketches were shown to children during the visit and were used as learning tools.

*Method:* We looked for a way to captivate the children's attention. At the beginning of the visit, each child received a small brochure with a selection of drawings and quotations from Mario Botta's books. We asked them to imagine they were a group of judges invited to the museum to evaluate Mario Botta's architecture and design. The PRS-ch scale was their way of judging: they gave each sentence (item) a 1 to 4 rating, depending on how much they agreed with the statement about each specific environment (the scale was filled in three times: at the Dome, the Bridge and in the Gallery).

*Rest:* To prevent fatigue, children were allowed to sit during the explanation of the artwork and when filling in the scale.

### **Ambient Environment and Museum Size**

*Density of visitors and noise:* The visit was scheduled for a weekday morning. In collaboration with the MART Educational Office we chose a time when the museum wasn't crowded. In addition, MART's Educational Office ensured no other tours were taking place in the same exhibition spaces during the visit. Due to this precaution, our activities were not interrupted or hampered in any way. The children were able to visit the museum in a peaceful and quiet atmosphere, almost exclusively dedicated to them.

*Complexity of the building:* this means the difficulty experienced by the visitor in getting around the museum galleries and spaces. During the visit, the group was accompanied throughout by an educator, so they were not concerned with this aspect or the museum size.

## THE VISIT: “L Mario Botta architecture” tour.

### The Dome

#### Explanation

A long and narrow corridor connects the main road and MART main entrance. Mario Botta describes this corridor as an "umbilical cord", because the city of Rovereto encloses the museum as in a womb. In it the museum grows and evolves, disclosing its full potential. The architect uses this image to describe the close relationship between the museum, the city and its citizens. Building such a long and narrow entrance, the architect wanted to play with contrast, surprising the visitor with the discovery of somewhere unexpected: the large circular square covered by a majestic dome of glass and steel. The dome has a hole in the centre, from which it can filter sunlight and rain. It is difficult to know if you are outdoors or indoors. Mario Botta says that "we are a little inside, but also outdoors". The covered square may look like an outdoor space but is also a transition from the city and the museum." Technically, we are still outside the museum, but not quite in the town, ready to enter.

"The square: upon entering from the street you immediately feel like you're in a special place, prompting immediate reflections on its nature." What is a museum? What is there in it? What can I do here? From the square, it is possible to access various museum spaces, with a series of doors all along the perimeter: "This beating heart is the hub through which



#### Activity

From Mario Botta's point of view: the void gives space to decisions: "[...] the creation of this empty square brings the visitor into contact with the surroundings." After the architectural explanations, the children were invited to spread out around the fountain. On a signal, a hand clap from the educator, they began to walk in all directions and then, with another clap of the hands, they changed direction. The class was then invited to sit around the fountain and to think about and discuss how they felt about moving in this space: walking in all directions, choosing a destination, changing it and then gathering together in the centre again.

The children were invited to reflect individually, without having to provide a response to the group. At the end of the activity, the children did the test.

all the various activities are functionally distributed: the museum, the library, the administration, the café, the reserved teaching spaces and the City auditorium"

### The Bridge

This is the entrance to the museum: the real protagonist of the space is a staircase that ends with a glass bridge. "From the stairs, you can access the different levels (floors) through the side passageway or through the walkway on the top floor; the passageways give visitors an idea of the size of the vertical section of the building." Via this walkway the visitor crosses the museum at its highest point. Once on the bridge, the visitor can see the full breadth and height of the building, with the thrilling sense of a void. Again, we are neither inside or outside the museum. Mario Botta says: "The emptiness of the two juxtaposed vertical staircases make a vertical spine." The staircases designed by Mario Botta allude symbolically to vegetable life, a solid, natural, branching structure.



### Activity

Children walked in pairs and stood along the sides of the bridge against the glass barriers. The pairs were divided into two and the educator gave the children a small piece of paper, red on one side, white on the other. The children were invited simultaneously to throw it into the void and watch the pieces of paper falling to the ground below. Then the class was asked to sit and think about how they felt suspended on the bridge and what they understood about the size of that space. The children were invited to reflect individually without providing a response to the group. At the end of the activity, they did the test.

### The Gallery

Mario Botta refers to the design choice for these spaces as "Exhibition hall nudity... where the architecture takes a step back to let Art and its protagonists talk." The architect thinks of these spaces, generically bright and totally white as a stage: the works are actors playing their part in Art History. Nothing can distract the visitor from the observation of the artwork, not the wall, not the floor or the ceilings. " Inside the exhibition galleries, where the artworks are exhibited, appropriate lighting and neutral architecture prevent a babble of different languages and facilitate the direct contact between the art and the visitors ".



### Activity

The children were invited to observe Mario Merz's "Chiaro scuro" (1983) and think about the contrast of natural and artificial materials used by the artist. They viewed two different houses, but one thing was constant: the need for man to have a home, an abode, a refuge. The children were invited to sit on the floor

next to the igloo they liked best and were involved in a collective discussion: which of the two igloos seems more comfortable? Which of the two houses seems safer? In which of the two houses do I want to live? How do I feel about this artwork, in this room? Then children were invited to reflect individually, without having to provide a response to the group. At the end of the activity, they did the test.

## Measures

To understand the Restorative attributes perceived by the children during the game, we used the Perceived Restorativeness Scale-children (PRS-ch), designed for school children (Berto, Pasini and Barbiero, 2015) (see Appendix 2). The scale was inspired by Kaplans's theories, based on the ART and the adult version of the PRS. The PRS-ch measures children's perception of the restorative attributes of a place. It consists of 17 items describing four restorative factors: Being away, Fascination, Coherence, and Scope. Preference was assessed as well, for a single item. A four-point scale was used (from 0 to 4, where 0= "completely disagree" and 4= "completely agree").

To investigate the moderating role of Restorativeness on the involvement in the Cultural Community, we correlated the R results with the CC outcomes, specifically the relationship between R and the three aspects of negotiation observed during the "Negotiation drawing" before and after the visit: Communication, Compromise and Cooperation. To measure these three aspects, an *ad hoc* observation grid was used.

## RESULTS

### Restorative factors

Our primary interest was to explore the level of Restorativeness perceived by the children during the museum visit. The perceived Restorativeness level was quite high for two of the three environments, the Dome and the Gallery, while the third environment, the Bridge, had a slightly lower level (Table 1).

**Table 1.** Mean level of the Perceived Restorativeness Scale (PRS) in the three museum environments (N=41)

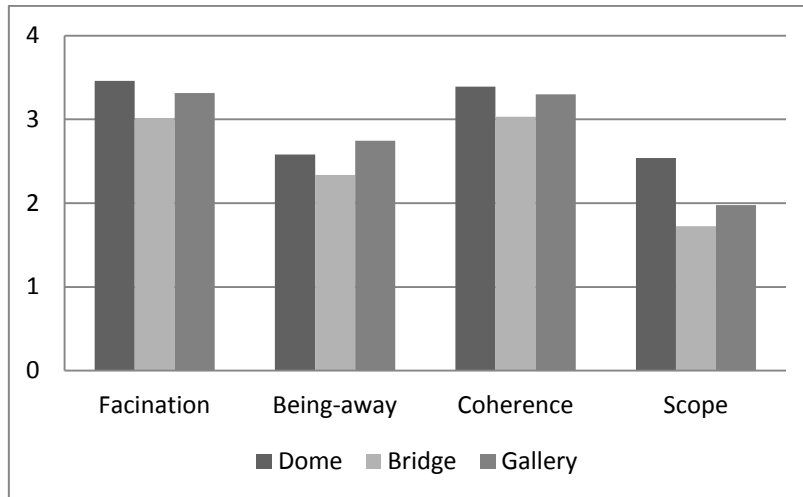
PRS level		
	Mean	St Dev
<b>Dome</b>	<b>3.03</b>	<b>0.4</b>
<b>Bridge</b>	<b>2.63</b>	<b>0.8</b>
<b>Gallery</b>	<b>2.95</b>	<b>0.8</b>

To test whether the perceived Restorativeness differed in the three environments, a repeated measure ANOVA was run, considering the three different spots as the within subject factor. The results showed a significant effect of the environment ( $F(2,78)=11.053$ ,  $p<.001$ ); the post hoc analysis highlighted that the Bridge was the least restorative environment, and the Dome and Gallery were equally restorative ( $p_B<.001$ ). Effect size was from medium to large: Cohen's  $d$  was 0.694 for the difference between the bridge and the dome and 0.827 for the difference between the bridge and the gallery.

In a second step, we decided to consider the four restorative factors separately for each spot in order to understand which was the most and which the least restorative factor in the children's Museum Experience. Fascination and Coherence seem to be the two most prominent factors; Scope was the least prominent factor for all locations (Table 2 and Figure 1).

**Table 2.** Mean level of each restorative factor in the three museum environments (N=41)

	Fascination	Being-away	Coherence	Scope
<b>Dome</b>	<b>3.46</b>	<b>2.58</b>	<b>3.39</b>	<b>2.54</b>
<b>Bridge</b>	<b>3.01</b>	<b>2.34</b>	<b>3.03</b>	<b>1.73</b>
<b>Gallery</b>	<b>3.31</b>	<b>2.75</b>	<b>3.30</b>	<b>1.98</b>



**Figure 1.** Mean level of the four restorative factors in the three museum environments (N=40)

To test whether these differences are statistically significant, a repeated measure ANOVA 3x4 was run, with two within factors: the “environment” (with three levels: Dome, Bridge, Gallery) and the “restorative factor” (with four levels: Being-away, Fascination, Coherence, Scope). The main effect of environment was significant:  $F(2,78)=12.23$ ,  $p<.001$ ,  $\eta_p^2=.24$ . This result depends on the fact that the Bridge was the less restorative environment (see the previous result).

The main effect of “restorative factor” ( $F(3,117)=48.00$ ,  $p<.001$ ,  $\eta_p^2=.55$ ) is due to the lower level of Scope (2.1), followed by Being-Away (2.6), Coherence (3.2) and Fascination (3.3).

In addition, the interaction “environment” x “restorative factor” was significant, albeit with a small effect size:  $F(6,234)=3.69$ ,  $p<.01$ ,  $\eta_p^2=.09$ . Descriptive statistics showed that the dome had the highest level of restorativeness for all restorative factors except Being-away, where the Gallery had a higher evaluation. As shown in Figure 1, the PRS measures restorativeness in descending order: for the Dome, followed by the Gallery, and finally the Bridge. This is true of every PRS factor, except Being Away (B-A), which is slightly higher in the Gallery. An interaction effect is produced by the Scope that seems to be much higher in the Dome than in the other two spaces.

At the end of the visit, the children drew their "Museum Experience", and the choice of which environment they decided to draw was compared with the Preference levels. The drawings were classified according to the environment represented by the children:

<b>Subject</b>	<b>No of Drawings</b>
Dome	9
Bridge	10
Gallery	12
Museum x	10

The results show that children drew the three environments equally, and their choice was evenly distributed over the Dome, Bridge, Gallery and Museum x (added for children who represented the museum as a generic place: a building viewed from the outside).

Table 5 shows the place preference evaluated with the expression "I like this place" (Table 5). Although the Dome was the least chosen subject, it was experienced as the favourite spot.

**Table 5.** Mean level of environmental preference in the three museum environments  
(N=40)

<b>Environmental preference</b>		
	<b>Mean</b>	<b>St Dev</b>
<b>Dome</b>	<b>3.65</b>	<b>0.6</b>
<b>Bridge</b>	<b>3.25</b>	<b>1.1</b>
<b>Gallery</b>	<b>3.58</b>	<b>0.9</b>

Drawings were not by an individual child but by two children in a pair, and the choice of what to draw was partly negotiated.



## **The moderating role of Restorativeness in the improvement of children's Cultural Community practice**

An interesting point of our research concerns the role of restorative benefits in encouraging children's Cultural Community practice; we know that CC increased from the pre-visit level to the post-visit level, in terms of Negotiation skills: communication, compromise and cooperation. Now, the result of the moderating role of Restorativeness on involvement in the Cultural Community shows that improvement occurred only for the indicator "compromise skills" and not the other two parameters. As stated in the introduction to this thesis under "Research aims", we were interested in exploring the moderating role of the perceived restorativeness of the Museum Experience on the involvement in the Cultural Community. We assumed that a high level of perceived restoration would increase the benefits of the visit on CC. This could be expected on the basis of the positive effect of restorativeness both on cognitive and social aspects. Actually, restorativeness is more associated with attentive than social processes; for example, stress recovery theory (SRT: Ulrich, 1983; Ulrich et al., 1991) concerned with restoration after the stress experienced when an individual is confronted with a situation that is perceived as damaging to well-being, or attention restoration theory (ART: Kaplan, 1995; Kaplan and Kaplan, 1989) focused on restoration after attentional fatigue. So we were unsure if this moderation effect (restorativeness as an amplifier) was real.

The sample was divided on the basis of the level of Restorativeness felt by the children into the total score (PRS) and individual factor scores (Fascination, Being-Away,...). The two groups of children represented a high level and low level of perceived restorativeness. We decided to explore this effect only in relation to the Dome and the Gallery, because the data collected showed that the bridge is an exception for visitor outcomes due to the extreme physical and mental feelings (such as fear or excitement) it provokes.

A series of mixed ANOVAs 2x2 were performed, considering "time" as the within factor (with 2 levels: CC1 and CC2) and the level of PRS as a between factor (with 2 levels: High PRS and Low PRS). This analysis was carried out separately for the two environments. Negotiation skills was the dependent variable, with the three types of skill considered separately. Only one moderation effect was found for Being Away and Compromise, in the "indoor" environment (the Gallery). This showed that all children had a higher level of Compromise skills after the visit than before.

