In the Gallery

Children, young people and families co-researching their experience in museums

A report of the second phase of the Creative Spaces programme

March 2011

Acknowledgements

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1. Executive summary

'In the Gallery' reports on the second phase of the Creative Spaces museum learning co-research programme funded by Renaissance North West and facilitated by CapeUK. Research questions reflecting specific issues or challenges were devised by museum education practitioners in three cultural venues. Two schools and a Children's Centre came on board as partner organisations to create teams of children, young people, parents, carers, teachers and museum practitioners working alongside CapeUK researchers.

The Creative Spaces approach sits within the broader context of participatory research in museums and galleries; connections are made in this report with other research findings. For the museum practitioners, the co-research was also a professional development opportunity, a chance to probe and reflect on practice. This was also true, but perhaps to a lesser extent, for the teachers involved. For the participating children and young people, the co-research resonated with the Pupil Voice agenda in education which seeks out and responds to the views of young people about their own learning experiences. Importantly, this was research *with*, and not *on* children and young people.

A methodology was devised for each question; participative activities in the museums and the schools/Children's Centre generated data such as photographs, video, mind maps, designs, drawings and recordings of discussions. The data was coded and analysed to address the research questions; where possible, participants were involved in the analysis. It was recognised from the outset that the interests and perspectives of children are as varied as those of adults; this research does not seek to present a single version of what children and young people think, want or need.

1.1. Site specific questions and findings

Tullie House Museum and Art Gallery explored the support that would enable a self directed (teacher led) class visit to be approached as a learning journey made by adults and children together. The co-researchers were two classes of pupils and their teachers from a local primary school. Two interventions, the creation of museums in the school and class visits to Tullie House, generated a wealth of data.

The findings suggest that museum provision for visiting schools should capitalise on what distinguishes museum learning from what is possible in a classroom with internet access. The participating children and teachers valued opportunities to handle objects and hear the stories behind the collections that can bring them to life. The planning of a learning journey that travels from school to museum and back again can enable children both to build on their prior knowledge of a curriculum topic and to have a more spontaneous experience of discovery and learning akin to that of visiting a museum with family and/or friends. The co-research highlighted the value of positioning children as experts and of ensuring that interactions go beyond the transmission of information from adult to child to become two way conversations.

The Manchester Museum investigated ways in which families with young children might engage with the Archaeology and Egypt galleries and make sense of the collections through creative play. The co-researchers were a group of families attending a programme at a nearby Children's Centre

and the centre teacher. The family group made two visits to the museum during which they captured their responses in photographs, drawings, comments on sticky notes that they attached to display cases and recordings of conversations. Further data was generated by family journals created during a session at the Children's Centre.

The Archaeology and Egypt galleries are not generally well used by families with young children yet the participating parents and carers were pleased by the possibilities they offered and by their children's responses. Although the children found some exhibits scary, this was described by parents as 'not in a bad way'; interest and engagement did seem to be stimulated by the emotional response. The vision of creative play in the question included visitors devising their own stories about objects as opposed to only receiving 'the official version'. This was an unfamiliar idea; parents wanted to provide clear answers and information to their children and felt that the museum could support them more in this role. Opportunities to handle or interact with the collection were seen as key to the way young children learn. The lack of these within the exhibits might have been a problem for the families had the research design not provided other tools for interaction with the objects – for example cameras, sketch pads and sticky notes. This outcome is particularly relevant when thinking creatively about how museums can provide the interaction that families value when objects are not suitable for handling.

The Whitworth Art Gallery explored the factors that might make a gallery a good space in which young people can reflect. Behind the question lay interests in the potential for the art gallery to support the wellbeing of young people and to sow the seeds of a lifelong relationship with art; ideas for the design and use of gallery spaces were also being sought. The co-research team was a group of young people aged 14-15 and an art and media teacher from a secondary school. None of the young people had previously visited an art gallery.

The methodology involved the students becoming familiar with the gallery through two visits and a series of activities. They then developed their ideas and produced designs for reflective spaces in the gallery that they 'pitched' to other members of the group.

The young co-researchers did not initially feel that the gallery was a place for them and they anticipated negative responses from other users, including other groups of young people. However, even in the short time they were able to spend in the gallery, they developed a greater sense of ownership, particularly valuing activities that affirmed that they were welcome and presented them to other gallery visitors as 'invited' visitors.

The young people did not envisage a 'reflective' space that would work for all; their plans either had options to cater for different people's needs or were designed for a specific group. The designs included many different means by which visitors could express ideas or contribute to the environment, for example, 'doodle rooms', white boards and display areas for visitors' art work.

Participants tended not to place art pieces from the collection in the reflective spaces that they designed. Some envisaged discrete places to which visitors could go to reflect; others suggested that transitional spaces between different galleries could become reflective spaces.

The young people expected technology to be part of their experience but did not regard it as bringing a 'wow' factor; it was seen as a basic requirement of something designed for young people.

1.2.   Common themes

The co-research highlighted opportunities for museum practitioners both to make their own expertise more accessible (for example, sharing the stories behind objects with school and family visitors in engaging ways) and to build upon the different types of expertise that children, young people and families bring to museums.

The findings highlighted a need for flexible and responsive means of providing information about objects and artworks. They also emphasised the potential for activities, interpretive tools and signage to encourage and support interactions between adults and children/young people. Some of the methods devised to generate research data in themselves proved to be effective tools for encouraging interactions.

Participants placed a value on leaving behind a trace of their presence (such as a comment, image of themselves in the space or a contribution to a collective artwork) and taking away a record of the visit (such as a drawing or photograph).

Participants in all three co-research studies placed a high value on being able to touch objects, or interact with them in other ways. Play amongst children and between children and adults was observed to be tentative. This suggests the need for museums to give clear messages about what is permissible and possible and to encourage play through the resources they provide (e.g. dressing up clothes for adults as well as children, family seating around play activities, elements within interpretative panels that encourage interaction between adults and children).

The experience of Creative Spaces has affirmed co-research as an effective means of probing site specific issues, supporting professional development and generating insights that are applicable to museum and gallery learning in many contexts. Importantly, it recognises children and young people to be experts on their own experiences of learning.

2. Introduction

'In the Gallery' reports on the second phase of the Creative Spaces programme. Funded by Renaissance North West and developed and facilitated by CapeUK, Creative Spaces has engaged children, young people, parents, carers, teachers and the staff of gallery and museums as co-researchers alongside the CapeUK team. Three galleries and museums were involved in the second phase; Tullie House Museum and Art Gallery in Carlisle and the University of Manchester's Whitworth Art Gallery and Manchester Museum. Each venue explored a research question with a group of its potential users - primary school pupils, secondary school students and families attending a local Children's Centre, respectively.

The first phase of Creative Spaces (Renaissance North West and CapeUK, 2008) attracted considerable interest in an approach that involved participants in the generation of site specific questions and connected the findings with broader knowledge and perspectives from the fields of educational research and museum studies. In commissioning a second phase, Renaissance North West's thinking was twofold. First, it was promoting the value of co-research and its future use within gallery and museum practice. Second, it was seeking insights that could inform the design of learning opportunities within the participating venues as well as other museums and galleries.

CapeUK is an educational trust that explores the role of creativity in children and young people's learning through a combination of research, professional development, project management and consultancy. A thread that runs through CapeUK's work is 'enquiry' - the framing and exploration of questions as an approach to both child and adult learning. Enquiry is aligned with action research[1] when, for example, it is used by adults to investigate and refine the learning opportunities that they provide for children and young people. When the children and young people are also engaged in the enquiry, a connection is made with the Pupil Voice[2] agenda. CapeUK's approach to both phases of Creative Spaces drew upon its prior experience of facilitating action research projects and its interest in Pupil Voice. The roles taken by members of the CapeUK research team are described in Appendix 1.

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[1] 'Action research' describes a process of designing and implementing an intervention, capturing evidence of its impact, learning from the findings and planning a new intervention in response to that learning.

[2] Pupil Voice refers to the active participation of pupils in the process of their own education and to the extent that they are consulted and listened to about a range of issues that directly impact upon them.

3. What do we mean by co-research?

The delineation of participating children and young people as co-researchers is a statement of empowerment; it positions them as expert in their own lived experiences and capable of designing and evaluating learning in partnership with adults. This is an approach to research *with* children, as opposed to research *on* children.

Both phases of Creative Spaces have drawn strongly on the Mosaic Approach, which was developed by Peter Moss and Alison Clark (Moss and Clark, 2001, 2005) as a means of listening to very young children. 'A mosaic is an image made up of many small pieces, which need to be brought together in order to make sense of the whole. The Mosaic Approach gives young children the opportunity to demonstrate their perspectives in a variety of ways...' (Moss and Clark, 2001). In this second phase, this methodology has been extended for work with secondary school students and through informal learning with families. The principles that have been applied in both phases, irrespective of the age of the participants are:

- Recognising children and young people as expert in their own lives and therefore in a prime position to shape the learning opportunities that are designed for them – and, in the case of families, enabling children to engage creatively with their families to shape learning opportunities.

- Working to children and young people's strengths by encouraging them to express themselves not only in speech and writing but through a whole range of activities and processes - and, in the case of families, supporting a diverse range of communication mechanisms between family members.

- Emphasising the need for adults (facilitators and family members) to listen to children and young people through their methods of expression and to respect their theories, interpretations and questions.

Children and young people have as great a range of responses to museums and galleries as do adults; the co-research sought to capture this variety and not to present homogenized 'young person' or 'family' perspectives.

The positioning of museum and gallery practitioners as co-researchers aligns the approach with reflective practice[3] as a form of professional development. The first phase of Creative Spaces had demonstrated the benefit to the co-research of the insights of the museum practitioners, and the value to those practitioners of the opportunity to reflect on their own practice. The second phase was specifically presented to the practitioners as a professional development process that would require their participation in the design of the methodology, facilitation of activities, analysis of data and reflection on the findings.

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[3] 'Reflective practice' is defined by Schön (1983) as "the capacity to reflect on action so as to engage in a process of continuous learning". Cowan (1998) suggests that learners are reflecting in an educational sense "when they analyse or evaluate one or more personal experiences, and attempt to generalise from that thinking".

The teachers were also positioned as members of the co-research team. They contributed to the design of the methodology, drawing particularly upon their knowledge of the children, families and young people who were to participate. Their input to the embedding of the methodology in broader learning experiences was crucial and they were involved in the adjustment of approaches from session to session in the light of participants' responses.

