**Mosaic in the Museum: The challenge of adapting the Mosaic approach to museum settings**

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**Introduction**

Natural history museums are perceived by parents and museum professionals alike as being particularly suitable for younger children. However, it seems that few researchers have asked what it is about these museums in particular that appeals to this age group. This paper will give an overview of my doctoral research to date, which seeks to find ways of exploring young children’s personal experience of natural history in museums. Addressing this subject requires two questions to be asked. Firstly, what are young children experiencing when they visit natural history museums? And secondly, how do we actually go about accessing their experiences?

Young children’s voices are lost in most studies carried out in museums. Where they are included, it is generally the accompanying adult who gives the researchers their own version or perception of the child’s experience. This is because the research methods generally used within museum studies require degrees of literacy, memory and self reflection that are beyond the abilities of children under the age of six or seven. Even an interview with a young child may be difficult because they find it harder than older children and adults to spontaneously recall what they have seen and done, and they also find it almost impossible to describe changes in their knowledge, beliefs or emotions, which are a central aspect of many interviews.

A number of studies do exist that focus on young children in museums, but these have generally been carried out by evaluators rather than academic researchers, and have been intended to demonstrate and advocate ways in which museums can be used by people with young children (see, for example, the work of children’s consultants such as Jo Graham and Playtrain).

My aim in this research has been to find ways of researching children who are old enough to independently express their views about their museum visit, but who are too young to be covered by the more usual museum and visitor studies research methods. As a final aim, I am very keen that these methods should tell us something about the everyday visits experienced by the majority of visitors, rather than special one-off projects within museums, and that they should be easily useable by museum and visitor studies professionals, including museum educators.
Studying learning in museums

Much of the research carried out by BERA members focuses on learning within formal establishments, such as nurseries, schools and colleges. But, of course, learning takes place throughout our lives, sometimes through intentional choice, and sometimes though the ebb and flow of experience. Museums are places that have been built and developed, certainly since the nineteenth century, with education in mind. This sort of experience is referred to as as informal learning, meaning that people visit and explore museums through choice, with no test at the end to check what they have learned. This lack of monitoring of learning is an important positive feature of museums — visitors certainly wouldn’t want to be tested at the end of a visit. However, it does mean that demonstrating learning in museums — vital both for developing effective exhibitions and for fundraising — presents particular challenges to the researcher.

Throughout the twentieth century, and particularly over the past two decades, the field of visitor studies has worked to develop ways of researching and conceptualising visitors’ learning in museums. A huge range of methods have been used, from questionnaires and focus groups, to tracking and recording visitors during an entire visit, to speaking to visitors months after their visit as a way of finding out how much the museum has affected on them. Researchers have looked at a huge range of visitors, from walk-in members of the public, to school groups, to groups of people engaged in long-term projects with museums.

This work has led to the theorising of informal museum learning, and the development of new ways of categorising museum learning that are meaningful to both museum professionals and those with whom they work. Contemporary museum learning theory (see, for example, George Hein, 1998) builds on the constructivist and social constructivist models of Piaget, Vygotsky and Bruner. From this, John Falk and Lynn Dierking (2000) have developed the contextual model of learning, in which visitors make sense of the information they encounter in the museum according to their prior personal knowledge, their social groups, and the physical setting. Meanwhile, Eileen Hooper-Greenhill (2007) has developed the Generic Learning Outcomes, which give a broader definition of learning that includes creativity, enjoyment and changes in attitudes or behaviour as well as more traditional categories such as development of knowledge or skills.

The work carried out within visitor studies has made a huge difference to museum professionals, who are now able to develop exhibitions and learning programmes using sound knowledge about how museum visitors learn and respond. However, in terms of representing the full spectrum of visitors, there is still some way to go. The near-absence of young children from visitor studies means that, while this age group makes up an important part of the visiting population, exhibitions may be based more on assumptions about what young children want than on solid research. Where young children have been included in research, they have often been involved in long-term projects that allow the researchers to get to know them and their views.
However, these methods do not represent the experiences of the majority of children who come to the museum for only an hour or so with their families. Because of the limitations of visitor studies methods for researching this age group, I have therefore searched beyond traditional museum methods to find ways of working meaningfully with young children.