## Discussion

Research indicates that undoubtedly the MART environment possesses restorative attributes. The test results showed that children clearly perceived Fascination stimuli during the visit in all the environments considered. In particular, the Dome received the most appreciation, reaching the highest score for three of the four factors: Fascination, Coherence and Scope. This outcome may be due to the design characteristics of the Dome environment: an open space, bright, spacious, inviting exploration. On the other hand, the Bridge appeared to be the least restorative location with the lowest levels for all four restorative factors, probably because of the limitations of the physical space: narrow, high above a void, where movement is impossible, devoid of elements for interaction. For the Bridge, the restorative factor with the highest score was Coherence (slightly higher than Fascination). This result is probably due to the statement: "15. In this place, it is easy to see what's around me". Due to its elevated and central position, the environment provides an open view of the various exhibition galleries all around. We argue that this result could be an effect of Nasar's Visual Quality (2008).

Scope was the least prominent attribute (equal to Being Away for the Dome). Scope was assessed by two items: 6 - "In this place I am free to play, run and move" and 8 - "This place is big enough to be explored". This result is not surprising: to move freely, run, play, are not the kind of actions open to visitors in a museum. The Dome, where children perceived a higher level of freedom to move around the square, was an exception.

Surprisingly the Gallery scored highest in terms of Being Away. This result may be due to the fact that the gallery was the only space where the learning activity included the observation of an object, the artwork. Because of this, in the exhibition galleries, children were much more focused on something beyond themselves. The other two environments engaged children with a learning activity much more associated with the perception of their own presence in the museum space.

Finally, our research confirms the relationship between Restorativeness and museums (Packer and Bond, 2010), noting a significant overlap between museum attributes and those suggested by Kaplan (1995) for a restorative experience. The findings indicate that for most children, museums provide insights into the factors that contribute to well-being. Our research supports the idea of museums as places that contribute to a visitor's sense of relaxation, peace and calm, or thoughtfulness; "as a result of their visit... some reported having gained a renewed ability to deal positively with life." (Packer et al., 2002, p. 4).

In relation to the moderating role of Restorativeness in the improvement of children's involvement in the Cultural Community, no significant effect was found. The improvement in Compromise skills is a relevant result because it represents the willingness to give something up, make exchanges, and address others' needs in order to achieve one's goals. This skill is the most representative negotiation activity. The Gallery was the environment with the strongest correlation with the improvement in Compromise skills with the highest score for Being Away. We assume that the presence of artworks helped children to live the sensation of escape, refuge, a break from the routine of daily life, and also enhanced the interpretation, negotiation and meaning-making process. There was no noticeable moderation of the restorative effect of the CC visit. The results are poor and can be considered accidental, due to the small visitor sample size. Restorativeness, affecting attention and stress, tested positively for most children during the visit, but there is no reliable evidence that restorative feelings contribute to the improvement in Negotiation skills and consequentially involvement in the Cultural Community.

### **Unexpected results: "The bridge effect"**

In relation to the preference for place, the high number of drawings representing the Bridge indicates that the Bridge environment was appreciated by the children as much as the others, although didn't represent a restorative experience.



Little attention was devoted to the emotional effect of the Bridge on the children. The Bridge was shown by the PRS to be the least restorative location was highly appreciated by the children. There is a contrast between the PRS Preference and what they actually drew, suggesting that the children did not agree on the restorative characteristics of the Bridge. How should the appreciation of the Bridge by the children during the visiting experience be interpreted in relation to the PRS test results? Obviously, a place can be appreciated

without being restorative, by virtue of other characteristics. To answer this question, we analyzed the drawing in order to understand what kinds of feeling children lived during the activity.

Although the bridge was scary and gave some children a sense of vertigo, the activity was great fun for the children. The drawings show details of all the elements involved in the bridge discovery: the structure, the staircase, classmates, the pieces of papers launched into the void and under the bridge, a tree sculpture. Despite authorization by the MART Educational office to throw the pieces of paper off the bridge, the gesture provoked a soft reaction from security staff who came up to complain. In particular, the security staff told the children it would be difficult to remove the pieces of paper from inside the statue of the hollow tree trunk. In the larger framework of the bridge environment, this episode raised the adrenaline and excitement of the children. These two feelings were clearly impressed on their memory and consequentially came out in their drawings.

Therefore, it can be assumed that the Bridge experience provoked strong emotional and contrasting feelings, not of a restorative nature but nonetheless positive. Russell (2003) suggests the key to understanding people's response to the environment is through emotion. He describes the concept of *Environmental affect*, comprising two main components: pleasure and arousal, subsequently described as "core affect" (Russell 2003). Affective reactions to place can be described by a model of emotion (Russell, 1988) based on contrast: pleasant/unpleasant, stimulating/sleepy. Affective qualities, described by an adjective, are based on a combination of these two dimensions: "exciting" is the combination of stimulation and pleasure (Roe, 2008). Indeed, the Bridge is not a restorative environment, it was not comfortable or relaxing, but it was exciting. It was interesting and attractive precisely because of the vertigo, the height, the void and, of course, the transgressive (albeit permitted) behaviour.

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# Chapter III. EMOTIONAL COMPETENCE

## Expressing feelings about a museum visit

### INTRODUCTION

"Museums are emotional places. We find emotions in the interactions between visitors as they move around, discussing the exhibitions and displays, or as they chat over coffee in the museum café. We also find emotions in the interactions between visitors and museum objects themselves, we often speak of loving certain exhibitions, whilst hating others. Emotions are also present in backstage areas where curators and conservators look after objects that they often care deeply about. Yet exactly how emotions fit into our understanding of museums are, as yet, far from clear" (Munro, 2014, p. 44). Recently, thinking about new community involvement strategies, museum professionals have tried to offer learning programmes about emotions as a way of involving the audience. Suddenly, due to a lack of clear guidelines about the dynamics of emotional involvement in museum learning, quality became an issue, and prompted museum professionals to pay more attention to their aims, contents and procedures (Bennett, 2005). The emotional element in museum programmes has highlighted the complexity of planning visitors' responses to museum spaces, exhibitions, contents and messages. Although this trend has become strong in museum learning, few Museum Studies have attempted to create a theoretical framework to analyze the phenomenon. Mastandrea and Maricchiolo (2016) discovered that the most common emotions associated with museum visits were curiosity, interest, and pleasure; however, emotions varied according to the kind of museum with aesthetic enjoyment for ancient art, aesthetic enjoyment and interest for modern art, and fun and curiosity for science museums.

The discussion among museum professionals is ongoing, with research slow to keep up. The little literature available is "focused predominantly on those heritage sites and museums that seek to bring about emotional responses in visitors; for example, museums devoted to understanding painful or difficult historical events" however, "emotions are

also important in the everyday experience of museum visiting and feature in the most ordinary and unexpected settings" (Munro, 2014, p. 45).

Contemporary psychological studies focus on how people learn to recognize emotions and develop social awareness. Our study considers the museum environment one that can prompt and improve visitors Emotional Competence (EC), applying techniques inspired by Socio Emotional Learning.

Some researchers have critically reviewed Emotional Intelligence (EI) and its role in the educational and school context; they showed that many programmes are not specifically designed to scientific guidelines, and rarely meet validity requirements. Consequently, they have pointed to several crucial issues that need to be addressed prior to developing and implementing EI programmes, responding to the need in specific guidelines for development, implementation and evaluation for future EI programmes (Zeidner, Roberts, and Matthews, 2002). Despite this, the tendency to incorporate the notion of Emotional Literacy into school programmes seems to have a positive influence on problem student behaviour (Liau, Liau, Teoh, and Liau, 2003). The theories and methods used to analyze Emotional Competence, Emotional Intelligence and Emotional Literacy lack clarity, with prolific scientific production proving detrimental to the quality of the knowledge produced. The relevance of 'emotional literacy' and 'emotional intelligence' to education has become a subject of considerable interest to educationalists and policy-makers. There is "a need to draw a distinction between projects that are about instructing young people in how to manage their emotions so as to improve their social behavior, and those that aim instead to help young people develop levels of emotional understanding that will motivate their desire to learn, enhance their general awareness and stimulate their capacity to engage with questions of values and spirituality" (Park, 1999, p.19).

## **OVERVIEW**

In this chapter, we argue that Emotional Competence is central to the practice of museum learning, because it affects the way the visitor perceives the museum environment and hence learning. Contemporary museums are increasingly concerned with the ways in which their exhibitions and learning programmes can contribute positively to social objectives, and in recent years particular focus has been dedicated to the ways in which museums can add to the visitor's emotional wellbeing. With an aging population and emerging policies on



the social responsibilities of museums, the sector is facing an unprecedented challenge in how to develop services to meet the needs of its communities in a more holistic and inclusive way (Camic and Chatterjee, 2013).

Museums are playing an increased role in improving health and well-being and there is evidence that engaging with museums provides positive social experience. Visits reduce social isolation, decrease anxiety, increase positive emotions (optimism, hope and enjoyment) and the sense of identity, inspiration and creativity (Chatterjee and Camic, 2015). Much of this suggests that emotional involvement may be beneficial to individuals who can be considered special audiences, because research indicates that cultural activities have an impact on a visitor's self-confidence and social integration.

In relation to emotional involvement in the Museum Experience, the feeling most often mentioned is empathy. In museum learning programmes, empathy is considered a common and easy instrument to involve visitors in museum content (Vinitzky-Seroussi, 2015; Williams, 2007; Young, 1993). Although in recent years there has been more interest in empathy dynamics, in Museum Studies, as in the larger philological field, there is still no clear consensus about what precisely empathy is. In recent years 'empathy' has attracted scientific attention in various academic areas, and it is difficult to distinguish the concept from other types of emotional involvement such as identification, concern or solidarity; furthermore, empathy, compassion and moral behaviour are intimately related (Arnold-de Simone, 2013). Researchers also disagree about its role. Is empathy a question of sharing another's feelings, or caring about another feeling? Is it being emotionally influenced by another's feelings though not necessarily experiencing the same situation? Museum storytelling seeks to prompt empathy by inviting visitors to image themselves in another's situation, or to image themselves as someone else. Our research did not try to sort this confusion in the Humanities, taking it, according to Lipps (2002) as the ability to understand others. According to Lipps, there are three distinct domains of knowledge: perception, introspection and empathy.

Over the last thirty years, the concept of Emotional Competence has been discussed by many psychologists and the debate still rages. Denham (1998) identifies for Emotional Competence three basic skills already demonstrable at preschool age: expression, comprehension and control. Children begin to develop Emotional Competence early (Denham, 1998): from primary emotions (joy, sadness, fear, anger), to secondary emotions, (pride, shame, guilt) (Raccanello, Brondino, and De Bernardi, 2013). The topic is central

for child development because skills such as experiencing and expressing one's emotions and recognizing others' emotions are fundamental for successful social interactions by children. These skills and attributes play a significant role in children's development, learning proper behaviour to relate to themselves, parents, teachers, other children and society as a whole.

Denham (2007) describes the main elements of Emotional Competence as follows:

- Awareness of emotional experience, including multiple emotions;
- Discernment of one's own and others' emotional states;
- Emotional language usage;
- Empathetic involvement in others' emotions;
- Regulation of avers or distressing emotions;
- Realization that inner and outer emotional states may differ;
- Awareness that social relationships are in part defined by the communication of emotions,

Halberstadt, Denham and Dunsmore (2001) developed a theoretical model for *Affective social competence* (ASC). The concept comprises three integrated and dynamic components: sending affective messages, receiving affective messages, experiencing affect: "We define affective social competence as the efficacious communication of one's own affect, one's successful interpretation and response to others' affective communications, and the awareness, acceptance, and management of one's own affect" (p. 48).

In the 90's Salovey and Mayer develop the concept of Emotional Intelligence, "a type of social intelligence that involves the ability to monitor one's own and others' emotions, to discriminate among them, and to use the information to guide one's thinking and actions" (Salovey and Mayer, 1989, p. 187). For them the purpose of emotional intelligence was the expression of emotions (verbal and non-verbal), their regulation in oneself and others, and the utilization of emotional content in problem-solving situations. After further research, their definition of EI evolved into "the capacity to reason about emotions, and of emotions, to enhance thinking. It includes the abilities to accurately perceive emotions, to access and generate emotions so as to assist thought, to understand emotions and

emotional knowledge, and to reflectively regulate emotions so as to promote emotional and intellectual growth" (Mayer, Salovey and Caruso, 2004).

The last EI model includes four types of ability:

- Perceiving emotions, the ability to identify one's own emotions;
- Using emotions, the ability to harness emotions to facilitate various activities;
- Understanding emotions, the ability to comprehend emotive language;
- Managing emotions, the ability to regulate emotions in both ourselves and in others.

In reality, the concept of EI has been strongly criticized in the last decade. The term became popular with the publication of Goleman's best seller: *Emotional Intelligence – Why it can matter more than IQ* (1995), assuming that Emotional Intelligence has a role in the workplace environment, affecting leadership, team performance, work motivation and business success. This is not a topic addressed by our research.

Social and emotional learning (SEL) is the process through which children and adults acquire and effectively apply the knowledge, attitudes, and skills necessary to understand and manage emotions, set and achieve positive goals, feel and show empathy for others, establish and maintain positive relationships, and make responsible decisions. This process is globally represented by The Collaborative for Academic, Social, and Emotional Learning (CASEL), an organization advancing of promoting and integrated social and emotional learning for all children from preschools to high school (Beland, 2007). Casel interpreted Emotional Competence as possessing five core skills:

- Self-awareness: the ability to accurately recognize one's own emotions, thoughts, and values and how they influence behavior.
- Self-management: the ability to successfully regulate one's emotions, thoughts, and behaviour in different situations.
- Social awareness: the ability to take the perspective of, and empathize with, others.
- Relationship skills: the ability to establish and maintain relationships with diverse individuals and groups: the ability to communicate emotions clearly, listen well.