4. The context for co-research

4.1. Co-research in museums and art galleries

There is relatively limited evidence within the cultural sector of co-research with young people, with a greater number of examples of research 'on' rather than 'with' young people. There appear, at present, to be more examples of such within the arts, education and youth sectors.[4] Co-research studies in museums that have either informed Creative Spaces or taken a similar approach include:

- Extensive work by Susan Groundwater Smith from the University of Sydney, with the Australian Museum and youth researchers. Of particular relevance to the Creative Spaces project is her work recorded in *As we see it – Improving learning in the museum* (2003). This project took, as a central principle, listening to and working with young people at all stages of the project development to explore how the Australian Museum's presentation of its collection and exhibitions assists and inhibits learning. Young people acting as researchers gathered images and interpretations from education staff and interpretive officers of the museum and then young people used an image based research methodology to capture and discuss features of the museum which either facilitated or inhibited learning.

- The View of the Child international network of teachers, researchers, architects, designers, historians, educators and curators interested in developing new participatory models of learning (http://www.viewofthechild.org/). This research network has developed and piloted methodologies of working with children and young people as participants in the design and research processes. In 2008, a series of exploratory discussion based and practice sharing seminars took place involving museums practitioners and academics from across the U.K. focusing on the 'view of the child' of museums and galleries.

4.2. Relationship of co-research to other participatory practices in museums

There is a considerable body of work that has been undertaken to develop the contribution and collaboration that visitors make to museums and galleries. In her book, *The Participatory Museum*, Nina Simon defines four types of participatory engagement with the public: Contributory; Collaborative; Co-created; and Hosted projects (Simon, 2010). These modes of participatory engagement can be plotted on a continuum of participation. We are keen to recognise that participation at one end of the spectrum is not necessarily better than at the other end.

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[4] For example, Participation Works (http://www.participationworks.org.uk/) is a partnership of six national agencies that enables organisations to effectively involve young people in the development, delivery and evaluation of services that affect their lives. The **playtrain** Children's Consultancy Scheme is a practical initiative that enables children to act as specialist consultants to arts, leisure and play service providers. **playtrain** has researched the use of reflective practice, and used the Mosaic Approach as a way of listening to and recording interactions with children. During the Foundation to Participation project (Tomlinson, 2007), **playtrain** explored the effectiveness of an age-appropriate method for consulting with early years children, to improve services for young children in the arts, leisure and cultural sector.

In the most basic terms:

Co-production is akin to what Simon calls 'contributory projects', where visitors are asked to contribute objects, actions or ideas to exhibitions or programmes. Examples might include comment boards, graffiti walls and video booths.

Co-development is similar to what Simon calls 'collaborative projects', where visitors are invited to serve as active partners in the creation of projects that are conceived by the museum. In these cases visitors' ideas and choices shape the content and development of projects and exhibitions.

Co-research within the Creative Spaces programmes is most similar to what Simon refers to as 'co-creative projects', where visitors work together with staff to define research questions, areas of enquiry or project goals, and develop and analyse results of any enquiry or activity. This type of engagement is always rooted firmly in the interests of the visitors as they define them. In many cases this work results in the production of a community generated exhibition or event.

Some practitioners feel that the co-production of meaning within exhibitions, and asking for local communities to support multiple interpretations of museum objects is the most inclusive and effective form of participation: '…there can be religious, emotional or nostalgic meanings, and that's the real value of involving lay people. It's supplementing the curatorial meaning' (Mulhearn, 2008:23 in Govier, 2010). Others feel that there has to be a fine balance between gathering multiple meanings and presenting a coherent exhibition to 'the visitor'.

Some of the cultural sector anxiety associated with co-production, co-development and co-research, is focused around perceived issues of 'handing over control' of spaces, resources and collections which in many cases are rare, fragile and/or valuable. Some researchers in the field, however, feel that it is unhelpful to use phrases such as 'handing over power' which in reality does not happen in these projects. 'When we stop making power hand-over a central aim of co-creation, I think we give ourselves many more possibilities to do interesting work with our audiences, which will be embraced by more of our colleagues (and will probably involve quite a significant sharing of power along the way)' (Govier, 2010).

Detailed below are a small number of examples of those projects that have worked in a participatory way with families and young people as co-producers, co-developers or co-researchers.

- Manchester Art Gallery has been exploring how they could co-create with their audiences a re-interpretation of the Mary Greg Collection of Handicrafts of Bygone Times, a collection that has been kept in store for some time but which offers all kinds of developmental possibilities.

- The Bradford Young Ambassadors group are young people aged 16 to 25, who meet regularly at Bradford Museums and Galleries to share projects and discuss views about art, interpretation and creativity. They support, co-curate and co-produce exhibitions and learning programmes within the museum service. Similarly Young Tate is a group of 13 to 25 years olds who work with Tate Britain, Tate Modern, Tate Liverpool and Tate St Ives to develop their

programmes for young people. They plan and deliver events and aim to create a programme of free, stimulating and fun activities to introduce other young people to art.

- Kate Pahl at Sheffield Hallam University has also explored co-research with young people in cultural venues in Yorkshire. One study took place in a library in Rotherham focusing on how and in what ways young people use literacy in spaces such as libraries (Pahl, 2010). The researchers used a participatory approach to data collection and analysis based on the Mosaic Approach as in the case of our Creative Spaces project.

At an international level there are numerous projects and programmes which use the range of participatory models described by Simon (2010), from the many museums that have used innovative approaches to gathering the perceptions, ideas and stories of their visitors, through the museums that develop programmes with their communities and on to the rarer examples, such as the Wing Luke Asian Museum in Seattle, where the ethos of working collaboratively with the local community is embedded and informs everything that the museum does.

5. Development of the approach

5.1. The participating museums

The co-research opportunity was offered to the six Renaissance North West 'hub' venues. Uptake was determined by the capacity for staff to be involved and whether an area of practice that might benefit from co-research could be identified. Two of the museums that chose to participate, Tullie House Museum and Art Gallery and the Whitworth Art Gallery, were involved in the first phase of Creative Spaces; the Manchester Museum was new to the programme. The terms 'museums' and 'museum practitioners' are used to refer collectively to the three venues and their staff in the remainder of this report.

5.2. Methodology

Each of the three co-research projects took the same overall course:

- a research question was framed by the museum practitioners in discussion with CapeUK

- an educational setting was invited to participate

- a specific methodology was planned (these are described in detail in sections 6, 7 and 8 respectively)

- research tools were designed and introduced through a series of sessions, some located at the educational setting and others at the museum

- participants reflected on the data generated during these sessions[5]

- data was then subject to further analysis by the CapeUK team.

An initial overview of each data set generated headings and questions that were used to identify groups and make links between data. In drawing together the findings, priority was given to what was most closely related to the research questions.

5.3. Framing the questions and recruiting the education partners

In other contexts, CapeUK has involved children and young people in the process of framing questions and this possibility was discussed at the outset of the second phase of Creative Spaces. The prevailing climate of financial uncertainty made it imperative for the research findings to address real and pressing issues faced by the museums. It was agreed that this was most likely to be achieved if the questions were framed by the museum practitioners themselves. There was an intention to build an ownership of the question by the children, young people and other co-researchers in the early stages of their involvement.

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[5]   The types of data generated are listed in appendix 2.

5.3.1. Tullie House Museum and Art Gallery

> **How can the gallery support schools to approach a self-directed visit to the museum as a learning journey made by adults and children together?**

At the start of the research in 2009, The Learning and Access Team at Tullie House Museum and Art Gallery faced changes that had the potential to reduce their capacity to cater for visits from schools. One possible response was to enable more visits to be facilitated by teachers (the term used by the museum for this type of visit is 'self directed') and fewer by museum practitioners. A detailed exploration of one school's experience of self directed visits would inform this consideration and the offer subsequently made to schools. A further rationale for the question was that teachers leading self directed visits don't always appear to engage with, or take responsibility for, their pupils. It was anticipated that the research findings would shape guidance and training for teachers.

The phrasing of the question emerged in discussions between the Learning and Access Team members and the CapeUK researcher that included reflection on the previous phase of co-research, in which Tullie House had explored the value of informal learning with primary aged pupils. Activities in which pupils were relatively autonomous had stimulated a strong appetite for learning, which pupils were keen to follow up; however their immediate acquisition of knowledge and understanding appeared more limited than that of pupils involved in learning activities at a second participating museum that were more adult directed (Renaissance North West and CapeUK, 2008:35). The concept of a *learning journey made by adults and children together* sought to combine the best of both approaches. It characterises a learning process that starts before the visit and continues after it; that holds the possibility of both adults and children discovering and pursuing interests along the way; and that positions children as potential experts and adults as learners as well as teachers (Renaissance North West and CapeUK, 2008:48).

It was agreed to work with primary school aged pupils, who represent a high proportion of school visitors to the museum, and to seek a partner school that had not visited in recent years. A School Improvement Officer identified schools in Cumbria that were taking innovative approaches to two issues with which the research question resonated: Pupil Voice and the redesign of the primary curriculum.[6] Schools were contacted and one head teacher responded immediately, attracted by the opportunity to participate in action research which, from his prior experience, encouraged teachers to trial new approaches. The head teacher selected two very experienced and reflective teachers to participate with their classes.

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[6] In March 2010, the point at which a participating school was being sought, it was expected that a new primary curriculum would be introduced in September 2010 based on the Independent Review of the Primary Curriculum (IRPC) led by Sir Jim Rose (DCSF, 2009). Many schools anticipated the review's recommendation of a curriculum based on six areas of learning and a set of essential skills that should be organised to meet the needs of particular communities; they began to re-design their own curricula. The proposed new curriculum was dropped from an education bill in the lead up to the May 2010 general election.

5.3.2. The Manchester Museum

> **How far do young children and their families feel able to explore the Archaeology and Egypt Galleries and make sense of the collection through creative play?**
>
> **What aspects of the spaces, displays or museum interventions help or hinder this process**?

The Manchester Museum decided at the outset that the co-research would explore aspects of how families with young children experience the museum. This focus brought together members of two internal teams - Learning and Interpretation and Public Programmes - and the regional Renaissance North West Hub Early Years and Family Co-ordinators. A decision was taken to keep the wording of the question open during the early discussions, from which the following areas of interest emerged:

- What makes a family that has been part of an organised visit want to return on their own and how can gallery staff influence these decisions?

- What are parents' and carers' expectations of the museum and perceptions of their own roles during a visit?

- How can the museum support families to explore, play, pose their own questions, weave stories, accept multiple interpretations and have 'permission not to know'?

A second consideration was the location of the co-research within what is, particularly from the perspective of a family with young children, a large collection. Three areas of the museum were in the process of being re-designed and it was agreed that the co-research be located in one of these, with the possibility that the findings would feed into the design process. It was decided that the research might reveal most if it was undertaken in galleries that were not well used by families with very young children: the Archaeology and Egypt Galleries.

During further discussions, the importance of providing means by which families could directly engage with the collections and ensuring that they felt comfortable enough to play in the gallery spaces came to the fore. The wording of the research question was then formalised to reflect these priorities.