The Methods

My starting point for working and consulting with young children was the Reggio Emilia pre-school approach, which treats children as creative and competent citizens in their own right, and which has developed ways of ‘listening’ to the children in multiple ‘languages’, including various forms of creative expression such as drawing, sculpture, music, movement and so on.

This approach has been influenced the development of a number of children’s consultancy methods, including the Mosaic approach (Clark and Moss, 2001), which seeks to understand children’s viewpoints of their everyday educational settings such as schools and kindergartens. The method uses creative participatory approaches such as children’s drawing and photography, along with children giving tours of their educational setting, and also ‘child conferences’ (a type of mini focus group), observations of the children, and interviews with significant adults. Each child is researched using a range of these methods to create a ‘mosaic’ of their experience, with elements that are individually small, but ultra-triangulated.

It seemed to me that a number of these participatory methods could be useful in museums. Specifically, as well as observing visitors, I planned to use children’s drawing, tours and photography as prompts for interviews with children aged three to five years old. I planned to ask the child to draw, to give me tours, or to take photographs, and then record the conversation that these activities prompted. This would provide me, if not with a mosaic for each child, then at least with a mosaic of the experiences of a range of children within one setting. At the beginning of my research I also intended to work with both schools and families — the two main groups with which young children would visit a museum.

The Pilot Study

I carried out a pilot study in the summer and autumn of 2010, the result of which was a significant narrowing of the focus of the research. I was quickly forced to drop the work with school groups. The combination of intimidating university ethics forms and the required cooperation of multiple gatekeepers (museum education staff, school teacher, parent), meant that I obtained almost no permission to work with the children. This contrasted with my research with family groups, in which I was able to
personally approach the parents in the museum, and which therefore led to a much greater number agreeing to take part.

I also soon dropped the method of asking children to draw a picture of their museum visit, even though this method is often successfully used with older children in museums and with younger children in pre-school settings. Like many traditional museum research methods it became apparent that asking children to draw their favourite part of the museum required them to clearly remember what they had done, and this appeared to be beyond the capabilities of children this young. It may be that the fleeting nature of the experience and the visually overwhelming environment of the museum makes recall particularly challenging for this age group in this setting. Instead, all of the children in the pilot study drew what they could see in front of them, even if they didn’t even know what it was.

Tours also presented problems. The children, when I asked them to take me to their favourite parts of the museum, rushed off at high speed, trailed by myself and their families. This made it difficult to record the conversation. In addition, it meant that I had to hold the recorder towards them, which they seemed to find intimidating.

Both drawing and tours also required that I approach families towards the end of their visits. The child were then immediately required to interact with me, a stranger, without any prior warning. Unsurprisingly, this seemed to make the children (and in some cases the adults) nervous, thus further reducing the usefulness of these methods.

In a final narrowing of my original plan, I found that all three-year-old children refused to take part. Again, they seemed unwilling to interact with a stranger (regardless of the method I used). I therefore decided to focus solely on children aged four and five years old, visiting with their families.

**Children and Photography**

Fortunately, where other methods were difficult or impossible, photography proved to be extremely successful. Firstly, it involved approaching the family as they came into the museum, and then allowing the child to carry out their task of photographing the things they found interesting as they went around the museum with their family, and without my interference. They then came to find me once they had finished, and we looked at the photographs on my computer while I asked them to tell me about the ones they thought were most interesting. This was clearly much less intimidating to the children, with many being willing to talk to me for between 15 and 20 minutes about their pictures and their visit.

Secondly, the task of taking photographs was clearly very enjoyable for the children. Many parents thanked me for letting their child take part, and many siblings fussed to have their parent’s cameras so that they could take part in a similar activity themselves. The fact that the data collection method was fun meant, of course, a much higher level of engagement with the task.
Thirdly, it became apparent that a very low level of skill is needed to give meaningful photographs. This contrasts with drawing, which some children had refused to do as they appeared to feel self conscious of their abilities or simply unable to do what I had asked. Although many of the photographs are slightly out of focus, they are almost all intelligible, and a number of them are easily as good as photographs taken by adults. I had previously tested my camera on my then two-year-old nephew and found that even he was able to use it (although I doubt he would have been able to understand the broader task).