- Responsible decision-making: the ability to make constructive choices about personal behaviour and social interactions based on the realistic evaluation of the consequences of various actions, and a consideration of the well-being of oneself and others.

## AIMS

Our research aimed to verify through an empirical study, in children, how Museum Experience (ME) increases their involvement with of the Cultural Community (CC) practices. We sought to evaluate children's EC levels before the museum visit, and to verify whether Emotional Competence acts as a moderator in the positive effect of Museum Experience on children's involvement in a Cultural Community (see Chapter I). We tried to figure out if children's initial emotional competence could in any way influence visits outcomes. Children who have more positive profiles of Emotional Competence (EC) are more successful in the positive social and learning process (Birch, Ladd, and Blecher-Sass, 1997). We examined the hypothesis that a more emotionally skilled child benefits more from visiting a museum than a child with little emotional skill. To test this hypothesis, we compared the levels of emotional competence with the results obtained from children in Chapter I relating to the Cultural Community (specifically the three negotiation skills).

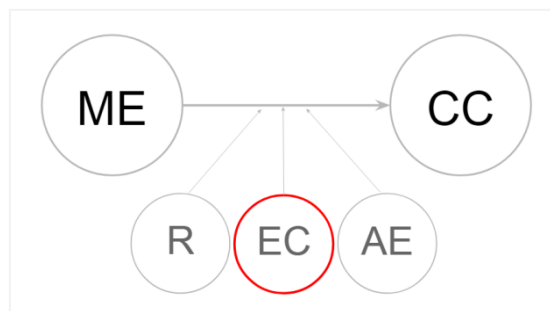


Figure 1: the role of Emotional Competence (EC) in the research model.

Children's Emotional Competence was assessed before the visit through a game activity in the classroom. The children were involved in an activity in which they had to recognize and express their emotions. We wanted to understand their awareness of emotions and the ease or discomfort they felt when talking about emotions. EC was not investigated further

during and after the visit because the project was already large, complex and difficult to manage in a short period. However, we did take advantage of the MART research setting to verify if the issue could be looked into at more depth in the future.

## METHOD

### Participants and procedure

The research involved 41 children from two primary school classes in Rovereto (Italy), mean age 8.3 years (20 males, 21 females). Children were guided in a "Mime game", in which they challenged themselves to reproduce and recognize emotional attitudes and behaviour (30 minutes). Then the children filled in an open-ended questionnaire designed by the research team.

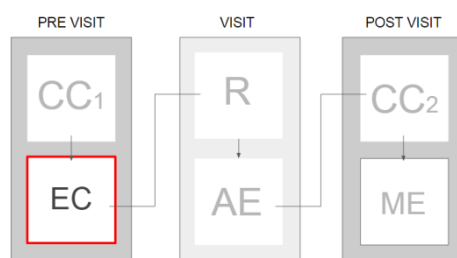


Figure 2: the position of Emotional Competence (EC) in the research procedure.

### PRE-VISIT ACTIVITY: "Mime your emotions!"

The instrument used aimed to foster a class discussion of emotions, within the SEL theoretical framework. Educard is an Educational game created for the development of emotional skills by a team of researchers from the "Call them emotions" project, coordinated by Davide Antognazza and Luca Sciaroni, Professors of Developmental psychology at DFA - Department of training and learning (SUPSI - Scuola Universitaria professionale della Svizzera Italiana). The game consists of 40 illustrated cards, representing 4 children in everyday emotional situations. The game is designed as a tool for the development of emotional skills in schools, and is distributed free to all teachers of Italian Switzerland. Educard is inspired by the Social and emotional learning (SEL) theory. This movement enhances the students' capacity to integrate emotional skills, attitudes, and behaviors to deal effectively with daily school tasks.

The Educard session is designed to encourage personal reflection in children and discussion by providing the opportunity to talk with one another and with educators about emotions. This kind of playful interaction was fostered by a supportive space. It is also seen as able to help children to learn from each other and make sense of emotional experiences together, to help them to prepare them for future challenges, and raise the self-confidence they need.

Children are introduced to the topic of emotions. The researcher asks children if they know what an emotion is, if they have ever felt an emotion and if they want to give a few examples of episodes, stories or memories to their companions. The conversation was very spontaneous; there were no right or wrong answers. The researcher then showed the children Educard, explaining that each card represented a child who feels a specific emotion: sadness, joy, anxiety, fear... The class then played the "Mime game". The children's class was divided into two smaller teams. The two groups sit on the floor facing each other. In turn, in each group a child stood up in front of his/her companions to mimic the emotion on the card silently received from the researcher. Obviously, the child could only mime with facial expressions or body movements; speaking and making sounds was not allowed. The child's team then guessed the emotion acted out by the child. Children often tried to describe the emotion with phrases, or used adjectives (sad, joyful, anxious) but they were asked to provide the noun (sadness, joy, anxiety). All the children were called on to mime a card once or twice, by themselves or in pairs. After the "Mime game", we asked to children to fill in an open-ended questionnaire.

## **Measures**

The questionnaire was filled in individually; we asked children to respond sincerely; if they had questions they could ask the three researchers and the class teacher. To measure Emotional Competence, we created an *ad hoc* instrument: an observation grid with 10 questions (see Appendix 4), divided into the three Emotional Competence skills, as follows:

- Self-awareness (Questions 2, 6),
- Relationship skills (Questions 3, 4, 5, 7),
- Social awareness (Questions 8, 9)

We used a 3-point scale for the answers (1=no/never, 2= sufficiently/enough, 3= yes/always).

To investigate the moderating role of Emotional Competence on involvement in the Cultural Community, we correlated the EC results with CC outcomes, specifically the relationship between EC and the three aspects of negotiation observed during "Negotiation drawing" before and after the visit: Communication, Compromise and Cooperation. To measure these three aspects, an *ad hoc* observation grid was used.

## **RESULTS**

### **Emotional Literacy**

During data analysis of the answers on the observation grid, we separately assessed the first question (Look at the boy/girl in the picture. What emotion does he/she feel?) as an indicator of emotional literacy (the ability to verbally describe emotions and to distinguish feelings), dividing the answers into three groups:

- The child answered with a noun
- The child answered with an adjective
- The child answered with a sentence

This choice was determined by the discovery during Pre-visit activities that not all the children possessed an appropriate emotional vocabulary. Table 1 shows the answers separately for boys and girls. The most frequent category is “noun” meaning that children - mainly girls - were able to describe their Educard emotion properly.

When the children were asked whether they had ever tried to communicate this emotional feeling to other people, and when they felt it, 28 (22 girls) said “yes”, and 13 (7 girls) said “no”.

**Table 1.** Breakdown of responses for boys and girls

<b>Emotional Literacy</b>			
	<b>boys</b>	<b>girls</b>	<b>total</b>
<b>Noun</b>	9	16	25
<b>Adjective</b>	6	3	9
<b>Sentence</b>	5	1	6

### **The moderating role of Emotional Competence in the improvement of involvement with the Cultural Community**

The main aim of this research was to explore the possibility that a museum visit experience makes the children more aware of their involvement with a Cultural Community. We assumed that emotions play an important role in this process and so decided, given the results in Chapter 1, that the constructs best reflecting this sense of involvement are Negotiation skills. However, the data shows that only one of them, Communication Skills, was relevant in the moderating process.

This subsection seeks to answer the following questions: What happens to the enhancement of communication skills if the Emotional Competence of children is considered? Does a high level of Emotional Competence increase enhancement? Does a low level of negative Emotional Competence stifle enhancement?

To try to answer these questions we divided the sample on the basis of the level of children's Emotional Competence, using the median of each distribution for the three kinds of Emotional Competence: Self-awareness, Relational skills, and Social awareness. Two groups of children – one with a high and the other with a low level of Emotional Competence – were created for each skill. For the following analyses, a series of mixed ANOVAs 2x2 were carried out, with “time” as the within factor at two levels (pre- and post-visit) and the “group” (high and low level of Emotional Competence) as the between factor, and communication skills as the dependent variable. We also report eta-squared values as a measure of the effect size. A different ANOVA was performed for each Emotional Competence.



The first analysis concerned the effect of self-awareness, i.e. the ability to accurately recognize one's own emotions, thoughts, and values and how they influence behaviour. The second analysis concerned relational skills, i.e. the ability to establish and maintain relationships with diverse individuals and groups, and the ability to communicate emotions clearly, and to listen well. The third analysis concerned social awareness, i.e. the ability to take the perspective of, and empathize with, others.

Table 2a, 2b and 2c shows means, standard deviation, and ANOVA results for each of the three different aspects of Emotional Competence: self-awareness, relational skills and social awareness.

**Table 2.** Means, standard deviations and ANOVA results for high level and low level of self-awareness (a), Relational skills (b) and Social awareness (c).

a)

**Communication Skills**

	PRE	POST	ANOVA
<b>Group for Emotional Competence (Self Awareness)</b>	M (SD)	M (SD)	F <sup>a</sup> ( partial $\eta^2$ )
Low level ( <i>n</i> =22)	2.67 (.58)	2.80 (.43)	1.30
High level ( <i>n</i> =19)	2.59 (.65)	2.86 (.46)	4.99 (.11)*

<sup>a</sup>GdL = 1,39.

\**p* ≤ .05.

b)

**Communication skills**

	PRE	POST	ANOVA
<b>Group for Emotional Competence (Relational skills)</b>	M (SD)	M (SD)	F <sup>a</sup> ( partial $\eta^2$ )
Low level ( <i>n</i> =22)	2.59 (.59)	2.71 (.57)	1.09
High level ( <i>n</i> =19)	2.68 (.63)	2.96 (.13)	5.55 (.12)*

<sup>a</sup>GdL = 1,39.

\**p* ≤ .05.

c)

### Communication skills

	PRE	POST	ANOVA
<b>Group for Emotional Competence (Social Awareness)</b>	M (SD)	M (SD)	F <sup>a</sup> ( partial $\eta^2$ )
Low level ( <i>n</i> =27)	2.70 (.45)	2.84 (.39)	1.98
High level ( <i>n</i> =14)	2.50 (.83)	2.79 (.54)	4.34 (.10)*

<sup>a</sup>GdL = 1,39.

\**p* ≤ .05.

In all three cases, no interaction effect was found, but the simple effects prove that only for the group with a high level of Emotional Competence, relating to self-awareness, relational skills and social awareness, was the enhancement of communication skills significant. This means that Emotional Competence has an important role in enhancing the positive effect of the museum visit experience on communication skills.

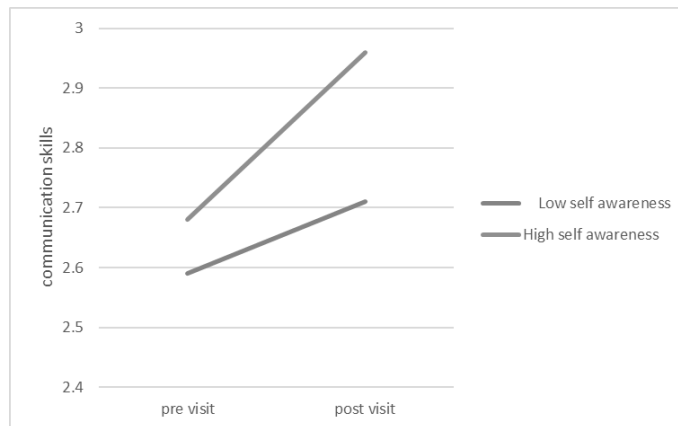


Figure 1a

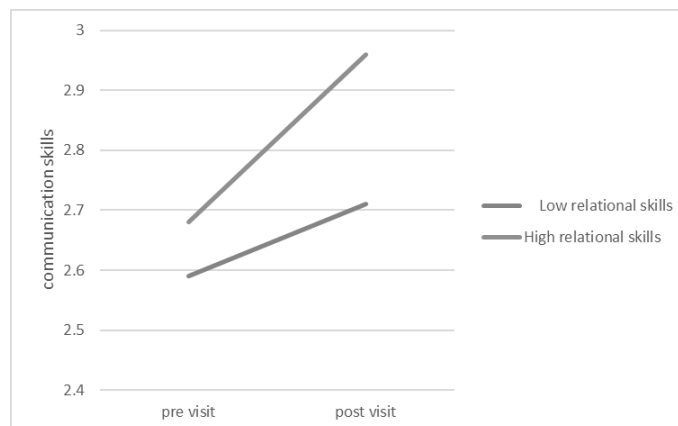


Figure 1b

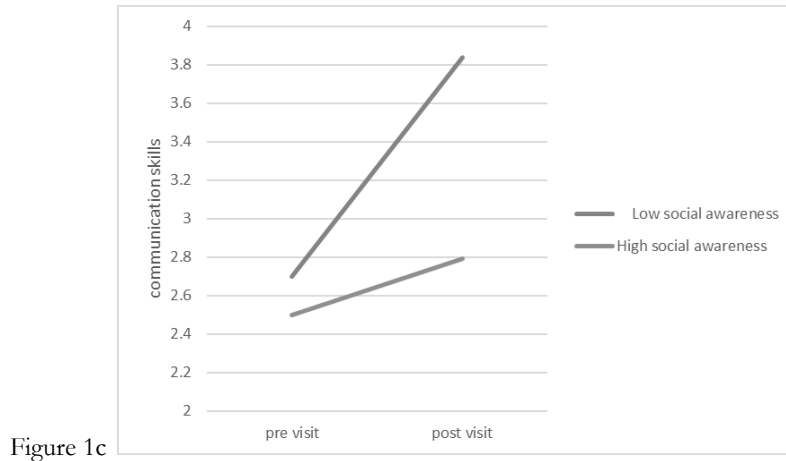


Figure 1c

**Figure 1.** Level of Communication Skills before and after the Museum Experience, for the two groups of children (High and Low level of Emotional Competence: a=self-awareness; b=relational skills c=social awareness)

## DISCUSSION



With the first question, we sought to understand if children were able to call emotions by their proper names. The correct way to answer the question was with a noun: joy, anger, sadness, serenity, embarrassment... This was accomplished only by half the children. Many chose an adjective: "tranquillo" (calm), "sereno" (untroubled), "felice (happy)...", others tried to describe the card with a sentence: "sta provando che è arrabbiato" (he is angry), "il bambino ride fuori" (the child is laughing).