Children's Centres have a strong focus on working with families and, on the recommendation of the Renaissance North West Early Years and Family Co-ordinators, Rusholme Children's Centre was invited to be the co-research partner. The Centre's teacher had extensive experience of collaborative projects, including several with cultural partners. The Centre had the additional advantage of being within walking distance of the museum, which not only eased practical arrangements during the co-research but increased the likelihood of participants returning to the museum independently afterwards.

Initial attempts by the Centre's teachers to recruit families from among its users met with difficulties because individual circumstances and commitment made it hard to identify times when a group of families would be available to participate. The solution emerged when an opportunity arose to embed the co-research in an existing programme for families.

5.3.3. Whitworth Art Gallery

What factors make a gallery a good space for young people to reflect?

The Learning and Engagement Team at the gallery decided at the outset that the co-research would involve secondary school students. Three contexts or connections were identified:

- the potential for the co-research to complement and inform an arts and health project with young people, also funded by Renaissance North West and with a major research dimension, which would lead to the creation of a therapeutic space within the gallery

- an awareness that much work undertaken by the gallery with the 14-19 age group took an instrumental approach and used the arts to explore issues of personal identity and current affairs. A focus in the co-research on the intrinsic value of the arts could provide insight into how the work of the Learning and Engagement Team, and the environment of the gallery in general, could sow the seed for an individual's long term relationship with the arts and culture

- a proposed major extension to the gallery which, at the time of the research was being submitted to the Heritage Lottery Fund and which has since been approved. Although the findings came too late to influence the design of the extension, they have the potential to feed into thinking about how the new spaces might be used.

During early discussions, interest was expressed in how young people perceived a school's role in developing pupils' emotional intelligence[7] and if, and how, they felt the gallery could contribute. This evolved into a proposal to explore with young people how the gallery might support their thought and reflection and to identify how the gallery differed from other spaces in which they might think and reflect. It was recognised from the outset that establishing a shared understanding of the term 'reflect' would be key to the success of the co-research. This emerging focus made a connection with the research question framed by the Whitworth Art Gallery in the first phase of Creative Spaces - an exploration with primary aged pupils of '*What is an art gallery? What would an art gallery designed by children contain and how would it feel?*'

The secondary school invited by the gallery to co-research the question had been a partner in other projects and, as a Creative Partnerships 'School of Creativity',[8] was familiar with an enquiry approach. Prior to the school coming onboard, it was anticipated that two groups of students would be involved: one designing an environment for reflection in the gallery that would be used by the other. However, it became apparent that the involvement of two groups would have made unfeasible demands on the school. A methodology was developed for a group of media students; however, there was a last minute change, by the school, that led to the co-research being transferred to a group of BTEC art and design students.

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[7] There are a number of definitions and models for 'emotional intelligence'. The work of Daniel Goleman has been influential in schools and this identifies four constructs of emotional intelligence: self awareness, self management, social awareness and relationship management.

[8] Creative Partnerships was funded by the government between 2002 and 2011 to develop relationships between schools and creative practitioners/organisations. 55 Schools of Creativity across England, selected for their outstanding practice in creative teaching and learning, provided local and national leadership.

6. Case study: Tullie House Museum and Art Gallery

6.1.   The question

> **How can the gallery support schools to approach a self-directed visit to the museum as a learning journey made by adults and children together?**

6.2.   The co-researchers

- Faye McNamara, Assistant Learning and Access Officer, Tullie House Museum and Art Gallery
- Rosie Marcus, CapeUK
- Mrs Murdock and Mrs Davidson, teachers at Robert Ferguson Primary School, Carlisle
- Classes at Robert Ferguson Primary School
    - Class M: mixed class of twelve Year 1 and ten Year 2 pupils (an age range of 5-7)
    - Class D: twenty-three Year 2 pupils (6-7 year olds)

NB. Names have been included to allow readers to make sense of the findings but have been changed for children to safeguard the identity of the children involved.

6.3.   Methodology

Research design

The research comprised two inter-linked interventions: the creation of museums in two classrooms and class visits made to Tullie House Museum and Art Gallery at the mid-point of this process.

The creation of classroom museums allowed pupils to develop and express ideas about museum based learning within the familiar environment of their own school. The method enabled pupils to articulate the experiences that they would like to have in museums through the choices they made when creating their own. Data was also generated by pupils' reflection on what they would have liked to have done that was not practically feasible. During the planning stage, pupils' perspectives were captured in audio recording of discussions, mind maps and drawings. Their responses to the completed museums, alongside the reactions of their families and pupils from other classes, were recorded in observation notes and photographs.

The second intervention, visits made to Tullie House Museum and Art Gallery by each of the two participating classes, was designed to model the concept of a learning journey made by adults and children together. Three perspectives, those of the pupils, teachers and Learning and Access officers were captured in recordings of individual and small group discussions before, during and after the visits.

Analysis

The data generated by the project was extensive and took a variety of forms. Following the final interaction with the pupils (between phases 5 and 6 below) a preliminary analysis was made to

generate a set of headings and further questions. These were used to shape the semi-structured interviews conducted with the two participating teachers and members of the Leaning and Access team respectively.

With the data gathering complete, relevant evidence from the audio recordings, observations and photographs and pupils' mind maps, posters, drawings and writing was converted into text in the form of descriptions, notes and quotations so that it could be considered as a full body of evidence. Different data types could be considered alongside each other and grouped as emerging themes appeared. Coding and sorting of this text allowed an efficient approach to making sense of large amounts of data, whilst reference back to its source allowed relevant interpretation and context to be retained.

6.3.1. Execution and adaptation of methodology

The phases described below extended over a four month period, with a concentration of phases 3-5 in three consecutive weeks.

Phase 1 Meeting to establish shared understanding of the co-research

A meeting of the head teacher of the school, the two participating teachers, the Learning and Access Officer and the CapeUK researcher established a shared understanding and provided a context in which the research strategies and tools could be developed. The head teacher suggested that a museum should be created within the school and this intervention, along with the class visits to the museum, was adopted.

Phase 2 Co-research with teachers at the museum

The teachers visited Tullie House with a CapeUK researcher and discussed their personal and professional experiences of museums. The conversation probed the ways in which their expectations of class visits has been formed, for example, comparing the experience of visiting with their own families with that of leading class visits. The two teachers and the CapeUK researcher then 'walked and talked' around the galleries, considering the ways in which their pupils might respond to the spaces and collections.

Phase 3 Co-research with pupils prior to the museum visit

Class M. It has been decided that this class would create a Museum of Journeys (the journeys big and small that pupils had made) and use their visit to Tullie House to generate ideas about how to organise the space and present their collections. Pupils worked in the groups in which they would be visiting Tullie House the following week to consider what they would look for, how they would record what they found and how their group wanted to organise their visit, including the role that they wanted their accompanying adult to take. The main points were recorded on sticky notes and then pulled together in a whole class plenary session.

Class D. The Assistant Learning and Access Officer and a Learning and Access Trainee participated in this session alongside the CapeUK researcher. The class teacher had decided during the 'walking

and talking tour' to explore the topic of the Border Reivers.[9] In response to the research question, she had also taken the decision to learn about the topic alongside her pupils, as opposed to researching it in advance.

The class divided into three smaller groups to discuss what a museum is and what they wanted their museum to be like. Each of the three groups recorded their thinking using drawing and text on large sheets of paper.

Both classes had opportunities to explore objects from the Tullie House handling collection during these sessions.

Phase 4   Class visits to the museum

The two class visits to Tullie House each lasted two hours; pupils worked in groups of five or six, accompanied by a teacher, student teacher or classroom assistant. Each of the small groups of pupils from Class M group had with them a route through the galleries that they had planned in advance and a checklist of what they were looking for. Class D pupil groups had taken the decision to spend the first hour freely exploring the whole of the museum and the second concentrating on objects and information connected with the Border Reivers. A Learning and Access officer greeted each class and gave a short introductory talk; this service is provided for all self-directed school groups that notify the museum of their intention to visit. However, the Learning and Access Team made no further input day in order that the experience of the classes should be consistent with the level of support that is normally provided to schools making self-directed visits.

Phase 5   The classroom museums

The two classroom museums were opened to other classes in the school and to the children's families at the end of the school day. Observations were made of the pupils' activity and their responses to the visitors. The museum openings were also used by the CapeUK researcher and members of the Learning and Access teams as opportunities to gather responses to the previous week's visit to Tullie House through small group activities and recorded discussion.   One planned activity was changed at the suggestion of a pupil. It had been intended to mind-map a 'before, during and after sequence' for a class visit to a museum. The pupil expressed a preference for creating a museum poster, an activity that had the potential to reveal how pupils thought museums might attract visits from schools. Other pupils responded positively to the alternative activity.

Phase 6   Semi-structured interviews with teachers and museum practitioners

A preliminary analysis of the data conducted after phase 5 was used to generate interview questions for first, the Tullie House Learning and Access team and second, the participating teachers. The interviews were conducted at the museum and school respectively so that reference could be made to the gallery spaces in the first instance and to the work produced by the pupils in the second.

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[9]   The Border Reiver families inhabited the area north and south of the England/Scotland border from the 13th to the 17th Centuries. Subject to raids and crop destruction by passing armies in the constant wars between the two countries, their means of survival was the raiding, or reiving, of cattle and goods from both sides of the border – with an allegiance to their own families rather than either England or Scotland.

6.3.2. Integrating the research into the broader learning experience

For the two class teachers, it was essential that the research could be integrated into a curriculum topic – ideally one that could be sustained for half a term. The creation of the classroom museum and the focus of the visit to Tullie House had to be effective means of supporting and taking forward pupils' learning. The teachers approached these topics as 'learning journeys made by adults and children together' in the spirit of the research question by, in the case of Class M, basing the topic on pupils' life experiences and, for Class D, researching the topic alongside the pupils as opposed to beforehand.

The following examples illustrate two of the ways in which the research was embedded within the broader learning experiences of the pupils. Both are drawn from phase 3.

In Class M, the concepts of collecting and collections were explored in order to make the connection between the objects with which pupils were documenting their own journeys and what they would see in the museum. The head teacher visited the class, bringing two objects that he keeps on his desk – part of a clay pipe and an ink bottle. These were handled by pupils who put forward ideas about what they might be and how they could have got to the beach where they had been found. Items from the museum's handling collection were then passed around – with discussion about what they might be and how they had ended up at the museum. Children and adults then talked about what they, and people they knew, collected. Finally, some of the objects collected during journeys that pupils brought to school for the classroom museum, were handled and discussed.

For Class D, the topic had been chosen by the teacher during the 'walking and talking tour' of the galleries because 'the battling' would engage the particular mix of personalities in her class, as would the personal connections (several pupils have family names that indicate a 'Reiver heritage'.) The class had begun their research on the Border Reivers the previous day using books, DVDs and the internet as sources. At the start of the session, they shared the knowledge they had acquired with the museum practitioners and talked about what most interested them. The stories of individual Reiver 'characters' that clearly captured the imaginations of the pupils and would become central to their learning, were already emerging at this early stage.