Lastly, and I suspect most importantly, photography makes perfect sense within the context of the museum. The children can see other people around them taking photographs, and are, by taking part in the research, being given the chance to carry out this ‘grown up’ activity for themselves. In addition, looking together at photographs and using them as a way of remembering a visit is also an everyday activity, and so the children soon settled into the interview format.

**Interviewing Young Children**

We carried out the interviews in the public space of the museum, and within the time span of the participants’ visits. This has provided certain challenges, for example it meant that the recordings include background noise from the gallery, that the interviews were sometimes rushed or cut short abruptly, and that the children were often distracted by siblings or other people around them. However, it was also stimulating for the children to still be in the environment of the museum, as demonstrated by the fact that the children would often look around them to try to locate the things they were talking about.

Many of the children were quite physical during the interviews, and I found it necessary to narrate these embodied responses so that they were captured in the recordings. This ranged from pointing, to children touching their own teeth or backbones, to showing me how they had touched an object, to impersonating the animals they were telling me about (penguins, crocodiles, ponies).

As expected, children’s memories of their visit were not always clear. Family members were often invaluable in filling the gaps of what had been said or done where the young participants could not remember. But the photographs without doubt provided a vital *aide memoire*, which allowed the children to remember far more than they would have done otherwise.

The parents and other family members (siblings, grandparents etc.) were always invited to take part in the interviews. However, the degree of participation varied from case to case. Most filled in where the child was not able to answer, some were quite dominant in the conversation, and others didn’t speak at all, or even left me to interview the child alone. It also became apparent that the parents didn’t have as thorough an understanding of the children’s experiences as previous research might assume. On a number of occasions parents were surprised by what children had
photographed or talked about, and often admitted that they and their child had been looking separately at the exhibitions, and hadn’t talked about everything the child had photographed, even when they had been going around the museum together.

The interviews were conversational, rather than following a strict structure. This put the children at there ease, but sometimes meant the interviews took unexpected turns. In particular, a number of children used the interview as an opportunity to ask me questions about the museum, indicating their strong drive to learn, and also suggesting that they are used to non-family adults having educational roles.

Types of Data

In spite of the fact that I reduced the research methods by cutting out the drawing and tours, the project has provided a broad range of potential data:

- Sets of photographs from each individual child, showing both their interests and their viewpoint
- Interviews with the children and members of their family, carried out whilst looking at the photographs on a laptop screen
- Maps of photographs on a gallery plan, showing which areas are most photographed
- Metadata from photographs, including times they were taken, which can help to show visit length
- I am also carrying out observations of other visitors in the gallery, which will be used to triangulate against data from the photography and interviews
- Researcher reflections & research diary, which ensure that I am a visible aspect of the research process.

I had originally intended that the main source of data for analysis would be the interviews. However, it has become clear during early analysis that the photographs reveal important aspects of the children’s experience that are not discussed in the interviews, either because of a lack of time or because they are visual or physical experiences that these young children are not yet able to express fully in words. The sets of photographs are therefore proving valuable not only as a tool to encourage young children to engage with the research, but also as a significant form of data in themselves.

The following section demonstrates the type of data that the project is providing, by focusing on the experience of one particular child, as revealed through his photographs and interview. I will also use this as an opportunity to reveal some of the patterns that have started emerging in the data more broadly, however, it must be noted that at the time of writing my analysis is at an early stage.
Kyle’s Museum of Stories and Dinosaurs

Kyle (not his real name) is five years old, and is visiting the museum with his mother, three year old sister, and his mother’s partner. This is their first visit to the museum.