It was interesting to analyze the result of question 3: "Quando l'hai provata [l'emozione] hai cercato qualcuno a cui raccontare come ti sentivi?" (Did you try to communicate what you

felt to someone else?). Half answered "Yes", half "No". Of the "Yes", twenty-two of the twenty-eight children were girls. Talking about emotions seems to be a female prerogative. The results show that a great deal of work needs to be done on Emotional Competence skills. This part of the research suffers from a lack of appropriate guidelines on theory, methods and tools.

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## **Chapter IV. ACHIEVEMENT EMOTIONS**

### **Measuring achievement emotions in the museum learning setting**

#### **INTRODUCTION**

Due to the many similarities, the museum context can definitely be considered a place of learning on a par with schools. To investigate the dynamics that associate emotions with the learning process, our museum research tested theoretical models already widely used in school learning contexts (defined as "traditional", i.e. in the classroom). In line with "control-value" theory (Pekrun, 2000), learning is associated both with the value that the child attaches to a task, and to the control that he/she can exert over the task itself. These two aspects result in different emotions defined specifically as Achievement Emotions (Pekrun, 2006), which affect performance. In the framework of Museum Experience, we examined the emotional outcomes of the visit learning processes.

#### **OVERVIEW**

Our study considers children's emotions during the museum learning process, applying the instruments of Educational Psychology generally used to evaluate school settings: this approach is an absolute novelty in contemporary Museum and Visitors studies. The motivational factors behind the choice of this topic include the wish to clarify the role of emotion in the museum learning experience. Museum Studies have never engaged in a clear debate on emotional involvement through visiting experience, although numerous studies in the last twenty years have circled around the topic.

In 2002, Pekarik launched a reflection in the Curator Journal on the mental state involved in museum learning: "The mental state involved in emotionally responding to the object can be very different from the mental state involved in reading and thinking. While our desire to effectively facilitate meaning pushes us to emphasize communication through language, many Museum Experiences are firmly rooted in feelings that are not enhanced by

words." (p.263). Pekarik's intention was to highlight the emotional response to a museum exhibit, suggesting that the visitor's learning process could be much more about "feeling" than "thinking" or "explaining". Hooper Greenhill (2007) affirms that while learning in a museum, "mind and body work together"; it is clear that children experience the visit as "a physical experience, which engages their feelings and emotions and allows their minds to open up to new ideas" (p. 165). Robert (1991, 1992) pays attention to visitors' affective responses to their Museum Experience: sudden comments like "I really enjoyed it!" "I had fun", "It was boring", "That visit really moved me". Affective responses can also be demonstrated in visitors' physical behaviour such as the continuous or recurrent observation of an object. Some behaviour indicates an affective engagement by returning to look at an object, showing it to someone else, discussing its value and comparing opinions with others.

In relation to museum learning goals, Museums and Visitor studies should take an interest in this topic, because emotions have a large impact on student motivations and performance, as well as on their health and well-being (Pekrun, 2006). Starting from this simple consideration, we focused our study on children's emotional involvement during the museum learning process: what emotions are experienced by students in museum learning and achievement settings? Museum learning offers many positive outcomes compared to the conventional school setting: the tangibility of experiences, the opportunity to access culture and feelings through the senses, combined with the perception of one's presence in a large and diversified community of learners; the museum can be a powerful teaching tool, especially for students who find more traditional approaches difficult (Hooper - Greenhill, 1994).

The findings presented here show that museum emotions may be central to the development of children's interests, motivation and effort in learning (Pekrun, 2006). In addition to the potential academic and intellectual contribution of this work to museum research, the findings of this study have a number of practical implications for those involved in the museum professional (management and marketing). Museums can emphasize how visitors feel about their learning experience, and rethink the services delivered. It is time for museums to consider both the cognitive and emotional aspects of visitor experiences in designing and planning their learning programmes (Del Chiappa, Andreu, and Gallarza, 2014).



### **Affective learning in the museum setting**

Why should museums be concerned about learning theories? Because the museum is a place of learning and visiting is a learning activity. Every time a museum develops a new exhibit, thinking of the best way to transmit content to its audience, it applies learning theories. The Museum's educational team needs to reflect on the possible connection between learning practices (ensuring that all learning programmes are delivered in line with the museum's mission) and research on new and successful learning trends (Kelly, 2007). Defining museum learning is a challenge: it is a fluid concept in an interdisciplinary field. In her PhD thesis on visitor learning identities, Kelly (2007) investigates the meaning of museum learning for visitors: "Research has shown that when asked why they visit museums people often say "to learn" but there has been little exploration into what this means. What do museum visitors think learning is? How do visitors view themselves as learners within the context of a museum visit and does this change during and after their visit?" (Kelly, 2007; p. 2). Research into motivations and expectations from a museum visit reinforce the importance of learning as both a key motivator and a measure of satisfaction in the visiting experience (Packer and Ballantyne, 2002).

It is hard to categorize museum learning approaches: a wide range of methods exists, depending of traditions, museum type, exhibits, contents and audiences. Museum learning takes many forms. We know for example that the Museum Experience no longer concerns formal learning: historically a visit was delivered by trained guides in a systematic way, within temporary or permanent exhibitions, but in recent decades an informal learning approach has become more and more popular.

Hein (1998) focuses on the Discovery learning approach, a technique of inquiry-based learning with a constructivist approach to Education. Inquiry-based learning occurs whenever the visitor is not provided with an exact answer, but with the information and instruments to find the answer themselves. Inquiry-based learning starts by asking questions, considering problems or scenarios, rather than simply by presenting facts or information. The process is often assisted by a facilitator, in the museum context, usually an educator/mediator/guide. Discovery learning became common in museum contexts with children's learning programmes because they actively involve the visitor (Falk and Dirking, 2000). However, there has been some criticisms of this approach in museums: for

some it pushes learners towards what we want them to learn, a sort of "unwired learning", limiting the free exploration and interpretation of the exhibit.

Recent theories have encouraged Museum Education to embrace free-choice learning practice (Falk and Dierking 1998) where learners themselves have a real choice regarding what, where, when, how, and with whom they learn. In free-choice learning, choice makes the difference between learning that is voluntary or involuntary. People acquire the knowledge important to them. Free choice is closely related to interest. Often, delivering free-choice learning activities for children is considered impossible, but "Griffin (1998) demonstrated that school children visiting a museum were well able to be self-directed learners, and consistently declared their satisfaction with museum visits that provided them with choices" (Kelly, 2007, p.24). Learning is motivated when it is spontaneous and attention is paid more readily to things considered to be interesting. Specifically, learners who are intrinsically motivated, have higher achievement scores and higher levels of creativity.

Hooper Greenhill (2007) reports strong evidence of spontaneous enjoyment by children in museums. This leads to the important relationship between learning and fun. Packer's (2004) work raised questions about the distinction between learning, education and entertainment. Hooper Greenhill uses the word 'fun' as employed by children to judge the way in which museum learning engages mind, body and emotions, provoking attention and curiosity. There is an old and well-established view that active involvement in the learning process is only appropriate for children. "Contemporary learning theorists point out that this view is mistaken, and that rather than leaving behind experience-based intuitive exploration and response, this remains one among many strategies for learning. The importance and value of embodied and immersive experiences for young learners is well demonstrated by the research data, but this mode of learning is equally as important for learners of all ages" (Hooper Greenhill, 2007, p. 172). The complexity of the relationship between education and entertainment in educational leisure settings is developed by Packer and Ballantyne (2004): the authors sought connections between the two concepts and evidence of compatibility, from the perspective of visitors' preferences. Their findings supported the proposition that education and entertainment are not only compatible, but synergic. Packer (2006) points to the difference between "to learn something or to experience learning". She uses the term "learning for fun" to refer to the phenomenon in which visitors engage in a learning experience because they enjoy the process of learning

itself. What they seek from their visit is not so much to learn something as to engage in an enjoyable experience of learning. Many visitors come to museums and other educational leisure settings expecting to find discovery, exploration and adventure. In other words, they come for a complete and complex learning experience. To make learning more pleasant and enjoyable is the educational trend in the last decade and this trend will increasingly influence museum learning services: "Edutainment", a term combining Education and Entertainment. Edutainment seeks to educate through moments embedded in forms of entertainment, especially for children. Hooper Greenhill (2003) suggested that without fun, no learning takes place. yet the term edutainment did not immediately appeal to museum professionals. For Kelly (2013) learning, education and entertainment are positively related. Museums have a strong learning focus and "entertain" through enjoyment, pleasure, and the emotional and sensory aspects of a museum visit. In her study of "Learning for Fun", Paker sets out some guidelines for enjoyable museum learning which include a blend of discovery, exploration, mental stimulation and excitement. It is important for museums to understand and provide the conditions that facilitate an enjoyable Museum Experience.

Why the interest in applying Achievement Emotions to the museum learning setting? Some of the characteristics that educational leisure settings provide that appear to facilitate the process of learning for fun, include a rich sensory experience, novelty, surprise, fascination and the freedom to explore and to engage with information without pressure. Perhaps one of the most important contributions that museums and other Educational leisure settings can make to society is in enabling their visitors to rediscover the "joy of learning" (Packer, 2006). For Csikszentmihalyi and Hermanson (1995) learning is intrinsically emotional; moreover, learning is powerful because feelings are engaged. In the last decade, museums have become increasingly emotion-oriented, paying attention to the satisfaction of their visitors. For a complete understanding of emotional involvement during museum learning, it is important to investigate the visitor's emotions. Identifying the kinds of emotions felt by the visitor reveals the success of museum learning.

Gobbo and Raccanello (2007) investigated affective states through children's narratives of personal events. "In daily life, everyone often experiences situations that can change, albeit slightly and temporarily, his or her mood. Such situations can be either ordinary, such as receiving a compliment or being criticized, or more unusual, such as seeing an old friend or hearing some bad news. However, in most cases, people are not fully aware that such events can influence their affective state. Moreover, people might not realize the possible

consequences of a positive or negative mood on the performance of tasks in which they engage." (Gobbo and Raccanello, 2007, p. 1174). The learning performance of children has been broadly investigated in the museum learning setting. Are children really learning in museums or are they simply being entertained? Few studies have tried to answer this question. An American initiative, *Project Explore* by two organizations, Please Touch Museum in Philadelphia and Harvard's Project Zero in Cambridge, carried out research into learning in children's museums (Haas, 1997). Researchers investigated exactly what it is that children are learning and how best to enable or enhance the learning process. *Project Explore* concluded that young children do learn in museums, with appropriate and supportive interaction with adults. (Haas, 1997).

At this point, many cultural organizations analyzed their visitors' experience in terms of "satisfaction". De Rojas and Camarero (2006) developed an analysis that confirms that the perceived quality, as well as emotions, are direct determinants of visitor satisfaction. Their findings also reveal that mood strengthens the emotional path, the generator of visitor satisfaction. "This explains why recent research strongly suggests that cognitive and emotional aspects of a consumer's experience and consumption should be simultaneously considered when measuring visitor satisfaction at a museum" (De Rojas and Camarero, 2008, p. 421).

### **Achievement Emotions in museum learning settings: behind the choice.**

Due to the lack of theories, methods and tools to measure learning in a museum context, we turned to Educational psychology theory. Until recently, Educational research paid little attention to students' learning emotions. The situation slowly started to change in the 1990s, when more research into emotions in learning and achievement began to appear in the scientific literature (Pekrun and Frese, 1992). Pekrun focuses his research on the emotions experienced by students in learning settings such as schools, colleges and universities. This focus helps him to discover the functional importance of emotions for student performance: "emotions could be defined in general as multi-component, coordinated processes of psychological subsystems, including affective, cognitive, motivational, expressive, and peripheral physiological processes" (Pekrun, 2006, p. 316). In the control-value theory of emotions, Pekrun (2006) proposed a taxonomy that describes emotions along three lines:

- Valence (positive vs. negative),
- Level of activation (activating vs. deactivating),
- Object focus in terms of being related to other achievement activities (e.g., learning) or achievement outcomes (i.e., success and failure).

He argued that enjoying a particular school activity and feeling positive (particularly activating) emotions leads to better student performance. One of the instruments created by Pekrun to develop an understanding of student emotions in the learning process was the *Achievement Emotions Questionnaire (AEQ)* (Pekrun, Goetz, and Perry, 2005), designed to describe various Achievement Emotions experienced by students in learning settings during learning tasks. Based on the AEQ-ES, another test more in line with a child survey, was created: the Graduated Achievement Emotions Set (GR-AES) (Raccanello, Brondino, and Pasini, 2014). This new instrument assesses the intensity of ten Achievement Emotions in primary school children: enjoyment, pride, hope, relief, relaxation, anxiety, anger, shame, boredom, and hopelessness. In this test verbal labels are supported by graphic representation of a child's face (boy or girl) harnessing children's facial recognition abilities; it is well-known that children recognize facial expressions representing basic emotions (Pollak, Seth, and Kistler, 2002).

Students' emotional experiences seem to be related to their perceptions of the classroom environment: perceptions of participation, involvement, affiliation, task orientation, order and organization (Frenzel, Pekrun, and Goetz, 2007). In his control-value theory of academic emotions, Pekrun postulates that a student's environment (including parents and teachers) influences achievement. He suggested that the overall effects of emotions depend on the interplay of different mechanisms (Pekrun, 1992) and correlated analyses concerning the relationships between academic emotions, students' cognitions, and aspects of the social environment too (Pekrun, 2000).