6.4. Findings

6.4.1. Pupils' perspectives at the start of the co-research

6.4.1.1. Interaction with exhibits

The pupils anticipated that a class visit to a museum visit would be an opportunity *'to learn stuff'*, '*enjoy yourself'* and *'play there'*. There was an expectation that learning would be multi-sensory *'for looking'*, *'to smell things'* and '*touching things'*. Similarly, in the plans for their own museum, specific reference was made to exhibits enhanced by sounds and smells. Pupils anticipated being both receptive and active in their learning, being '*shown things'* and '*told things'* and able to '*ask about old things'.*

There was also an awareness of the restrictions of the museum – particularly in relation to touch – *"don't touch", "we want to touch them but we are not allowed"* – and a sense that behaviour associated with having fun in other contexts could be prohibited in a museum;

> *"You could get grounded from the museum if you are having fun."*

The pupils in Class D were very aware of the harsh lives of the Border Reivers families. Prior to the visit, some pupils had an expectation that the museum would recreate these terrible living conditions and therefore questioned whether enjoyment was an appropriate response.   This was captured when a group mind-mapped and discussed the purpose of a museum;

> *"Interesting."*

> *"Fun."*

> *(Child) "It's not really fun."*
> *(Researcher) "Why's that?"*
> *(Child) "Because life in the olden days wasn't fun."*
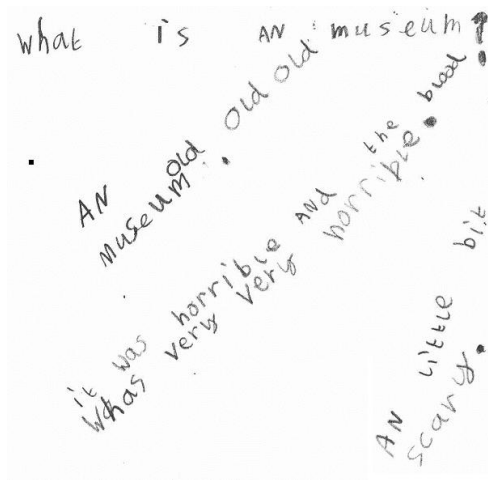
The feature that generated most discussion between those who had previously been to Tullie House and those who would be visiting for the first time was a re-creation of a Roman mine; this was referred to as the 'cave'. The mine, which is designed to demonstrate the dark and cramped working conditions, is far more physically accessible to children than adults. It appeared to generate the mix of fear and excitement that characterised some of the strong responses to objects in the first round of Creative Spaces research (Renaissance North West and CapeUK, 2008) at Tullie House. Prior to the visit, one child had said; *"We don't have to go in if it makes us cry"* and another asked; "*Can some of us go as a group to go in the dark scary bit?"*

A second feature that generated a lot of discussion prior to the visit was referred to as the '*sword in the stone'*. A sword is fixed firmly in the stone until a code is entered on a key pad that enables it to be (partially) withdrawn. The clue to the code can be found in the displays. Some pupils knew the code prior to the visit and were very proud of this knowledge – there was a sense of knowing something special and secret.

6.4.1.2. Interaction between adults and children

When describing the jobs that people might do in the museum, the pupils were most aware of front of house roles; *'receptionist', 'put sticker on you', 'someone to tell you where to go'*, the preparation of displays *'collecting the things together', 'make stuff for you to look at'; 'cooks in the café'; 'shop worker'* and preparation for activities such as holiday workshops – *'people get the stuff ready for an activity'*. It seemed as if there was an expectation that their teachers, rather than the museum practitioners, would support learning. In contrast, when pupils planned the roles of staff in their own museum, they envisaged expert/teaching roles, *"living statues that talk about the Reivers"* and *"someone to talk about the exhibits"*.

6.4.2. Teachers' perspectives at the start of the co-research

During an initial discussion (6.3.1), comparisons were drawn between the teachers' experiences of visiting museums with their own families and with school classes. As a family, they would move 'naturally' around the galleries, stopping to look in more detail at the displays and objects that caught their interest and leaving when 'they had enough'.   In theory, this was regarded as a good approach to a class visit. However, the realities of a class visit with an end time pre-determined by transport arrangements and, in their case, the young age of the children, were identified as barriers by both teachers:

> *"It would be lovely to be child led - go with them and research. This is perhaps more appropriate for older children who can work more independently."*

> *"It would be nice to let them explore but would the needs of different groups be met? Would some get something out of that, but others wouldn't without direction?"*

> *"In general there is not time in the school timetable to do a visit unless it is part of a topic."*

The museum was seen to have roles in both reinforcing what pupils already know and opening up new avenues of learning for them;

> *"Children like to know in advance but also to discover."*

The teachers' expectation was that a museum visit (to Tullie House or another venue) would enhance their current topic by providing learning experiences that extend beyond what can be provided in schools (through specialist knowledge, real objects and activities).   A second expectation was that it would be an enjoyable experience for pupils that would engender an interest in visiting museums with family and friends. These expectations were shaped more by their previous experiences of class visits to museums than by an awareness of the different types of visit on offer at Tullie House, and the relationship between the charges made to schools and the level of support provided.

6.4.3. Learning and Access Team perspectives at the start of the co-research

A tension for the Learning and Access team was that self directed visits, which might become a larger part of their offer to schools, are currently problematic. Their premise for such a visit is that school staff will supervise their own pupils - supporting their learning and ensuring that their behaviour does not unduly impinge on other visitors to the museum or create a safety risk.

However, the Learning and Access team felt that teachers did not always recognise this responsibility to be theirs. Two reasons for this apparent abrogation were identified. First, a lack of confidence about working in the unfamiliar space, engaging with the objects in the collection and responding to pupils' questions when they don't know the answers. Second, the fact that such visits do not always have a 'primary purpose' and are often viewed by schools as 'fillers'. For example, a visit might be an end of term activity, one part of the programme of a day or residential visit to Carlisle, or what occupies one half of a large group of children or young people while the other half takes part in a workshop.

A strong connection was made between a teacher's advance preparation and pupils' or students' behaviour during the visit;

> *"If teachers come in 'cold', they don't know where they are going and the kids sense it if they don't know what they are doing."*

> *"A self directed visit is best when teachers know what they want from it, they do a pre-visit (although this isn't always possible) and they pre-plan."*

6.4.4. The class visits to Tullie House

6.4.4.1. Interaction with exhibits

For each class, the visit contained an element of free exploration of the collections and some activity connected with their curriculum topic. For Class M, the intention was that the two elements would be integrated throughout the two hours of the visit. Each group of five to six pupils had a clip board holding a map of the specific route they planned to take through the museum and a checklist of features such as signs, labels, information panels, display techniques that they would look for. However, when they were asked during the 'meet and greet' session what they had come to the museum to do, children's responses were tentative and no reference was made to the map or checklist. The groups had spent a considerable amount of time creating these tools but their lack of ownership of them suggests that the activity had not been meaningful for them. One Class M group was encouraged by the supporting adult to work through its checklist, ticking off labels, signs etc when they had been spotted. However, as no discussion was initiated about the function of these items and whether they would be useful in the classroom museum, the activity lost its purpose and literally became a tick box exercise. None of the other groups were observed to use their checklists. It was observed that the supporting adults (other than the class teacher) also seemed to be unsure of, or perhaps unconvinced by, the intended link between the visit and the creation of the classroom museum.

Class D had decided that the five groups into which they were divided should explore the gallery freely in the first hour of their visit and then meet at the Border Reivers area for the second hour. Although this was a very simple plan, the pupils did have a strong sense of ownership of it. For example, in the first hour some pupils noticed the Muckle Toon Bell, which they knew about from their research on the Border Reivers, in an exhibit about the Siege of Carlisle; they decided not to look at it immediately but to return to it in the second hour of their visit.

When exploring the gallery freely, pupils did not appear to respond strongly to the chronological and thematic connections made by the Tullie House exhibits but tended to be attracted by individual objects or collections of similar objects. For example, a large exhibit of rocks and minerals stopped several groups in their tracks. Pupils also made connections between the guns, shield and swords within the collection even though these are from different historical periods and are therefore distributed around the museum.

Several pupils responded to objects with which they made a personal connection; for example one boy stopped to comment on an exhibit of fish because fishing is one of his father's hobbies.

Elements of the displays that pupils could experience physically were definitely a draw and feature prominently in post visit discussion and documentation, a railway carriage for sitting in, clothes for dressing up, stocks in which children can be 'imprisoned'. The mine or cave (6.4.1.1) which had generated a lot of interest prior to the visit, has an entrance and a separate exit; children can circle though it repeatedly and many chose to do so.

6.4.4.2. Interactions between adults and children

The role taken by the teachers and teaching assistants had a considerable impact on pupils' level of engagement; several strategies were observed. One adult provided a simple scaffold for exploration by calling the pupils together at the beginning or end of their time in each new space to talk about what they had seen or might see. In another example, a group of pupils settled in the railway carriage; after a fleeting moment all but one were ready to move on. A teacher drew them all back by the simple expedient of sitting down in the carriage and initiating a conversation about how and why it differed from a modern railway carriage.

At the end of the visit, one teaching assistant who had been supporting a group of five pupils, commented that the two hours of the visit had felt rushed. It had not given her sufficient time to respond to the diverse needs and interests of the pupils in the group.

After the 'meet and greet' session, pupils had very little contact with members of the wider museum staff. Only two interactions were observed and these both involved pupils being asked not to run.

6.4.5. The classroom museums

6.4.5.1. Interaction with exhibits

The elements that pupils chose to include in their classroom museums were displays of replica objects, explanatory text, labels, photographs, maps and drawings, quizzes, word-searches, dressing up areas, things to make, a museum shop and a café. Their preference for interactive elements was reflected in these choices and in the encouragement that pupils gave to their parents and other pupils to engage with them. Aspects that pupils would have liked to have included, but were unable to for practical reasons, included a very much larger exhibition (i.e. on the scale of a 'real museum') and replicas of the mine or 'cave' and of the Muckle Toon Bell – the object that best connected Class D's learning about the Border Reivers and the exhibit at Tullie House (6.4.1.1).

6.4.5.2. Interaction between adults and children

The classroom museums opened during the day to other classes in the school. Each pupil from Class M and Class D had a specific role; these included welcoming and directing visitors, supervising activities, staffing the shop and providing explanations. Observation of the manner in which pupils adhered to these roles and the diligence with which they undertook them, suggested that they felt a strong sense of responsibility and ownership. For example, one pupil, who had become the class expert on a particular Border Reiver character, took the initiative to make a list of all the people with whom she had shared her knowledge. For the family visits at the end of the school day, the pupils left their 'stations' and showed their parents/carers around the whole museum. However, their approaches to leading their families around the museum were shaped by the ways in which specific roles had been fulfilled earlier in the day; again the pupils' strong sense of ownership and responsibility was observed.