Kyle’s interview is filled with little stories, prompted by the museum and the photographs. He tells me that he liked the eagle owl because an eagle owl was brought into his school, and that the pheasants reminded him of the time that he and his grandfather ran over a pheasant when they were travelling to the tip. But he also creates stories between the animals, for example saying that the eagle owl is ‘creeping up on the rabbit’ in one picture. (These are free-standing stuffed animals, which happen to be positioned on a table so that the owl is facing the rabbit, which is, in turn, facing away from the owl.)

Like many of the children, Kyle notices the physical features of the animals. A photograph of the stuffed animals on the handling table prompts him to tell me that the male and female pheasants are the same, but different colours, and that he remembers seeing that the otter (whose head is not shown in the picture) had very sharp teeth.

Also like many of the children visiting the museum, Kyle is a huge fan of dinosaurs, and is incredibly knowledgeable about them. Unlike some children, he does not know their names, but does know a lot about their behaviour, which he has learned about from watching TV programmes about dinosaurs. He is especially drawn to the fierce creatures. While looking at a photograph of the liopleurodon (a large sea reptile), he is reminded that he also saw the animal that it preyed on, which he describes to me as a ‘fishy animal’. It is not until some minutes and photographs later that we see the photograph of this prey animal (the ichthyosaurus), which he excitedly tells me is the one he was talking about. He tells me that he did not learn about this predator-prey relationship (my words, not his) from the museum, but from the dinosaur programmes he watches. But it was hugely exciting to him to be able to identify and see these creatures close up in the museum, and clearly had a huge impact on his visit.

He tells me that his favourite dinosaur is the velociraptor. The picture he shows me is actually of a utahraptor, which is much bigger than a velociraptor, but the children almost universally refer to this as a velociraptor, probably because this is how they were portrayed in the movie Jurassic Park. Again, this prompts storytelling about himself and his younger cousin, who have play fights with their toy velociraptors. And again, he notices the colour, telling me that it is different from their toys.

Kyle likes the tuna skeleton, which he says looks like a dinosaur fish, because it is made of bones. This linking of bones with dinosaurs, especially in the case of large animals, is fairly common among the children. But Kyle also notices the humour in his photograph, telling me that it is funny because you can see
the tuna’s tail through its mouth. Because of Kyle’s height, he sees the tuna face to face, and can look directly through its mouth, while adults would tend to look down onto this skeleton and many others that are at a similar height. This gives an example of a way in which children have a different experience from adults, even when they are walking around the same parts of the museum. The child’s viewpoint is different, and they must necessarily see things that adults don’t see.

Significance and Future Research

Even before deep analysis has begun, certain findings have come from this project. To begin with, it has demonstrated the importance of matching the method to the participant in the setting. It shows that it is not enough that the participant may be capable of that task in another setting (for example drawing activities in school), the research method must make sense to them as an activity in the place where research is being carried out. The project also proves that it is possible to gain young children’s viewpoint and give them a voice within museums, thus challenging visitor studies methods that ask children’s parents or teachers to speak on their behalf.

While the method has deviated significantly from the original Mosaic approach, I see it as providing ‘mini mosaics’ for each child, comprising their photographs and an interview that includes their thoughts with additional input from their families. Each of these ‘mini mosaics’ can then be seen to contribute to a larger mosaic for multiple children within the setting.

Within the broader sphere of educational research, this project has also proved valuable for demonstrating some of the limits and possibilities of their research methods in other settings. Given the success of drawing as a method within nurseries, it may be surprising to some that it is so unsuccessful in the museum. But this can also help us to understand why it might be successful in the settings where it is used.

A final thought

This project has begun to suggest to me that a museum can be seen both in terms of the single, physical entity that is the museum itself, and also in terms of the many tens or hundreds of thousands of personal museums that are experienced by each of its visitors. The children’s photographs and the conversations they have prompted allow us an insight into children’s own personal museums, which are each different, depending on the child’s interests, personality, fellow visitors and physical attributes such as height. We can almost imagine that we are being allowed to ‘visit’ children’s personal museums. And once we have seen the child’s own museum from their personal perspective, we can begin to discover ways in which we can make it better.
Bibliography


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