## **AIMS**

As indicated, our research aimed to verify through empirical research how, in children, Museum Experience (ME) increases the awareness of involvement with a Cultural Community: in this chapter, we investigate the Achievement Emotions (AE) felt by children during visit activities, and their moderating role for the Cultural Community (CC). Previous studies suggest that students are sensitive to different learning environments, but

this study focused only on academic and school settings. This research represents an experimental study in the Museum learning setting. Unlike general Achievement Emotions studies, the performance we investigated was not related to learning tasks during the museum experience (indeed, that performance was not assessed). Although most Museum Education research focuses on effective learning outcomes during a children's visit, we studied not "what children learn" but "how children learn" and "how children feel" during the visit, specifically the moderating effect that these emotions have on children's involvement in the Cultural Community. This is a second level learning outcome.

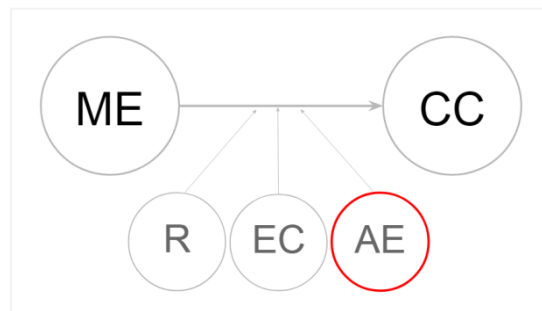


Figure 1: the role of Achievement Emotions (AE) in the research model.

## METHOD

### Participants and procedure

The research involved 41 children from two primary school classes in Rovereto (Italy), mean age 8.3 years (20 males, 21 females).

We chose to carry out the research not as a simple simulation in the classroom but during a real museum visit. Given that Achievement Emotions are related to achievement activities and their outcomes (Pekrun, 2006), we planned the visit as a three-step activity. The first part focused on the observation of artworks and listening to an explanation (10 minutes). The second focused on a game involving both an individual and collective learning task (10 minutes). The task was more similar to a game than a real "school test". The third concentrated on narratives of emotional events immediately after the end of the game: each child was asked to complete the Achievement Emotions test after finishing the learning task (5 minutes). The instructions were: 'Now, try to think about how you felt during the

activity, not only during the observation of the artwork, or listening to the explanation, but especially, during the play part.’

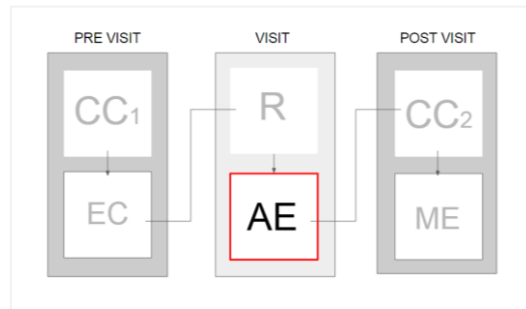


Figure 2: the position of Achievement Emotions (AE) in the research procedure.

## Stimuli

With the exhibit, *Le Collezioni. L'Invenzione del moderno. L'Irruzione del contemporaneo*. MART explores over a century of history of Italian and international art. Our visit focused on the rooms on the first floor dedicated to the *L'Invenzione del moderno*, with the Futurist artworks of Umberto Boccioni, Giacomo Balla, Carlo Carrà, Gino Severini, Luigi Russolo and Fortunato Depero. Children were guided in an Art History tour to three different Futurist artworks and involved in a learning activity called "Colori e form del Futurismo", with a simple task: to recognize in Futurist artworks the lines, shapes and colours suggesting the idea of movement, speed, mechanics and dynamism. The classes were welcomed to the MART galleries and the Manifesto of Futurism by Filippo Tommaso Marinetti (1909): in front of that artwork they were given an introduction to the contents of the visit and the activities, as well as an explanation of the Achievement Emotions test and instructions on how to fill it in. Then the groups were taken to see "Profilo continuo" [Head of Mussolini] by Renato Bertelli (1933), "Gli intonarumori" [The noisemakers], by Luigi Russolo (1914), and "Rotazione di ballerina e pappagalli" [Rotation of ballet dancer and parrots] by Fortunato Depero (1917).

## THE VISIT: “Forme e colori del Futurismo” tour.

A summary of the visit and the information and instructions provided is set out below.

**Profilo continuo (Head of Mussolini),  
Renato Bertelli,  
1933.**



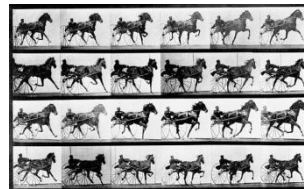
### Explanation

The rotating face of Benito Mussolini, known as "Il Duce" was a dictator who established the Italian Fascist Party after the First World War. This statue, called "Continuous Profile" was made in 1933. The head of Mussolini turns at dizzying speed and is able to look in all directions, seeing everywhere and everyone, continuously. It gives us the idea that Mussolini, as a dictator, can control everything. With this head, Bertelli, who was interested in the Futurist ideas and theories of Marinetti, embodies a passion for cars, speed and power. The image is very much in tune with Mussolini's self-promotion of the time, presenting him in the role of technological and cultural mentor and pioneer.

### Activity 1

We asked the children to observe the statue and try to guess why it was represented in that way.

We explained that if you look at a body in motion the eye retains many instant images in quick succession. We showed the children one of the first examples of high-speed stop-motion photography to capture a horse's motion: a popular picture by photographer Eadweard Muybridge in 1878.



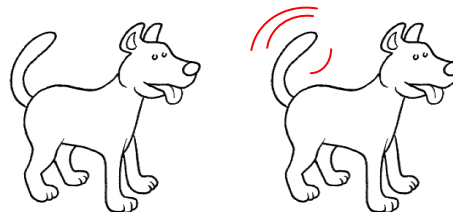
We asked the children to focus on their hands moving quickly: they become multiple, blurred and transparent. Seeing every single step of the gallop of a horse was revolutionary, but today, a single high-speed camera shows events as fast as a bullet.

To introduce the activity, we explained to the children that today Cartoons are inspired by Futurist expressions of movement and sounds.



Each child was given a drawing in which they had to add lines to give the idea of movement. At the end of the exercise, the child stood up to show the others the lines added, explaining the choice.





**Gli intonarumori (The noisemakers),  
Luigi Russolo, 1914.**



**Explanation**

Luigi Russolo revolutionized the concept of music in his manifesto "The Art of Noise". For Russolo noises can turn into musical sounds, for this reason he created a machine able to produce and combine noises: "Intonarumori", a large wooden box with speakers which makes sounds when a handle is turned. Depending on the sound Russolo called them "scoppiatori" (explosive) "sibilatori" (whispering), "crepitatori" (rustling), "stropicciatori" (crumpling), "ululatori" (howling). In a few years, he became popular and gave concerts throughout Europe. His performances were called "spirals of noises" and had titles such as "Awakening of a city" or "Conference of cars and airplanes".

**Activity 2**

Sound is everywhere, you just need to know how to listen. We involved the children in creating a concert of noise. Each child took the sheet with the moving image created in the previous activity and was asked to give the image a sound to be reproduced individually in front of the class. Then the children produced the noises simultaneously, creating a chorus. In this way, the children reproduced the noises of their day: the alarm clock in the morning, water in a basin, the noise of the school bus, children in the park, a balloon, chalk on the blackboard, a dog barking, the sound of Mum on the phone etc.

**Rotating dancer and parrots, Fortunato  
Depero, 1917.**

**Activity 3**

What happens to the ballerina's shape when she starts to turn? We carried out an experiment with a rotating rainbow-coloured umbrella. As the umbrella pirouettes, the colours and lines could no longer be



### Explanation

A dancer is painted while she performing a pirouette. Dancing, faster and faster, generates flashes of bright colors: red, yellow, blue and so on. Dancer and parrots are merged (as can be seen from the shadows projected on the wall). The painting recalls the theatrical experiences of Depero, who worked in 1916-1917 for the "Ballets Russes". He created scenes and costumes for "Le Chant du Rossignol", a ballet based on an Andersen fairy tale and music by Stravinsky.

The dancer has a mechanical form and looks like a robot. Her body has a geometric shape and it is difficult to identify physiognomic elements: hands, face, mouth, eyes ... Depero was inspired by the idea of the modern human as a robot, but there is another reason why the dancer and the parrots have undefined boundaries: motion! The dancer is pirouetting.

distinguished.



To visually stimulate the children, we engaged them in an activity focused on the observation of the painting. We made a color print of Depero's artwork and cut the image into different shapes, following the original lines and the colors, to make a "Rotating dancer and parrots puzzle". We gave each child a piece of the puzzle and asked him/her to find the shape in the painting. Each child was called to stand next to the painting one at a time, holding the piece of the "puzzle" and showing the class its location in the painting.

## Measures

Children were guided on a tour of Futurism including numerous modern artworks. In front of each artwork children were engaged in interpretation processed by an Inquiry-based learning technique. Then the children filled in the Graduated Achievement Emotions Set, GR-AES questionnaire (see Appendix 3). The GR-AES is a verbal-pictorial instrument, aiming to assess the intensity of Achievement Emotions by primary school children (Raccanello, Brondino and Pasini 2014). The GR-AES measures children's perceptions of ten Achievement Emotions: enjoyment, pride, hope, relief, relaxation, anxiety, anger, shame, boredom, and hopelessness. The Intensity range was from "1 = not at all" to "5 =

very much". The emotions were divided into two categories, positive and negative, and the following sub-sets:

- Positive activating emotions (proud, hopeful, happy),
- Positive deactivating emotions (relaxed, relieved),
- Negative activating emotions (anxious, angry, ashamed)
- Negative deactivating emotions (bored, sad).

There were two versions of the test, one for girls and one for boys. Figure 1 is an example from the girl's version.



Fig 1. Achievement Emotions test from the Graduated Achievement Emotions Set (GR-AES), (Raccanello, Brondino and; Pasini 2014).

To investigate the moderating role of Achievement Emotions on involvement in the Cultural Community, we correlated the AE results with the CC outcomes, specifically the relationship between AE and the three aspects of negotiation (Communication, Compromise and Cooperation) observed during the "Negotiation drawing" before and after the visit.. To measure these three aspects an *ad hoc* observation grid was used.

## RESULTS

### **Achievement emotions: Positive, Negative, Activating and Deactivating.**

The first step aimed to describe the level of the Achievement Emotions felt by the children during the three activities and to verify whether they felt any difference in Valence and/or in Activation, checking for the activities. To do this, we ran a repeated measure ANOVA, with three within three factors: Valence (Positive vs Negative), Activation (Activating emotions vs Deactivating emotions) and Activity (Activity 1, Activity 2 and Activity 3). The last factor was used as a control.

Using this analysis, we investigated “Valence”, answering the question: Did the level of positive and negative emotions felt by the children differ, irrespective of the activity and the activation? The answer was yes: Children reported a higher level of positive emotions. The mean value for positive emotion was 3.1, and 1.4 for negative emotions (SE was .12 and .09 respectively). The main effect of Valence was in fact significant:  $F(1,40)=113.991$ ,  $p<.001$ .

The second question was: Did the level of activating and deactivating emotions felt by the children differ, irrespective of the activity and the valence? The answer was no: the main effect of “Activation” was not significant ( $p=.06$ ). The mean value of activating emotions was 2.3, and for deactivating emotions 2.1, but this small difference is not significant. Children reported the same level for activating and deactivating emotions.

An important result of this analysis was the lack of the main effect “Activity”: each of the three activities afforded the same level of emotions in the children. This result means we can use the averaged values of the emotions for the three activities in the analyses set out in the sub-section below.

To sum up, the children felt quite a high level of positive emotions (3.1 on a 5-point scale), and no differences were found for activation and for the three activities.

Figure [N] shows the level of each achievement emotion, taking the three activities together.

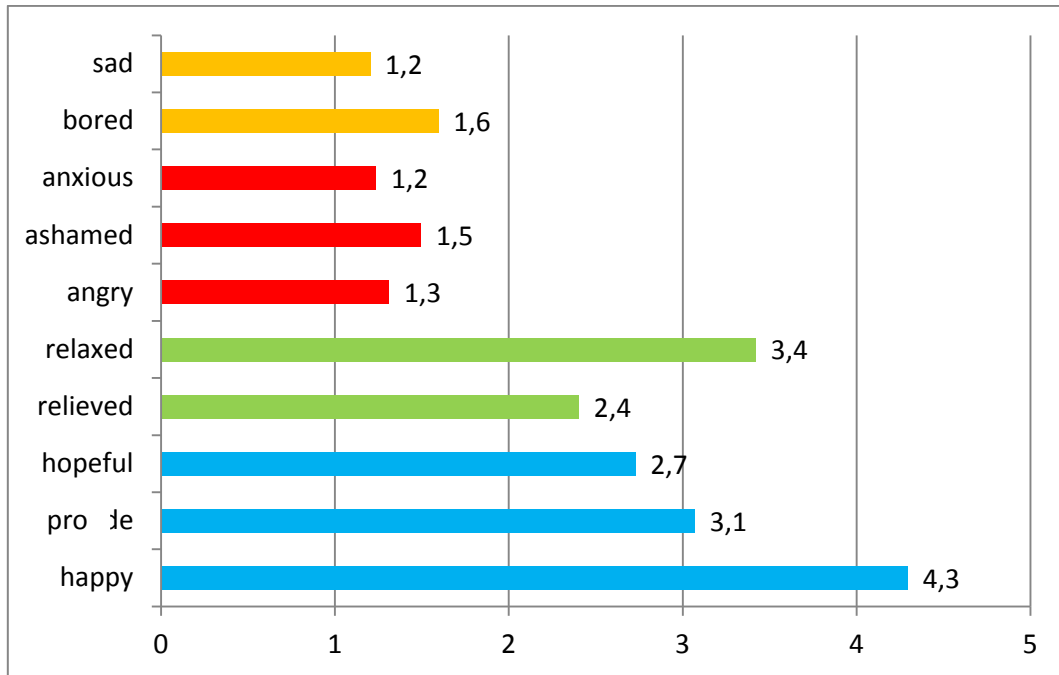


Figure N. The level of each achievement emotion during the three activities.