6.4.6. Pupils' reflections on the visit to Tullie House and the classroom museums

6.4.6.1. Interaction with exhibits

A range of responses was generated in small group discussions with pupils after the visit about whether they preferred to learn in advance about what they would see at the museum or be surprised by what's there when they arrived;

"Surprise really."

"I prefer to know what I am looking for – you can't just go there if you don't know anything, if you don't know anything about it. "

"I think if you are an adult you can go anywhere you want whenever you want because adults can look after themselves and are sensible – kids would just go crazy. Something is too exciting - I want to learn about it"

Each group in Class M had planned a route through the museum in advance. After the visit, the researcher discussed this with them:

(Researcher) "Did you follow your own route?"
(Children) "Not really."
(Researcher) "Was it a good idea? "
(Children) "Not really because we wanted to see other things."

Ten days after the visit, the only aspect of the Border Reivers exhibition that pupils recorded in documentation or discussed in conversation was an audio visual presentation.[10] For some pupils it was the experience of watching a film that they found scary that was memorable;

"I went to Tullie house and watched a movie. It was scary."

"It was horrible and the blood was very horrible and a little bit scary."

Other pupils tried to connect the film with their leaning about the Reivers;

"It's interesting but a bit scary but it's OK. It's telling us some information about the Boarder Reivers."

"The video was a bit interesting because it was telling us a lot about the names."

One pupil had become passionately interested in the story of Lilliard, a Border Reiver woman who went into battle. The pupil related a 'generic' female character in the presentation to Lilliard;

"It was scary because the man was looking really horrible on his face. And then there was this thing about Lilliard left alone and she feared every noise. When they got there they were all around her … then they left and you could see the whole village lighting on fire … she was saying something about Reivers."

Pupils responded very positively to seeing the Muckle Toon Bell, an object that played an important role in the stories of Reiver history that interested them;

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[10]   At the time of the visit, this was projected on a large screen in a separate darkened room which did have the atmosphere of a cinema. The Border Reivers exhibit has since been re-designed and includes a revised audio visual presentation on a much smaller screen.

"You know when we went to see the Muckle Toon Bell – I wasn't expecting the actual bell – they brought it from Carlisle Castle. It was actually real and it was really interesting - I was expecting a picture."

The mine or 'cave' that has aroused so much interest prior to the visit (6.4.1.1) was less evident in documentation or discussion after the visit. No pupils mentioned its intended representation of a mine and all pictures drawn of it show an entirely incidental aspect; a ladder next to its entrance that is used by staff to access the roof when necessary and carries a sign 'Do not climb'.

In contrast, the 'sword in the stone' (6.4.1.1) grew in reputation to feature prominently in recollections and documentation. Some pupils described the process of finding the answer in the museum displays;

"You do problem solving – you have a puzzle and you have to find something."

In most cases, the code was regarded as a 'special number' but its significance as a date was not referred to.
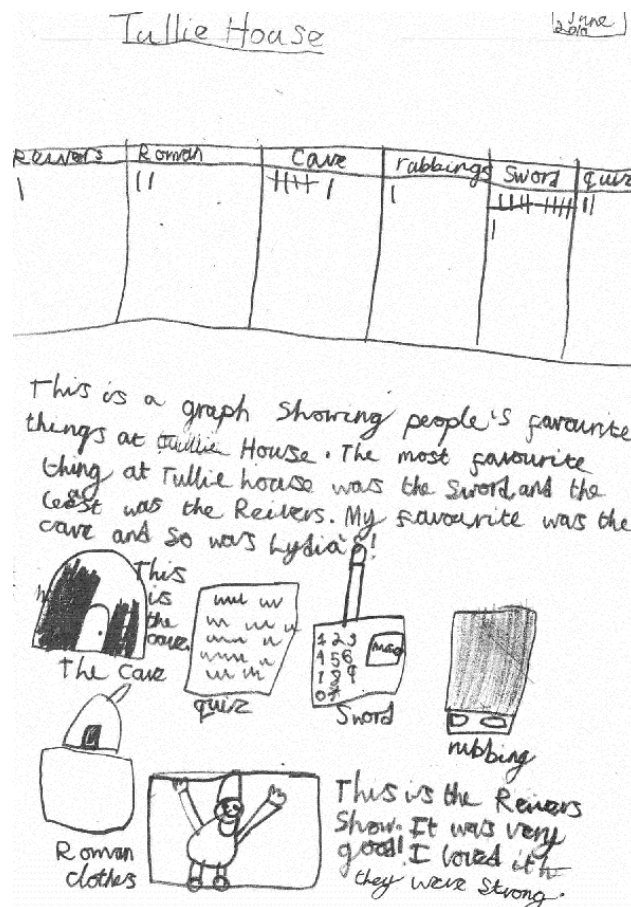
6.4.6.2. Interaction between adults and children

The pupils considered that a teacher should visit the museum as part of the preparation;

"She'd have to have visited it first to make sure it was a good museum."

"Plan that its safe and nothing wrong with it."

They also thought it was beneficial for their teacher to be involved in organising the groups in which they worked in the museum:

"You can choose your own. The teacher should advise you with the choosing. Say if you were good and then you chose someone bad and you never knew they were bad then they could turn you bad and maybe even the whole group would get sent back. And you could get told off and sent back."

"I think the teacher should do it because it has to be a sensible group not like a group of all silly boys and girls all pushing or throwing stuff about."

Pupils variously described the role of the adult accompanying a group as '*looking after you'*, '*helping*' and '*reading the stuff that we can't read – all of it.*'

(Child) "The group can stop in the middle and the teacher can ask you some questions."
(Researcher) "Why?"
(Child) "You learn more."

6.4.7. Teachers' reflections at the end of the co-research

The two class teachers embraced the concept of a learning journey made by adults and children together in different ways. Mrs Murdoch selected a topic that positioned the pupils as experts – their own journeys. Mrs Davidson decided to learn alongside her pupils as opposed to researching the topic in advance. She described the work that resulted as more child led than would usually be the case. In both cases, knowing from the outset that they were creating museums that would be visited by their families and other classes in the school gave the 'real life purpose' to the work and proved "a g*ood way to share with other classes and celebrate the work."*

6.4.7.1. Interaction with exhibits

However, in neither case did the learning journey flow between school and the museum. For Class M, the link between the visit and their topic of creating a Museum of Journeys was problematic. The teacher commented;

"The idea of 'we are going to Tullie House to see what we'd like to have in our own museum' was too abstract for the children. If I was doing the co-research again I would choose a curriculum topic that had a direct connection with what's in the museum. The creation of the classroom museum and the visits were individually both good experiences, but only the most able pupils could make the link."

For Class D, the problem was that the museum exhibit did not provide a context in which pupils could extend their learning about the Border Reivers. At that time[11], it comprised a series of explanatory panels that include some maps and drawings but no objects – and an audio visual presentation. The teacher commented;

"They were disappointed by the lack of artefacts."

"The children maybe know more than there was to see - they were looking for the Reivers characters that they had learnt about."

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[11] A redesigned Border Reivers exhibit opened in April 2011.

The way in which pupils would have reacted had the exhibit fulfilled their expectations, was indicated by their responses to an object that did connect with their learning in school;

> *"They loved the Muckle Toon Bell because they had heard the story about it before and now they were seeing it."*

6.4.7.2.   Interactions between adults and children

Reflecting on the co-research, the two participating teachers considered that the museum's offer to schools undertaking self-directed visits needed to provide more than access to the collections, and it was the knowledge of museum practitioners that came to the fore. It was considered that, in advance of the visit, Learning and Access Team members should provide access to, or guidance about, resources on the topic(s) to be explored. During the visit, the teachers wanted their pupils to have access to the 'quirky details' and 'stories being the objects' that would engage the pupils and bring the collections to life.

An unanticipated outcome of the creation of the classroom museums was the high level of parental engagement. Every single child in the two classes had a family member attending, which is unusual for this school. Most parents stayed for a considerable time and many participated in the quizzes and creative activities; some dressed up. The teachers attributed the success in attracting parents to the timing at the end of the school day (when many parents would be at the school anyway to collect their children), the positioning of children as experts and children's strong sense of ownership of the museums. For Class M parents there was the additional personal connection with the objects and images that formed their child's collection. The teachers commented;

> *"Parents were under pressure to come from their children*."
>
> *"It worked well - making children experts and people asking them questions."*
>
> *"They showed their parents around."*
>
> *"They wouldn't let them go."*

6.5.   Summary of findings and discussion

The co-research revealed the self-directed class visit as a slightly awkward hybrid between the themed workshop for schools and the independent visit to the museum by a group of family and/or friends. It has to accommodate the large group, but is less likely than a themed workshop to provide opportunities to handle objects or hear the stories behind them – two types of learning experiences many participating pupils valued.   In common with the visit by a group of family/friends, it holds the possibility of people being excited by the discovery of objects that have personal associations or capture the imagination.   However it can be challenging for adults supporting groups of pupils to cater for varied needs and interests and to strike the balance between encouraging spontaneous responses and managing behaviour.

The concept of a learning journey made by children and adults that emerged from the co-research – informed by both the successes such as the Muckle Toon Bell (6.4.6.1) and the positioning of pupils as experts in their own museums (6.4.7.2) and the set-backs such as the disappointment of the Border Reivers exhibit (6.4.7.1) can be represented in the following way:

Before
- Adults and children develop a context for what they are going to learn in the musuem
- Pupils acquire a sense of ownership of the topic/s

During
- New learning, some of which could only happen in the museum, builds on the prior learning
- Pupils are positioned as providers, as well as receivers, of knowledge

After
- Adults and children use the knowledge and enthusiasm generated by the visit for further learning.

The importance placed by the Learning and Access Team on teachers knowing the purpose of a class visit was shared by the participating teachers. Guidance and support for self-directed visits could include a step that encourages teachers to articulate the objective of the visits. This is not to suggest that all visits need to be topic based. A visit purposefully designed to enable pupils to experience a museum and discover what is there has an equal value, needing an equal amount of, but different type of, preparation.

The prior knowledge that pupils may have of the museum and its exhibits could be put to good effect. A few pupils within each class generated high expectations of the mine or 'cave' among other class members (6.4.1.1). Prioritizing this exhibit during the visit was a way of respecting pupils' interests and preferences. Once pupils had experienced the thrill of the 'cave's' darkness and the fun of circling though it (6.4.4.1), they could be made aware of its intended representation of a Roman mine by the type of conversational technique used to engage children with the railway carriage (6.4.4.2). Such a conversation could have evolved into imagining, and possibly role-playing the lives of those who would have worked in the mine. This adult-supported interaction might have generated more recollections of the exhibit after the visit (6.4.6.1).

There can be a mismatch between teachers' expectations of museum practitioners, which may be shaped by previous experiences of visiting museums, and the level of support provided for self-directed visits. On the most pragmatic level, this suggests that a museum's offer needs to be very clearly communicated.   There is a bigger question about what makes a self-directed visit an attractive option for a school, and the resource implications of this. The findings indicate that the inclusion of the following learning opportunities would be most valued by children:

Provision of 'special' information

Class D pupils showed a consuming interest in the stories of particular Border Reivers characters and behind object such as the Muckle Toon Bell when researching their own museum. The supposition that they would respond positively to such information within the museum is backed up by an episode at the Harris Museum and Art Gallery in Preston during the first phase of Creative Spaces (Renaissance North West and CapeUK, 2008:33) when children responded very positively to additional information provided during conversations initiated by a gallery attendant. There are already audio recordings of personal stories integrated in the Tullie House displays, but children tended to move on from these quite quickly. It does seem that this information is most valued when it is part of a conversation that responds to children's interests and knowledge – a two-way dialogue.

Handling opportunities

Children's comments on touching and not touching objects (6.4.1.1), their positive responses to the objects from the museum's handing collections brought into their classrooms, and their inclusion of handling objects in their own museums, strongly suggest that access to relevant objects from the handling collection would enhance self-directed visits. Access to the internet has transformed what is possible in the classroom; accordingly, objects have become more prominent in what makes museum learning distinctive.

6.6.   Relating the case study to other co-research

Culture 24[12] highlights several examples of partnerships between schools, children and museums involving the development of a museum in the classroom. There is also a link to a teaching resource pack outlining the history of collecting and providing a number of ideas and resources to use in developing a museum in the classroom. These articles and resources focus on the process of development rather than the co-research aspect of the work.

6.7.   Actions taken, or planned, in response to the co-research

Responses can be identified at three levels. Firstly, there has been some influence on changes to the Border Reiver exhibit at Tullie House, partly because a member of the Learning and Access team involved in the co-research team worked with the Curator of Social History on its redesign. The new Border Reivers exhibition has both a specific 'Learning and Access area' and elements within the main display that are designed to engage children. For example, a painting of Kilmont Willie, one of the Border Reiver characters who captured the imaginations of co-researching pupils, is hung low on the wall and has two explanatory labels – one designed for children and the other for adults. A box in the Learning and Access area contains a range of activities including one that encourages visitors to spot objects in the painting and take on the personality of a Border Reiver to

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[12] Culture24 exists to promote and support the cultural sector online and to serve the needs of online audiences: http://www.culture24.org.uk/teachers/ideas+%26+resources/art70985

'text home'. The co-research has highlighted other opportunities that could be implemented in any further development of the exhibit to support interaction *between* adults and children.

The second level of response is actions that the Learning and Access team plan to put into effect shortly. Schools booking self-directed visit are now asked whether they are coming to explore a specific topic. Their responses enable advice to be given to the teacher about their preparatory planning visit and the 'meet and greet' session to be customised, potentially becoming a two way conversation with pupils or students about the topic. The information now being collected about the topics that attract schools is valuable for the museum's forward planning. While the value, highlighted by the co-research, of providing relevant handling objects is recognised, funding and staffing levels are currently a barrier.

The third level of response will be in strategic decisions about the offer to schools. The findings generate questions about whether a self-directed visit that has no, or very low, input from the museum, will be sufficient to attract schools. There is potential to reframe the types of visit offered to schools, the ways that these are marketed and the levels of resource attached to them.

7. Case study: The Manchester Museum

7.1.   The question

> **How far do young children and their families feel able to explore the Archaeology and Egypt Galleries and make sense of the collection through creative play?**
>
> **What aspects of the spaces, displays or museum interventions help or hinder this process?**

7.2.   The co-researchers

- Anna Bunney, Curator of Public Programmes at the Manchester Museum

- Yvette Fidler, Researcher at CapeUK

- Sue Craven, Rusholme Children's Centre

- Seven families from Rusholme Children's Centre (three families attended all three sessions). The families were all involved with the Centre as they had elected to be part of a summer scheme for children who were due to start school next term. The scheme was four weeks long (two sessions per week) and was aimed specifically at children who had not been attending a pre-school educational setting. Siblings and parents/carers attended the research session with the children. Most of the families had visited the Manchester Museum previously but most had not looked at the Egyptian collection before.

NB. Names have been included to allow readers to make sense of the findings but have been changed for children to safeguard the identity of the children involved.

7.3.   Methodology

The overall approach was designed to give families an opportunity to explore and reflect on possibilities within the Archaeology and Egypt Galleries at the Manchester Museum.

Research design

The initial phase was to introduce families to the museum and allow them to capture their response to the space and objects they encountered. The families were given space and time to explore the galleries and optional ways of recording their response including sticky notes, video recorders, sketch books and photography.

The second phase was a journal-making activity designed to allow families to reflect on their experience and record their memories and favourite aspects of their visit. Families worked together to select photos and drawings to include in the journal.

It was also intended that the second phase would include opportunities for families to explore storytelling and play in relation to the Archaeology and Egyptian collection. This would be through 'object handing' and family playtime.

In the third phase the objective was to stimulate exploration of further possibilities in the space, particularly around play and stories. This included a re-visit to the galleries to put ideas into practice.

Analysis

As an action research project, the intention was that the analysis would be integrated into the whole process with opportunities for families to record their reflections along the way and that the researchers would also reflect and adapt subsequent interventions in light of the findings.

The approach was designed to allow families to build their own analysis and reflections throughout the project. Families made their own choices as to what to photograph; they later made further selections when making their journals, allowing them to express preferences and highlight the importance of certain images in their selection. Parents were also asked to comment on their child's choice of photographs and images. The final phase of the research was led by the families using the ideas and reflections from the earlier phases.

Analysis of the data by the research team involved cataloguing all the data collected and recording it in a common text-based format allowing the different data types to be considered alongside each other. The museum played a key role in identifying and making sense of data that related to specific objects in the collection. Themes were identified by the team, and data coding allowed relevant examples from any of the data types to be identified efficiently to illustrate the observations and conclusions.

7.3.1. Execution and adaptation of methodology

The three phases outlined above were conducted on three days, the first session taking place at the museum and the following two sessions taking place the following week on consecutive days. Each session lasted approximately three hours.

Phase 1

The session began with the welcoming of the families as VIPs in the museum and an explanation of what a researcher is. Yvette and Anna also demonstrated ways in which the families could record their responses to the space.

Families were given a mix of blank and completed sticky notes. The latter could be used as inspiration for their own responses, or used directly: families could select the comment that most closely reflected their response to an object or space, e.g. "this makes us feel ☺". Some sticky notes contained prompts such as "What we said when we were here was..."

The families spent approximately thirty minutes in the Archaeology and Egypt Galleries taking over one hundred photos and many videos between them. They posted their notes on the glass or plinth of the objects that inspired their thoughts.

The families returned to the discovery room to record their initial reflections in drawings and in discussion with Yvette on an audio recording.

Phase 2

The key research intention of the session was to generate the family journals that expressed their memories, preferences and reflections on the visit. Each family was given a full set of the photos that had been taken at the museum, from which they chose the pictures that they wanted to keep (by cutting them out and adding to their journals). The pictures that they drew at the museum were also added, along with new images drawn directly into the journals.

This session was adapted as two unexpected barriers presented themselves. Firstly, although five children attended (including four of the original children), only two parents stayed with their children; the others were dropped off and picked up at the end. Secondly, there was difficulty in gaining permission to take objects to a site outside of the museum. The effect of these changes was:

- The children gained primary ownership of the journals (as opposed to the original intention of a family response). In fact even where parents were present, they took this approach to the creation of the journal, appearing to see their role as supporting their child's learning, as opposed to collaborating with their child.
- The intention to explore aspects of play and storytelling through an exercise of role-playing the discovery of objects and creating stories (or 'own truth') about the objects was not feasible.

Phase 3

As object handling had not been possible at the Children's Centre, the last session began with an activity designed especially for the children and their siblings to stimulate their imagination and allow them contact with real Egyptian artefacts. The children imagined that they were in Egypt rowing down the Nile as they travelled along a piece of blue cloth had been spread across the floor of the discovery room. They were given Egyptian objects to handle and a story about Egypt was read to them by Anna.

The parents and carers took part in a discussion about creative play in the museum. They reflected on their visit – what could be learnt from it and what worked well? They discussed what types of creative play were possible in a museum, what can be done to aid this play; what the families could do in the space, and in what different ways they could respond to objects?

The group also discussed the idea of there being a 'right' answer to the purpose and meaning of the objects. Parents and carers accepted a challenge to find an object that they did not know the purpose of, and together with their child create a story about what it was for.

The families re-visited the Egyptian collection for a further twenty minutes after which they talked briefly to Yvette about what, if anything, had been different in the second visit.

7.3.2. Integration in to the broader learning experience

As the research was taking place within sessions that had other objectives for the families, it was important to complement and support these. The sessions aimed to help the children get used to being in a classroom setting with children of their own age (sometimes without their parents), and participating in activities that they would experience at school. To a large extent the methodology

complemented these objectives by providing the children with structured activity similar to those that might take place at school, e.g:

- working with and co-operating with other children

- sharing equipment

- listening to and following instructions

- cutting, sticking, drawing and writing

- expressing their ideas

- working on time bound activities.

Some additional elements of the process were included to enhance the families' experience (i.e. driven less by research objectives and more by the need to ensure that the participants' needs were also met). These included the following:

- *Carpet time and singing at the Children's Centre* – the children were used to the structure of the sessions at the Children's Centre and the repetition of this was an important part of the programme they attended.

- *Object handling* – whilst this was an important part of the research it was also included to give the children an exciting experience.

- *Celebration* – at the end of the process there was time for celebration, thanks and the giving of gifts. Each child received a 'family explorer pack' which included a rucksack, binoculars, magnifying glass, magazine (with Egyptian pencil case), and disposable camera. As well as being the end of the research process this was the last of the summer sessions with the Children's Centre, so this time for celebration was important. Families also wanted to take photos and say their goodbyes to each other.

7.4. Findings

7.4.1. Exploring as a family

Parents had expectations that the space would be unsuitable or not designed for children of their child's age, particularly in comparison to other areas of the museum, such as the nature and animals section:

> *"Usually when we do come here we are straight to the animal bit, we don't often go in the Egyptian bit, we just walk through it, so it was quite nice to go around with her because she usually just makes a bee line for the lions and bears."*

> *"We went a little bit further on to the bit that has got plants and underwater and that seemed more child friendly. There were little seating areas and tables and things for them to think about and you could talk to your child about it, whereas there wasn't really in that [the Egyptian] area."*

Parents were surprised that they enjoyed the space as much as they did and they put this down in some part to the activities that they did as part of the research:

> *"It was good, it was nice to go round and do things, to be able to stick things on like that and ask her properly how she thought about things. It was interesting because quite often we go round and she buzzes around things but talking to her properly about things was quite good."*

> *"Quite surprised with how opinionated the children actually are, because you think okay they are looking at the museum and that's it, but they voicing their opinions, the kids more than the parents…"*

The design of the first phase of this action research incorporated an element of 'leaving something' (sticky notes) and taking something away (photographs, video and drawings). The children responded to both of these elements with enthusiasm. Parents reported that having these 'activities' enhanced the experience of visiting the museum and opened up lines of communication and interaction with their child.