### **The moderating role of Achievement Emotions in the improvement of involvement in the life of the Cultural Community**

An interesting point of our research concerns the role of achievement emotions in enhancing the positive effect of the Museum Experience on the sense of involvement with a Cultural Community. In Chapter 1 “Cultural Community” we stated that the sense of involvement with a Cultural Community increased from the pre-visit level to the post-visit level in terms of negotiation skills. This was true solely for “communication skills” and not for the other two parameters of negotiation skills, i.e. “compromise skills” and “cooperation skills”.

But what happens in terms of enhancement if the achievement emotions felt by the children during the visit are also considered? Does a high level of positive emotions increase the enhancement? Does a high level of negative emotions stifle enhancement?

To try to answer these questions we divided up our sample on the basis of the level of Achievement Emotions felt by the children, using the median of each distribution for Positive and Negative Emotions. In this way, we obtained two groups of children – with a high and low level of perceived emotions - for each group of emotions. The following analysis concerns solely the communication of negotiation skills, the only aspect enhanced

by the museum visit experience. For the following analyses, a series of mixed ANOVAs 2x2 was carried out, considering the within factor “time” at two levels (pre-and post-visit) and the “group” (high level and low level of emotion) as the between factor, with communication skills as the dependent variable. We also report eta-squared values as a measure of the effect size.

***The effect of positive emotions.***

The first analysis concerns the effect of positive emotions considered, globally. Table 2 shows means, standard deviation, and ANOVA results.

**Table 2.** Means, standard deviations and ANOVA results for high level and low level of Positive Emotions

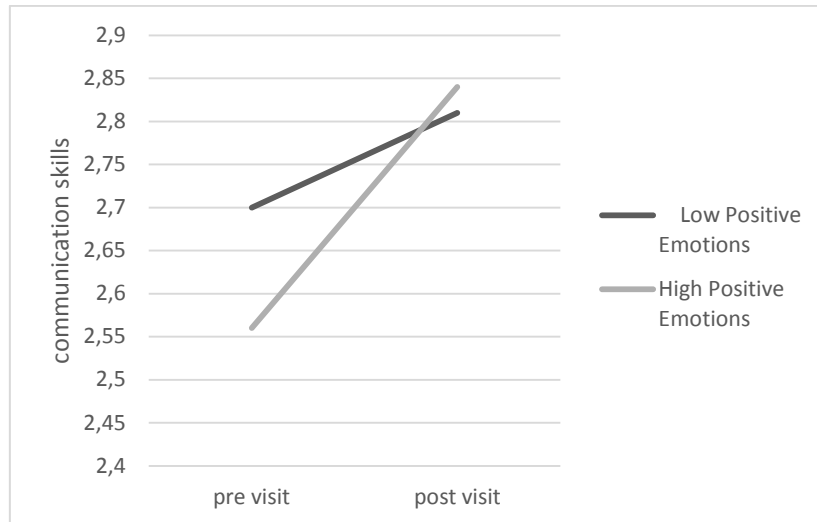
	communication skills		ANOVA
	pre	post	
Group for Positive Emotions	M (SD)	M (SD)	F <sup>a</sup> (partial $\eta^2$ )
Low level (n =21)	2.70 (.50)	2.81 (.45)	0.92 (.02)
High level (n =20)	2.56 (.70)	2.84 (.45)	5.79 (.13)*

<sup>a</sup>df = 1,39

\*p ≤ .05

No interaction effect was found, able to prove the moderation effect of achievement emotions. Nevertheless, analysis of simple effects showed that only for the group with a high level of positive emotions were communication skills significantly improved from pre-visit to post visit assessment. Figure 1 shows this result. Note that no significant difference was found for the two groups in the pre-visit assessment. This result is very interesting, and shows that the only group which actually improved its communication skills was the group that experienced a high level of positive emotions during the museum activities.

Further exploration of this result showed that positive deactivating emotions (relaxed, relieved) were the main cause.



**Figure 1.** Level of Communication Skills before and after the Museum Experience, for the two groups of children (High and Low level of Positive Emotions)

***The effect of negative emotions.***

Table 3 shows means, standard deviation, and ANOVA results, in the case of negative emotions. These results were similar and complementary to the result found with positive emotions.

**Table 3.** Means, standard deviations and ANOVA results for high level and low level of Negative Emotions

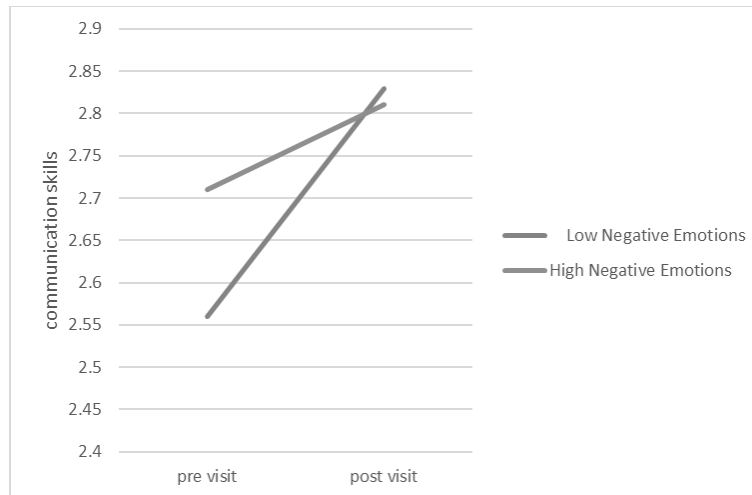
	communication skills		ANOVA
	pre	post	
Group for Negative Emotions	M (SD)	M (SD)	F <sup>a</sup> (partial $\eta^2$ )
Low level (n =21)	2.56 (.70)	2.83 (.44)	6.04 (.13)*
High level (n =20)	2.71 (.49)	2.81 (.45)	0.77 (.02)

<sup>a</sup>df = 1,39

\* $p \leq .05$

For negative emotions too, the interaction “Communication Pre-Post” x “Group” was not significant, but the analysis of the simple effects showed that only the group with a low level of negative emotions improved its communication skills from pre- to post-visit levels, and nothing happened in the group of children with a high level of negative emotions. Figure 2 shows this effect. In this case too, despite appearances, no significant difference,

was found in the pre-visit assessment of communication skills. Only the pre-visit vs post-visit difference for the Low-negative-emotion group was significant. Further analysis, including the activation dimension, showed that the enhancing of communication skills in the group with a low level of negative emotions involved only activating negative emotions.



**Figure 2.** Level of Communication Skills before and after the Museum Experience, for the two groups of children (High and Low level of Negative Emotions)

### Unexpected result: comparison of the school and museum learning setting

During class activities, before and after the visit, children were asked, among other things, to freely describe their feelings at school and in the museum. Table 1 shows the emotions they reported, separately for the school and the museum.

**Table 1.** Frequency of the emotions reported by the children for the school and for the museum.

	Bored	Hopeful	Happy	Relaxed	Relieved	Anxious	Angry	Fun
School	23	3	33	2	23	4	4	2
Museum	8	0	37	20	8	6	2	14



Although the study did not aim to compare the two environments, this result confirms that for the museum positive emotions were more frequently reported than negative ones, in line with the result for the Achievement Emotions experienced during the visit.

## **DISCUSSION**

The Museum Experience is changing as a result of the recent interest in the emotional nature of museum-visiting; some museums are moving away from formal, didactic models of museum learning towards new models that embrace experimental activities. There is a great deal of curiosity about the emotional interactions between visitors and a museum's exhibits. In recent years, educational and environmental psychology has underlined the relevance of the attributes of the learning setting, searching for the correlation between students in a given context (Linnenbrink-Garcia and Pekrun, 2011). Achievement emotion results provide a spectrum of emotions felt by the children during the three activities. The children felt quite a high level of positive emotions, confirming the theories that the museum learning setting can be considered a positive environment: playful, recreational, pleasant and enjoyable. Moreover, a museum can stimulate positive achievement emotions, supporting and encouraging the learning process. Interesting was the rather similar level for positive activating and deactivating emotions. This means that feeling relaxed, or relieved, can contribute to the museum learning experience just as much as being proud, hopeful or happy. It would be interesting to examine and verify this in further studies.

We are now justified in thinking that positive Achievement Emotions contribute to a positive mood that enhances the children's involvement in a Cultural Community, enhancing the positive effect of the visit on their "communication skills". If it is recognized that during the Museum Experience individual meaning is mediated by and between communities of interpretation (Hooper - Greehill, 2007), it can be assumed that children who live with a positive mood enjoy the meaning-making process during the visit, as well as the involvement in an "interpretive community", experiencing sensations such as: relaxation, relief, happiness, pride, etc. Indeed, only children who actually experienced positive emotions during the museum activities improved their communication skills.

During the "Negotiation, drawing", class activity we asked the children what emotions they felt during the learning process at school and in the museum, to compare their perception of the emotional school and museum environment. The result was very interesting because it supports the restorativeness theory of learning environments designed for children

(Berto, Pasini and Barbiero, 2015). The planning of restorative learning environments for children is an urgent matter, with environments that support their daily school activities in the classroom, the playground, common rooms and libraries. During the pre-visit activity, one researcher asked: "How would you describe the emotions you feel while you are learning at school?", and then made a list based on ten achievement emotions. The other researcher recorded the couple's reactions on the observation grid.

At this point, during the interview portion, we decided to add to the ten Achievement Emotions a new item: "fun". With the term "fun" we sought to verify the value of "Edutainment": how many children perceived education as entertainment at school and in the museum? How can we compare the children's perception of emotions in these two different learning spaces? Achievement emotion and qualitative results confirm that in museum learning, education and entertainment were related to positive emotional outcomes. Although the visit had a purely learning focus about art history, the children's emotions revealed their enjoyment and pleasure. Our research provided us with some guidelines about the characteristics of emotional museum learning.

"Learning on and from a field trip, hence, is no longer seen as simply an extension or improvement of classroom teaching, but as a valuable supplement and addition to classroom instruction, as well as an excellent way to prepare students for future learning" (DeWitt and Storksdieck, 2008, p.182).

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## **Chapter V. MUSEUM EXPERIENCE**

### **There is not one but many Museum Experiences**

#### **INTRODUCTION**

Some years ago, the visitor's mood was described as a “flow”, a specific quality of experience that involves total immersion in an activity, where the self can be freely and fully expressed, a process of learning about the self, its capacities, and its relationship to the external world (Csikszentmihalyi and Hermanson, 1995). The article *Exploring Satisfying Experiences in Museums* (Pekarik, Doering, and Karns, 1999), a milestone in Museum Studies literature, provided a clear category of feelings experienced by a visitor during a museum visit: Objective, Cognitive, Introspective and Social. Subsequently, Packer (2008) demonstrated that Satisfying Experiences in museums provide benefits for visitors beyond the experience itself, highlighting the importance of the restorative aspect of the museum environment. In this study, using a qualitative approach, we investigated the type of Museum Experience lived by children. To achieve this goal and provide a more complete view of children’s Museum Experience, we added two further categories: Emotional and Environmental experience.

#### **Defining Museum Experience**

Today, audience evaluation is one of the core aims of museum management, but a historical account of museums would be more interested in facilities, collection, conservation and the transmission of knowledge than visitor experience (Kirchberg and Tröndle, 2012). The concept of visitor experience is generally lacking in museum studies. Although most museum professionals now agree on the importance of visitor studies, they did little to advance this kind of research. Shettel (2008) lists several reasons why the empirical analysis of exhibitions is not highly regarded: it takes time, money, and professional staff to conduct these evaluations. The field of visitor studies, methods and analyses is still new, and methods and evaluation procedures sometimes may be too

intrusive in the museum context (Kirchberg et al., 2012). Moreover, from a scientific point of view, Visitor Studies require an arduous interdisciplinary approach: different methodologies and theoretical backgrounds (psychologists, sociologists, curators, designers) cooperating in research design, conducting the empirical study, analyzing the data, and publishing the findings.

The first attempt to define Museum Experience was made by Falk and Dierking (1992; 2000). The authors developed a “contextual model of learning”: the personal, socio-cultural and physical contexts, with the flow of time. Csikszentmihalyi and Robinson (1990) stressed the significance of aesthetic experience in a museum, applying their “flow” model to museums. "Flow" is described as an authentic experience that occurs if people are deeply involved in a creative process. The original account of the state of flow has proved remarkably strong, confirmed in studies of art and aesthetic experience and many other recreational activities (Csikszentmihalyi and Robinson, 1990). The experience was the same across lines of Culture, class, gender, and age, as well as different kinds of activity. Rather than focusing on the person, unrelated to context, flow research emphasizes the dynamic system of the person and the environment. Significantly, Combs (1999) stated: “People want a museum ‘experience’ where they can participate actively, engage their senses, socialize with family and friends, and acquire information. They want to have fun and relax through a memorable, informative encounter with museum objects that removes them from the everyday work world” (p. 187). Doering, Pekarik and Karns (1999) observed the expectations that visitors bring to the Museum Experience, and described the various elements that comprise that experience. The first problem was to clarify the meaning of the term “experiences in museums” and then to construct a survey to describe valued museum experience. They were unable to find a single theoretical framework for all experiences in museums and the empirical data guiding their work. Finally, a concept definition of Museum Experience in four categories was put forward:

- Object experiences: in which the individual focuses on the material, the object or “the real thing”;
- Cognitive experiences: in which the individual gains information or knowledge;
- Introspective experiences: in which the individual turns inward, to personal feelings, memories and experiences, with a sense of belonging or connectedness;



- Social experiences: in which the individual interacts with family members or friends.

The social aspect of museums features significantly in visitors' expectations: motivational studies indicate that most visitors come to a museum as part of a wider social group and social interaction is one of the most common reasons for visiting a museum with others. The desire to establish social relationships is thus an essential element for almost all visitors. Moreover, based on Doering's definition of Museum Experience, Packer (2008) further investigated the subject and discovered that Social Experiences were greatly extended: "The social experiences reported by participants were not limited to their own companions and family members, but extended to interactions with other visitors. For some, just being in the presence of others in a positive environment appeared to be a satisfying experience." We came to the purpose that Introspective and Social experiences work against one another. "Introspective experiences are enhanced by a quiet environment and "inner space," while Social experiences are enhanced by activity and engagement with others." (Packer, 2008, p. 161). But literature shows that the children's preferences for Social or Introspective experience depends on age and the type of museum: it is easier to have an Introspective experience in an art museum and a social experience in a Natural History museum.

## **AIMS**

As indicated, our research aims to verify through empirical research how, in children, Museum Experience increases (ME) the awareness of belonging to a Cultural Community (CC). In this chapter, we investigate the Museum Experience (ME) construct. This does not involve evaluating the Museum Experience, the experience of visiting MART or the visit itself, but categorizing children's feedback of the Museum Experience at MART.

Based on the definition of Museum Experience (Pekarik, et al., 1999) and the literature analyzed in the previous chapters (especially Chapters II, III and IV), we added two further categories to the definition of Museum Experience (Objective, Introspective, Cognitive and Social):

- Environmental experiences: those in which the individual appreciates the interaction with museum facilities, its architecture and design. Museum environmental awareness

was a latecomer to Museum and Visitor studies but is now highly valued. Packer and Bond (2010) extended the concept of “restoration” to the museum environment. We tested the effects of restorative attributes of fascination, being away, extent and compatibility on the psychological well-being of children.

- Emotional experiences: those in which the individual expresses as the most significant element of his/her visit the mood or specific feeling aroused by the visit.

Museums are emotional places: emotions aroused in interactions between visitors as they move around, discussing the exhibits and objects (Munro, 2014). During the visit, via the Achievement Emotions test, we explicitly invited the children to think about the emotions they experienced.

We know that visitors obtain physical and mental benefits and emotionally engage during a museum visit. In this chapter, we investigate how they become aware of this, and whether their feedback pinpoints environmental and emotional elements. Our goal is to check what kind of experience the children enjoyed most, and if Environmental and Emotional experiences are as valid as criteria as the other four categories.

## **METHOD**

### **Participants and procedure**

The research involved 41 children from two primary school classes in Rovereto (Italy), mean age 8.3 years (20 males, 21 females). After collective reflection and discussion about the museum visit (about 15 minutes), we asked to the children to draw their most significant memory of the visit (about 15 minutes). At the end of the activity they were asked to give a title to the drawing.

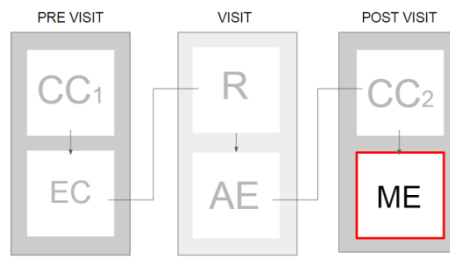


Figure 2: the position of Museum Experience evaluation in the research procedure.

### **POST VISIT ACTIVITY: The Silent book “A cosa pensi?”**

During my museum career, as an educator, I learned that the best way to understand the strongest impression that a visitor has experienced visiting the museum is to ask what he/she liked most. If the question is spontaneous the answer comes out naturally, exactly as you might ask a friend what they thought of a film a pizza the night before... Probably the first thing they say is what remained in their minds most. Visitors' feedbacks can be easy, spontaneous or superficial, but needs to go beyond "I liked it" or "I didn't like it". Behind the answer, there are always very personal unspoken reasons. Leinhardt (2003) proposed a socio-cultural definition of museum learning: "learning as meaning construction, a socially mediated phenomenon that was a consequence of dialogue among the curatorial premise, the supporting tools of signage and other symbol systems, and the visitors themselves [...] learning as a conversational elaboration [where] the language becomes enriched by specific details of objects and themes from the museum and reflects the affective and personal connections to the museum in a way that goes beyond simple statements of like or dislike or identification" (Leinhardt 2003, p. 25).

Based on "the first thing that comes to mind..." we designed the class activity after the museum visit. We sat in a circle with the children, and all together read the book: "A cosa pensi?" ["What are you thinking about?"] (Moreau, 2012) in the genre of "Silent book": books without text. The storytelling is a collaborative process based on the graphic illustrations. Silent books are produced to encourage spontaneous narration by children.



Figure 1. "A cosa pensi?", some illustrations.

Every page was illustrated with a head. The reader sees the thoughts inside the character's head. The book was chosen because it was useful to summarize the "Emozioni in mostra!" topics: emotions, thoughts, the bond with personal experiences, memories, opinions and the ability to express all this to others. We also launched a challenge based on an artistic technique: the children drew the shape of a face on a sheet, then took small pieces of paper of various shapes and colors inspired by Futurist technique, we asked them to make a collage, to compose some "thoughts" inside the outline of the head. Researchers prompted with a single question: "If I think of my Museum Experience, what is the first thing that comes to mind?"

### Measures and coding rules

Back at school, after the museum visit, we involved the children in a book reading: "A cosa pensi?" We asked children to make a collage to express what most impressed them during the museum visit. Afterwards, we asked them to write a title on the back of the sheet: "If I think of the museum..." and we asked them to complete the sentence. This study was based on a qualitative approach related to the definition of Museum Experience (Pekarik, et al., 1999). The collages were divided by researchers into six categories:

- Objective, explicit reference to museum artworks
- Cognitive, explicit reference to exhibit information
- Introspective, explicit reference to personal reflection inspired by the visit
- Social, explicit reference to classmates, teachers, museum educators or visitors
- *Environmental*, explicit reference to museum spaces
- *Emotional*, explicit reference to emotions and feelings

With the formula " explicit reference to" we mean clear graphic elements (present in the drawing), and written words (in the title given to the collage). For the research team, it was

very important to find a method to encode the drawings. Three researchers analyzed the definition of Museum Experience (Pekarik, et al., 1999) and all its categories, identifying the elements in each. They then looked for these elements in the drawings. The assessment was made by three independent judges; in the event of disagreement, they discussed the collages until agreement was reached.



The enormous challenge of classifying Museum Experience was immediately clear to us. There is no one Museum Experience, pure and simple; it is a multidimensional phenomenon. All the elements characterizing personal visiting experience are closely linked.

We chose Objective experience for the collages that represented an artwork and mentioned it in the title: 9 children, 1 boys and 8 girls. Interestingly, this is the result with the largest gender gap between boys and girls. Of these nine children, six mentioned the artwork by name: "Al museo penso alla testa che gira...", "Al museo penso... alla forza della curva" ("In the museum I think of the Rotating Head", "In the museum I think of... the Strength of the curve"). The other three described and represented the object clearly, so they were evidently impressed by the object, even without the specific name (Figure 1 and 2).



Figure1 and 2. Some examples of Objective experience, three collages and the igloo both shown and mentioned in the title.

In the category Cognitive Experience, we placed the collages that mentioned the learning process as the most satisfactory experience: to gain new information, acquire notions of art, expand personal knowledge, reflect on inputs. Some children felt particularly engaged in the learning process, producing enthusiastic titles: "al museo penso ad esclamazioni e domande!", "al museo imparo ad imparare", "al museo imparo ad essere felice!" ("In the museum, I think about exclamations and questions!", "In the museum I learn to learn", "I learn to be happy in the museum!") (Figure 3).



Figure3. An example of Cognitive experience, with an explicit reference both in the title and the drawing. Despite the fact that we involved children in two specific test activities (the Restorativeness test during the MART architecture tour and the Achievement Emotions questionnaire during the Futurism tour), Environmental and Emotional Experience only attracted three children's collages for each category. Among the Environmental collages, only one mentioned a specific museum spot: " Penso alla vasca nella piazza" ("I think of the fountain in the square"), referring to a large fountain in the middle of the MART area under the Dome (Figure 4).



Figure 4. One of the drawings about the architectural environment of MART.

All collages which specifically named emotions during the visit were placed in the Emotional category: "al museo mi sento molto felice! penso ai colori e alle cose allegre!", "al museo penso alla noia...", "al museo penso che avevo paura." ("I feel very happy in the museum! I think of all the colours and fun stuff!", "In the museum I'm bored...", "I think in the museum that I was afraid.") (Figure 2).



Figure 4. One of the drawings referring to emotions. The child represented the bridge, but there was an explicit reference to fear in the title, as shown by the green arrow representing the idea of falling from the bridge.

After categorizing the collages, we created a new category, "Others' experiences", to classify the collage of a child who did not represent anything with implicit or explicit references to the museum visit (a child with behavioral problems produced this collage).

## RESULTS

Table 1 shows the distribution of each children's drawing, separately for boys and girls.

Introspective	19	11M/ 8F
Cognitive	6	4M/2F
Objective	9	1M/8F
<i>Environmental</i>	3	1M/2F
<i>Emotional</i>	3	2M/1F
Social	0	0M/0F
Other	1	1M/0F

**Table 1.** Museum Experience categorization

## **DISCUSSION**

We came to the conclusion that Emotional experience can be integrated into Introspective experience, because in the Introspective collages, although not verbally emotionally explicit, the tone and words were profoundly personal. The two categories are so similar they can be put together.

The largest category was Introspective experience: the fact that nineteen children had this kind of experience is a significant achievement for the "Emozioni in mostra" school programme. Introspective experiences focus on private feelings and experiences, such as imagining, reflecting, reminiscing but most importantly, they facilitate connection with something bigger, the feeling of being part of a community. This outcome underlines and further enriches the link between Museum Experience (especially Introspective) and involvement in a Cultural community.

### **Unexpected results: the implicit presence of Social Experience**

The Introspective result become even more interesting when compared with the Social result, utterly ignored by the children: the literature says that the two experiences may involve self-exclusion (Pekarik et al., 1999). In one sense, the data confirmed that Introspective experience is profoundly self-focused, personal and intimate. The Literature shows that social interaction during a museum visit can be an important feature of the school field trip experience (Falk and Dierking, 1992). "Students are often observed sharing discoveries and experiences with others on their visits, behaviors that could support learning if used constructively in the field trip design"(DeWitt and Storksdieck, 2008).

During all study phases (Pre-visit, Visit and Post-visit), we saw signs of "infection" in relation to opinions, interpretation and meaning-making. Of the nineteen Introspective collages, nine had a similar title. Eight were produced in the same classroom. While the concept of a group mood has a long history, there is no one definition. Kelly and Barsade (2001) showed how affective influences abound in groups and sought to understand the mechanisms. Their model suggests that combined individual affective experiences produce the affect of a group which depends on the individual characteristics of each child, his/her mood and emotions: "When people enter a group, they bring their affective personalities and individual affective experiences and skills with them" (Kelly and Barsade, 2001). There are two dynamics for emotional infection:



- An implicit, or subconscious, and non-verbal, process. The individuals involved are not necessarily aware that the process of emotional sharing is occurring.
- An explicit, or conscious, and verbal, processes of sharing. Individuals actively attempt to influence the affect of other group members.

It is possible that the children did not mention the presence of other people because they were visiting the museum as a class where they take for granted the group dynamics. If they had visited the museum with friends or family their Social experience may have been more meaningful. This aspect requires further research in the future.

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## CONCLUSION

We conclude our dissertation with a short discussion of research contributions, summarizing the empirical results of this study. The project “*Emotional engagement in children’s visiting experience*” aimed to deeply analyze young visitors stream of feelings during the museum learning programme “Emozioni in mostra!” at MART - Museo d’Arte Moderna e Contemporanea di Trento e Rovereto. The analysis and results illustrated here are part of a larger project aimed at involving children in a broader museum visiting experience. Through this teaching experience – a real edutainment experience, hopefully – involving children and their parents, teachers, as well as a museum learning team, researchers were also able to explore some unanswered research questions in museum studies. We followed a psychological approach, applying the theoretical framework of Educational and Environmental Psychology and exploring some topics for the first time in a museum context. Field observations in an ecological research environment were analyzed combining the quantitative and qualitative perspective.

The main goal of our research was to verify during the Museum Experience if young visitors developed an involvement with the Cultural Community, communication, interpretation and the negotiation of meanings, leading to long-term affective and cognitive outcomes, especially in terms of social awareness (DeWitt and Storksdieck, 2008). In our specific case, the term Cultural Community means a "community of visitors", individuals who consciously enjoy museum spaces and their contents, creating a situation of debate, interpretation and mediation over the Cultural Heritage.

We start from the assumption that Museum Experience is a complex phenomenon. Reporting their sensations, children describe it as a confused range of existing elements: extraordinary objects, majestic spaces, the presence of other people, information and knowledge. The emotional engagement is variable: joy, sadness, boredom, wonder... Through our research, we sought to establish a theoretical framework; to properly collect and analyze all the data was a significant challenge. Our research explored theories, methods and instruments to classify children’s visiting experience, and revealed the emotional potential of the museum environment. With this research, we designed a useful tool, not only for the scientific community of Museum and Visitor Studies, but also for

professionals in Museum Education, who work with children on School and Family learning programmes. Our aim included developing an understanding of how the museum environment, when consciously exploited, can have a positive impact on children and their learning process.