> *"I have brought them to the museum quite a few times but this experience was totally different to what they normally experience. Because they were leaving behind as well."*

> *"I think younger ones have quite a short attention span in terms of remembering things so sometimes I think it's better when Belle comes away with something like a colouring sheet because then it helps it stay in her mind, what she has seen so she is able to talk about it a*

> *lot. So it just helps with the recollection of what she has seen. So I think that aspect of 'taking away' is a good one."*

Parents were surprised and pleased by their children's emotional responses. These seemed to be aided by the sticky note activity. The mummies and coffins were the objects that elicited the most emotional responses from the children, who put both sad and happy faces on their sticky notes. One family wrote *"makes me ☹ because it's broken"* next to a small carved figure with no head.

> *"I think they took a lot more than just the photos because they expressed themselves as well, so it was more interesting."*

> *"We talked about how we felt, which things made her happy and which things were scary and it was good."*
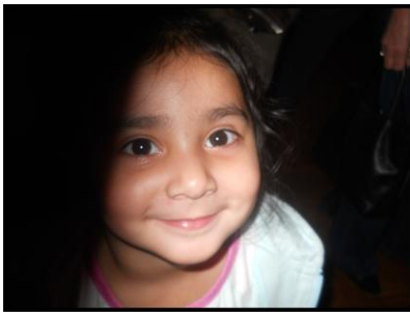
Whereas the happy and sad faces had been given as a suggestion of a way of responding to objects, the other key emotional response of fear came completely unprompted. It appeared on seven sticky notes from four of the five families. The children can also be heard on the video saying that they find things scary. There was a darker area tucked around a corner containing the mummified body of Asru in a glass case, and a bronze cast of her head that the children could reach and touch. These two objects were a source of fear for a few of the children. However, parents reported that this fear was not necessarily negative (see 7.4.5). This conversation was recorded between one family:

> *(Sister) "This is very interesting."*
> *(Anita) "That's scary! Have they took his eyes out?"*
> *(Sister) "It's just a skeleton."*
> *(Mum) "Look you can even still see her toenails - come over here."*
> *(Sister) "She's getting scared."*

7.4.2. Making sense of the collection

In general the interpretation of the objects was more likely to be at the level of identifying what the object is than where it came from and what it tells us about life in Egypt.

Where parents had tried to interpret the collection in this way, they reported that the information given about the objects would need a significant amount of translation in order to make it accessible or relevant for their children. They often found that they struggled to understand it themselves. One parent (who also had older children with her) was very interested in her children

learning about Egypt but often felt that the information gave her very little of the information she would have liked to have been able to give her children.

> *"I tried to explain what things were, sometimes, Even for my 8 year old it was quite difficult to understand what was actually written. The writing and the information could be a little bit easier; I know it's a museum for everybody but… even if they had one that's more for adults further up, and something easier for the children to understand as well. What this is and…"*

Five of the sticky notes indicated a desire to have better information about the objects, for example:

> *"We wish we could know more about this!", "When we were here we said things should be explained easier"* and *"It would be good if we could understand this".*

> *"For the little ones it's just that these are from Egypt and these are mummies. It'd be brilliant for them to just understand that."*

Parents were very focused on providing truthful answers to their children's questions and saw this as an important part of their role. This may have been, in part, linked to the fact that the sessions that they were attending with the Children's Centre were to prepare their child for starting school.

> *"If my children ask me 'what is this' I need to find out to answer him so that is a really hard part for me - it's very difficult."*

> *"I would like to know what it is as well. I'd probably ask one of the staff."*

> *"I feel guilty if I give him a wrong answer because after a couple of years maybe he will discover the right answer, then he will say… [laughter from all mums] so I try my best to find a good answer."*

There was some evidence that the parents' instinct in terms of making sense of the collection for their children was to engage them in spotting familiar aspects such as shapes, colours, patterns etc. rather than talk about what the objects were and where they had come from. They would ask them questions to help them relate to their own experiences:

> *"I talked a bit with Belle about the fact that some of them had smiley faces and others looked a bit … 'look at these faces, are they grumpy faces, are they happy faces?' … 'Have you got any shoes like that?' 'What's your favourite necklace?' Those [were the] sorts of things she liked talking about."*

Colours were a frequently mentioned by parents both in the space as a way of engaging their children, and in their suggestions for how the space could be more engaging for children. Colours were not frequently mentioned by the children unprompted by their parents, although their choice of things to photograph gave an indication that they were drawn to the more colourful objects like the 'blue teddies' in the Grave Gods exhibit to which they added a sticky note saying *"I like these colours".*

"Colours – there were lots of blues and reds; they liked the colours – they are attracted to colourful things."

"We were looking at how they were on the mats. They want to go on certain colours, the girls won't sit on just any colour, the boys are not bothered."

In contrast, the children took the lead in spotting and responding to words and letters. One child took a picture of a section of the information board and the children were observed taking an interest in the large print information board by pointing at it closely with their fingers as children do when learning to read.
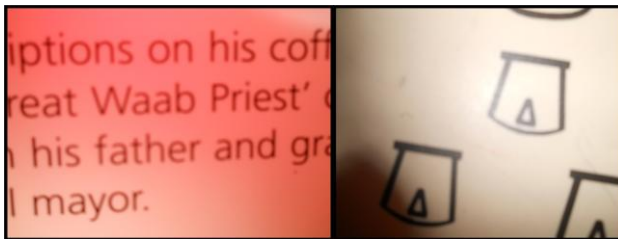
"I know with Anita she gets very excited by letters at the moment, the letters she knows anywhere… 'Oh mummy there's an "f" and an "a"'. They identify with their name too."

"Sara is very excited by letters."

"Belle is interested in letters and shapes and patterns at the moment. If there is a 'B' for Belle she points it out."

7.4.3. Play and stories

On the whole, neither the objects themselves nor the information provided next to the objects appeared to prompt parents to tell stories. There was little evidence of this sort of interaction taking place naturally in the first session.

Some children responded to the objects in a playful way or expressed their desire to be able to play with the objects. Sara's sticky notes expressed a desire to play with the Shabti (funerary figurines) and to wear and play with the New Kingdom Jewellery.

The most playful behaviour occurred with touchable objects or with people. In the video the children are dancing excitedly near the big alabaster pot and making 'music' by tapping with pencils They can also be seen behaving playfully towards the adults or with the cameras.

> *"I think you know because they had a chance to actually touch it as well, they could relate with her more. I think with the younger children, because quite a lot of the museum is for older children, which is a shame.."*

The narrative of the day for the child was as much about the people they had met than anything else. This was reflected in two ways: people were the subject of 31 of the photos, and made 27 appearances in the children's videos. Their choice of photos to add to the journal, and most of the drawings in it, were also of people. This is partly due to the fact that they were creating family journals so they wanted to draw their family and include photographs of their family. However, it was also evident at the museum how much enjoyment they had in taking pictures of each other and this seemed to be the most familiar use of cameras. Indeed this is unsurprising as adults also use cameras in this way and a 'family day out' would normally be captured in pictures of people.

> *"Belle has gone for all the people, they were the main things that she was interested in, the people. Oh she has got patterns, some of the colours she went for as well."*

> *"Sara has chosen people."*

The children's journals were as likely to include the journey, such as jumping in puddles on the way, as the things that they saw at the museum.

When parents were prompted to think about other ways of exploring the museum with their child, storytelling did not feature. When 'making your own story' about an object was suggested, parents were reluctant becasue they were keen to give their children factually correct information and were looking to the museum to supply this. They were interested in the stories of the objects but wanted these to be supplied in a factually correct and accessible way.

When asked what else could be done in the space, parents initially found it difficult to respond. When promoted to think about creative play in the space, they came up with suggestions that indicated their own ideas about engaging the children and also what they had experienced the children's interest to be:

> *"…a chance to do something with the mummy patterns, to draw them or something so that they remember the colours because they love the colours as well…"*

> *"I think because they are interested in letters at the moment you could do something with how they write – or how their name would look in hieroglyphics –'this is your name in*

ancient Egypt, this is your name now'. I think they would find it really interesting and they would relate to it. 'It's my name but in a different language'."

"Could you pick a theme, like 'scary' and get them to take pictures of things that they see that they find scary?

"...we are always telling children 'this is this'. Why don't we turn it on its head and ask the children what they think it is? 'Where do you think it's from?' We ask the questions that they normally ask us. I think that's different, yes."

"I don't know what your little girls are like but with Belle she is very interested in princesses, so if there were Egyptian queens and princesses she would really get involved ... trying on the hats [headdress] yesterday, they loved things like that. If there were hats to try on and things like that, and you can be a princess and have your picture taken."

7.4.4. Aspects of space

The children were initially quite wary of the space, staying with their family groups and working around the space at a pace set by the parents. Familiarity with the space brought confidence to explore and more interaction between the children. Once confident that they could explore and then return to their parents, they felt able to move further away from their family groups. Knowing that most of the people in the space were part of their group may have made them feel safer (in terms of becoming lost or encountering strangers) helped to build this confidence.

The Egyptian Gallery is in two halves: visitors first encounter a darker space containing central cases with windows at (adult) waist height. These form a series of narrow corridors and cross-corridors, which the families made their way through hastily, in favour of the better-lit side of the gallery. Only one sticky note was posted in the darker area:

"It was a little bit dark, the children didn't like to go where it was dark. There were really interesting things. I don't know if it's to actually protect the artefacts but I think the children found it a bit spooky."

The lighter area was favoured also as it contained large objects that had greater visual impact. Parents mentioned that the children were interested in colourful and patterned items and things that they could spot and recognise. Parents were keen to find things that their child might relate to or recognise and, failing that, they could point out familiar colours and shapes. Children tended to take photos of large objects (sometimes as a whole, sometimes a close up of the detail on the item).

Parents found the space easy to navigate, but did report some hindrances to using the space when asked, including the difficulty of getting pushchairs through the space and the height of the displays.

"I think some of the parents found it difficult with the pushchairs as well, because it was quite a narrow space. I've been before with a pushchair and if you have got one thing hung on the pushchair getting through the narrow spaces is quite difficult. And with things being right in the middle – I was able to get round but it's quite difficult, especially if someone is coming in the other direction."