This section follows the research questions in each chapter, summarizing the issues based on a review of the literature and case studies, finally presenting the data.

## **Research contributions and limitations**

Starting from an overview of French literature, we investigated the subject of Cultural Heritage Education. Inspired by this literature, we tried to understand how a museum visit can help children increase their emotional involvement with the Cultural Community. We looked at the bond between children and Culture, the "feeling of Culture", a sense of "affection for the cultural heritage", from a different point of view.

During the Museum Experience, the visitor is involved in a process of discussion, interpretation and negotiation of meaning about the Cultural Heritage; he/she is part of an "interpretive community", where meaning-making is mediated between individual and collective interpretations (Hooper-Greenhill, 2000). Inspired by this literature, as described in Chapter 1, we implemented a museum learning programme for primary school children. Museum Education studies describe this process as one identified with "meaning-making" carried out by the "interpretative community" or visitors during the visit. Analyzing negotiation skills (Communication, Compromise, Cooperation), we found a significant increase in children's social skills after the MART visit. The Museum Experience contributed to the improvement in children's Communication skills: the ability to discuss contents, to communicate ideas and opinions, to negotiate concepts and act with respect for companions. In other words, to act as a member of a social group and discuss experience of the Cultural Heritage as an active member of a Cultural Community.

In Chapter 2, we investigated Restorativeness and its benefits during the children's visiting experience, considering MART a "restorative environment", an escape, a refuge, a break from the routine of daily life. We wondered if museums can give young visitors the opportunity to restore attention after mental fatigue (Kaplan, 1995; Paker and Bond, 2010). The MART - Museo d'Arte Moderna e Contemporanea di Trento e Rovereto proved to be

a genuinely regenerative environment. Through a high level of fascination, the museum gave the opportunity to children to perform learning tasks in a condition of effortless attention. Of the three environmental settings investigated (Outdoor, Outdoor/Indoor and Indoor), the Dome was the place with most Restorative attributes. Classified as an Outdoor environment, its natural characteristics may have contributed to this success. But the Gallery also provides opportunities for regenerative experience too, with the highest score for Being Away. Presumably, the presence of artworks helped children to live the sensation of escape and refuge, away from the routine of daily life. Focusing in particular on the restorative benefits perceived by children during the visit, we were surprised by the result for the Bridge, experienced by children as both terrifying and exciting. Due to this unexpected result, we reassessed the museum as a place able, among other things, to provoke strong emotions and Arousal.

Chapter 3 focused on Emotional Competence. The study considered the museum environment as a potential place of Social and emotional learning (SEL), a new approach in contemporary Museum Studies and Visitors literature. We sought to verify if Emotional Competence has a moderating role in Museum Experience and the effects of involvement in the Cultural Community. We engaged the children in a SEL game before the visit, to assess their knowledge, aptitudes and skills in relation to managing emotions, and to feel and show empathy for others. The research was inspired by The Collaborative for Academic, Social, and Emotional Learning (CASEL) guidelines, an organization promoting and integrating social and emotional learning for all children from preschools to high school (Beland, 2007). Museum studies literature suggests that the socio – emotional dimension is an important aspect of museum visiting. Many visitors reported discussing or sharing opinions with their companions. Children’s emotional expression, comprehension and control was quite elementary before the visit. The study showed that the visit helped children with a low level of Emotional Competence to improve Negotiation skills. In the future, via efficient and appropriate instruments, the museum environment may be considered a place of social and emotional learning.

Museums can be considered a place of learning on a par with schools, but with all the advantages of a school field trip. "Learning on and from a field trip, hence, is no longer seen as simply an extension or improvement of classroom teaching, but as a valuable supplement and addition to classroom instruction, as well as an excellent way to prepare students for future learning." (DeWitt and Storksdieck, 2008, p.182). To investigate the

dynamics that associate emotions with the learning process, the museum visiting experience tested theoretical models widely used in school learning contexts ("traditional" i.e. in the classroom). According to "control-value theory" (Pekrun, 2006), appraisals of control and values are central to the arousal of achievement emotions, including activity-related emotions such as enjoyment, frustration, and boredom experienced at learning, as well as outcome emotions such as joy, hope, pride, anxiety, hopelessness, shame, and anger relating to success or failure. In Chapter 4, we looked at Achievement Emotions in the museum learning setting and recorded the emotions felt by children during the visit tasks. The focus was not on "what children learned" but on "how children learned", and the kind of emotions they felt. In the future, it would be interesting to combine the two points of view and to verify the relationship between the two aspects of the museum learning process. We considered the museum a place of learning on a par with schools. Probably, given the edutainment context, children attached to the task a soft value, which they can handle without difficulty. These two aspects result in different and especially positive Achievement Emotions. Positive emotions scored more than double negative feelings and were also mostly activating (positive deactivating was almost at the same level). This means that emotions in the museum education setting support and facilitate learning.

In the framework of the Museum Experience, we examined the emotional outcomes of the visit learning processes. Pekarik, Doering and Karns (1999) provide a clear categorization of feelings experienced by visitors to a museum: Objective Cognitive, Introspective and Social. In Chapter 5, via a qualitative approach, we verified the type of Museum Experience lived by children during "Emozioni in Mostra!". Although our research asked children to reflect on the museum environment and their emotions during the visit, we discovered that these two experiences were not particularly significant in young visitors' memories. Specifically, we concluded that Emotional Experience is Introspective, with memories, personal reflections, and feelings enriching the definition.

The moderating role of Restorativeness, Achievement Emotions and Emotional Competence in the improvement of the involvement in the Cultural Community was crucial. In Chapter 1 "Cultural Community" we showed how the sense of involvement with a Cultural Community increased (comparing the pre- and post-visit levels) along with negotiation skills.

Analyzing the moderating role of Achievement Emotions it was evident only for "communication skills" and not for the other two parameters of negotiation skills, i.e.



“compromise skills” and “cooperation skills”. The analysis was repeated for Emotional Competence and the three Negotiation skills: no interaction effect was found, but the simple effects show that for the group with a low level of Emotional Competence Communication skills significantly improved. An interesting outcome was the moderating role of restorative benefits in encouraging children’s Cultural Community practice. All children had a higher level of Compromise skills after the visit than before.

Finally, the moderation effect is small because it was evident only in some circumstances and for a few Negotiation Skills. But the data showed that museums contribute to the development of Communication and Compromise skills. It would be interesting to extend this research topic in the future with a larger sample of visitors and over a longer period of time, including a control group.

The research presents many limitations. Specifically, many difficulties were generated by the attempt to reconcile different disciplines: the Philosophy of Culture, Museum Education, Environmental Psychology, Educational Psychology. The need to adopt an interdisciplinary approach was dictated by the wish to take Museum Studies further, by integrating quantitative theory and methods from psychology. This choice is not new in Museum Studies. Indeed, some of the most important academics in Museum and Visitor studies have a background in psychology. The difficulty came from incorporating these tools into research conducted from a professional museum management point of view. This involved defects and benefits derived from adopting a scientific method in an Applied Research debate. In recent years, museums have focused a great deal on the visitor’s emotional engagement, seeking continuously innovative ways of engagement to guarantee a successful Museum Experience; hence this research has impacts for museum professionals who challenge themselves with School and Family learning programmes, every day, and can be considered a first step.

Moreover, mainly due to the lack of time and financial resources, the research was carried out quickly and without a pilot project. Another limit concerns data evaluation: too much data was collected from a few classes in a short period of time. Although the research staff gave children their full attention and care, many children needed a more relaxed atmosphere and more time to visit the museum and its exhibits. A “control group” would have been very useful but it was not possible to include the activity for local schools, which had already scheduled extracurricular activities for the current year. With a larger sample, the data would have increased validity. Such a small study cannot make too many

generalizations and is essentially preliminary research opening up new paths of enquiry, for detailed examination.

Finally, the study was carried out in one museum alone, and it is certainly possible that the satisfying experiences and restorative elements identified in this particular museum are lacking in others. These results are valid and restricted to the MART - Museo d'arte moderna e contemporanea di Trento e Rovereto.

Although this research provides an understanding of the relationship and links between Introspective experience and the Cultural Community, through Achievement Emotions and Restorativeness outcomes, many doubts remain concerning in-depth dynamics. Future research could seek to do deeper into the issues raised here one by one and step by step, reviewing theory and methods, instruments and tools. Greater attention should be paid to the social aspect of museum learning, trying to understand the dichotomies between social and introspective experience. Many issues were left open, for example, the verification of the link between Achievement Emotions and specific performance related to the museum learning objectives associated with the visit, and the effects of restorativeness on learning performance inside museum galleries. It would also be interesting to check whether the effects on CC are durable and grow in the long-term, or are limited to a short time after the visit.

The dissertation leaves these questions open, and this is an opportunity for Museum and Visitors Studies to take up new interpretative challenges.

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# APPENDICES

[Appendix 1]

Cultural Community

"The Negotiated drawing"'s observation grid.

<b>POST VISITA</b>	Nomi .....		
Coppia n° .....	Compilato da:.....		
<b>DOMANDE</b>	<b>SI</b>	<b>ABBASTANZA</b>	<b>NO</b>
1. LA COPPIA HA CAPITO LE REGOLE DEL GIOCO?			
2. HA DISCUSO LA PRIMA DOMANDA?			
Hanno nominato, compagni, insegnanti, genitori, educatori, visitatori...	CERCHIARE RISPOSTA		LA
3. HA DISCUSO LA SECONDA DOMANDA?			
Hanno nominato solo concetti o anche valori come AMICIZIA, SOLIDARIETA, ASCOLTO, RISPETTO, altro...	CERCHIARE RISPOSTA		LA
4. HA DISCUSO LA TERZA DOMANDA?			
Ha nominato <i>gioia, speranza, orgoglio, sollievo, rilassatezza, ansia, rabbia, noia, tristezza</i> , altro...	CERCHIARE RISPOSTA		LA
5. LA COPPIA HA TROVATO UNA RISPOSTA UNANIME ALLA 1° DOMANDA, 2° DOMANDA, 3° DOMANDA...	CERCHIARE RISPOSTA		LA
6. LA COPPIA HA DECISO ASSIEME IL SOGGETTO DEL DISEGNO?			

7. LA COPPIA HA INIZIATO A DISEGNARE CON UN IDEA PRECISA?			
8. LA COPPIA HA CAMBIATO IDEA DISEGNANDO?			
9. LA COPPIA HA TROVATO IL MODO DI DIALOGARE SENZA PARLARE?			
10. LA COPPIA HA TROVATO IL MODO DISEGNARE ALTERNANDOSI?			
OSSERVAZIONI PARTICOLARI			
Titolo del disegno: .....			

[Appendix 2]

Restorativeness

Perceived Restorativeness Scale – Children Version (Prs- ch), (Berto, Pasini andamp; Barbiero, 2015).

Soggetto n.:

M  F

età:

Classe:

ISTRUZIONI

Adesso ti farò alcune domande. Non ti preoccupare sono domande molto semplici. Per prima cosa leggi. Se c'è qualcosa che non capisci dimmelo, io sono qui per aiutarti. Poi rispondi mettendo una crocetta sulla **scala numerata** che trovi vicino ad ogni domanda.

Rispondi sinceramente, e non preoccuparti, qui non ci sono risposte giuste o sbagliate.

Se ti è tutto chiaro puoi cominciare.

1-In questo luogo non penso ai miei problemi.	1	2	3	4
2-In questo luogo tutto sta bene dov'è.	1	2	3	4
3-Questo luogo è interessante.	1	2	3	4
4-In questo luogo penso a cose diverse da quelle di tutti i giorni.	1	2	3	4
5-In questo luogo succedono cose interessanti.	1	2	3	4
6-In questo luogo posso giocare, correre e muovermi liberamente.	1	2	3	4
7-In questo luogo mi posso rilassare mentalmente e fisicamente.	1	2	3	4
8-Questo luogo è abbastanza grande da essere esplorato.	1	2	3	4
9-In questo luogo non penso alle cose che devo fare.	1	2	3	4
10-Questo luogo mi incuriosisce.	1	2	3	4
11-In questo luogo nessuno mi obbliga a fare o a pensare a delle cose.	1	2	3	4
12-In questo luogo penso solo a cose che mi piacciono.	1	2	3	4
13-In questo luogo ci sono molte cose da scoprire.	1	2	3	4
14-In questo luogo ci sono molte cose che mi incuriosiscono.	1	2	3	4
15-In questo luogo è facile vedere cosa c'è intorno a me.	1	2	3	4
16-In questo luogo non mi annoio.	1	2	3	4
17-In questo luogo tutto sembra avere il proprio posto.	1	2	3	4
<b>18-Questo luogo mi piace.</b>				

[Appendix 3]

Achivement Emotions

Graduated Achievement Emotions Set (GR-AES). (Raccanello, Brondino andamp; Pasini 2014). Some exaples from the girl version.



Figure 1



Figure 2




Figure 3



[Appendix 4]

Emotional Competence

Educard's open ending questionnaire.

Emozioni	
	Guarda il disegno sulla carta e descrivi cosa sta succedendo...
2. Secondo te, che emozione sta provando il protagonista?	
3. Hai mai provato quest'emozione?	
4. Quando l'hai provata hai cercato qualcuno a cui raccontare come ti sentivi?	
5. Quando provi un'emozione bella a chi la racconti?	
6. Quando provi un'emozione brutta a chi la racconti?	
7. Secondo te è facile capire come ci si sente?	
8. Secondo te è facile spiegare agli altri come ci si sente?	
7. Secondo te è facile accorgersi delle emozioni che gli altri provano? La tua mamma, il tuo papà, i tuoi compagni, le maestre....	
8. Tu riesci ad accorgerti se qualcuno vicino a te prova un'emozione bella o brutta?	
9. Ti capita mai di chiedere a un tuo compagno di classe come sta?	