"One thing I found that was a problem was that there was things that were a little bit too high so I had to lift each of the children up to actually see it, with having a bad back it's not perfect anyway, so if things could be moved down so the children could see."

"'Cause they have actually changed the layout haven't they? That Asru was in the corner before. I prefer this layout because there were more corners in that. It's more open as well which I thought was good as well."

A few of the sticky notes also reflected the height problem – the open coffin of Nekht - Ankh was "*too high for small people*", the New Kingdom Jewellery note said *"mummy doing a lot of lifting"* and a note saying *"ooops too high"* was posted on another jewellery case. In fact the jewellery displays seemed to be the least accessible displays for young children.

They wanted to touch a lot of things, and quite a lot of things were a little bit too high for them, where you are actually lifting them up to things and it gets tiring after a bit as well, especially for the jewellery and things – with the girls they loved the jewellery. I think Belle was tall enough to see over but I had a problem with two of mine so I had to pick them up and it was really tiring – that was one of the things I had a problem with to be honest."

Some of the photographs that the children took were very revealing about the viewpoint of a small child. For example, a photograph of a coffin captures the underside of the lid, which is all that the child sees unless he or she is lifted up. Many photographs taken by children of objects in the glass cases revealed that the child's view is so different that the objects were initially unrecognisable to the adults when creating the journals. This is both restrictive and potentially revealing for the child, in the sense that they have their own shared, but alternative, experience of the exhibits.

7.4.5. Aspects of objects

There was no evidence that the families particularly looked at the collections in themes or sections. Individual items were picked out by either the parent or child and attention was focused on that item alone before moving on. The exception to this was possibly the Asru section where connections between the mummified body and the bronze head of Asru were made for the children by some parents.

The biggest draw for the children was the things that they could touch.

"Things that she could actually touch, touchy feely, with the younger children that is how they relate, isn't it? Because they can't read at that age so I think when they can touch it they can relate to it."

"Anything they could touch they were touching, like that big bowl, Anita loved that [all parents laughing and agreeing]. Anything they could touch they were there."

The large alabaster pot featured in 18% of the photographs and was frequently drawn and mentioned. The children displayed their most playful behaviour around this item (dancing around it, tapping with their pencils, feeling the smoothness of the stone, putting their head inside etc.). This pot also brought about the few imaginative ideas – one child said she would like to fill it with cameras. She also took a photo right inside it.

"They loved the pots… they were all around the pot at one stage, touching it, holding it because it was cold to the touch, and nice and smooth as well. They loved that pot, some of them were actually putting their heads in it as well."

The other touchable object was the bronze head of Asru. The families were most fascinated by Asru and the head was a focal point of their curiosity – they found it scary but fascinating. One sticky note beside it read *"scary but very interesting – wanted to draw"*.

One little girl was scared by the bronze head of Asru but eventually approach it and touched it. She chose to take pictures of it and when we returned to the education room it was the one thing that she chose to draw.
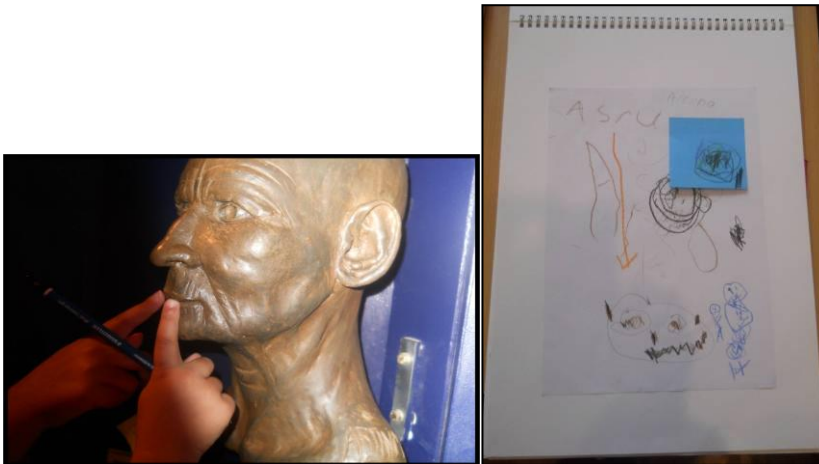
"Yeah, she found that scary but really intriguing. I was really astounded at that, she said, 'oooh mummy that's scary' but look, she has drawn it as she seen it, scary!"

Some of the girls were particularly interested in the jewellery; one of the girls drew a picture in her journal of herself wearing a necklace from the museum.

"She was looking at the colours and everything, lots of things she wanted to touch. Talking about how we felt, which things made her happy and which things were scary and it was good. She liked all the jewellery, especially."

Mummy cases were the most frequently photographed objects as there were so many of them. Large standing case, such as 'Two Brothers' in the entrance, were a focus. However as these could only be looked at and not touched, they did not hold the children's attention to the same extent as the 'touchable' objects.

"I'd love to have a mummy, not a real one but a made up one that they could touch... and it was colourful because most of the mummies, because they are so old, haven't got that much colour anymore. So if they could see something that is made up but is still a mummy they'd find that interesting. It'd be brilliant with bright, vibrant colours."

Many different objects in the 'grave goods' collection were photographed by the children. They favoured colourful ones such as blue 'teddies' and blue balls, and items that they could recognise, such as a pair of sandals.

The limestone false door drew some attention from the children, perhaps due to its height and accessibility to them, and they liked the pictures on it. Other frequently chosen objects were the carved statues, heads and headdresses and the skeleton (which was also cited as scary but was picked for one of the journals).

A lot of the sticky notes left by parents reflected that the children found the objects in the museum scary, but still wanted to look at them.

"I think that a lot of things that they found scary they also said made them sad. So they related that it's scary but it's 'making me sad'."

"With that head on the wall, they found it scary – but they didn't 'not like it'. Because they could touch it they found it scary but interesting as well."

"Yes, Belle likes to be scared. Definitely."

7.5. Summary and discussion

The design and layout of the space gave the impression that it had not been designed for families with children of this age (or even with them in mind). There were a number of physical limiting factors preventing the families from making full use of the collection (including objects that required an adult viewpoint, lack of space for pushchairs and 'dark and spooky' spaces). However, ideas that it would be unsuitable for families with Early Years children were challenged by the engagement achieved during this research. Parents were surprised and pleased at the possibilities and the extent to which children's expressed their opinions and emotions.

Families found that although the collection was scary for the children, this aspect stimulated interest and discussion. The children were sufficiently fascinated by the objects, and to some extent the feelings they were experiencing, to allow their curiosity to lead them.

The children favoured large objects and those that they could touch and interact with. The lack of objects that could be 'interacted' with may have been a problem for the families had the research design not provided tools to interact with the objects i.e. cameras, sketch pads and sticky notes.

Interestingly the provision of these tools brought about similar positive effects to those evident from being able to touch objects. This is particularly relevant when thinking creatively about how museums can provide the interaction that families value when objects are not suitable for handling.

The parents wanted to be (and felt they should be) the experts and able to provide answers and information to their children. They felt that the museum could support them more in this role. Making sense of the collection was often at the level of spotting colours, letters and shapes that the children would be able to identify. Some parents would have liked to take this to the next level but felt unsupported to do so by the information provided in the gallery.

The research design reflected the premise that museum visitors can create their own stories about objects and that these have validity alongside other explanations because there may not be a single historical truth. The children were unfamiliar with this process and, along with their parents, focused on identifying things and getting the 'right' answer; they were not keen to 'make things up'. However, they did respond very well to the idea of being VIPs and being researchers, which closely resembled the role of 'explorer,' a more familiar concept to such young children.

The parents seemed to view the trip to the museum as an activity for the children in which their role was to support their child's learning. They wanted to see their children learning and participating in a 'school trip' – experiencing being a member of a group and learning how to behave in the space. Their behaviour and interaction may have been quite different if they chose to revisit as a family (i.e. not part of an organised visit).

It is important to note that the parental views may have been related, in some part, to the common characteristics of the group. All the families had children who had not attended a pre-school setting (mostly due to the availability of a stay-at-home parent): these parents and carers had therefore taken on the role of the main, or sole, source of their child's education so far. Coupled with the fact that they were all sufficiently engaged in their child's learning to motivate their attendance at sessions to prepare their children for school, it is perhaps unsurprising that these parents had such a focus on personally being able to provide their children with information and a valuable learning experience.

In the design of the research there was discussion about stories as part of creative play in the museum. There was no evidence that creative/purposeful play, storytelling or playfulness with 'own truth' happened, although the children did behave playfully, at times, with each other. The idea of playing in the space seemed contrary to parental expectations about what the space was for and also clashed with their desire for the museum to provide them with 'facts' or 'truths' about the objects.

Despite an embedded approach to learning through play in the Early Years Foundation Stage and Key Stage 1 education, there appears to be an enduring view of academic-style learning that is separate and different from 'play'. During their extensive experience of working with schools and children, CapeUK has recorded similar responses whereby children and teachers talk about learning and play as distinct.

7.6.   Relating the case study to other research

Among the three case studies, the focus at the Manchester Museum was the best supported by prior research. Of the studies that have explored aspects of family behavior in museums, a large proportion has been undertaken in science learning contexts. However, many of the findings have a broader application to museum learning – exploring, for example, the interactions between family members, exhibits and tools such as signage, practical activities and interactive displays. Rahm (2002) sees the potential for signage in science museums to better support and 'scaffold' interactions around the exhibit so that parents can lead children through more meaningful learning conversations during their visit. The proliferation of technologically enhanced interactive displays in science learning contexts in the early nineties stimulated a number of studies of their impact on interactions between families.   This literature was reviewed by Dierking and Falk (1994). More recent research studies that have focused on such interactive displays – for example Heath and von Lehn (2008) – include some that have indicated their inherent limitations and constraints for engagement.

The method used at the Manchester Museum of recording the conversations of families and analysing the interactions between family members and with the exhibits was also used by Peacock (2006) in his exploration of family learning at the Eden Centre, Cornwall and Zimmerman, Reeve and Bell (2010) in study visits to science museums that revealed the variety of knowledge types that families use to make sense of the exhibits.

We can see similarities to the Manchester Museum case study to 'Which way shall I go?' (Graham, 2009) which documents action research work with families and young children in six museums in the South West. This piece of action research focused on finding out which resources, spaces and exhibitions were most effective in supporting parents to engage and learn with their children. The report contains some useful insights into the mechanisms tested, and the ones which were most effective at engaging whole families with the exhibitions at each of the museums.   In each participating museum a practitioner worked with a group of parents or carers and their families to review, modify and pilot old and new resources. Data collected included:

- consultant observations
- project team observations
- still photographs
- video footage
- informal conversations with parents following pilot sessions.

Family interactions were observed using the ORIM framework the four pillars of shared learning in families. The ORIM framework was developed by Cathy Nutbrown and Peter Hannon at the University of Sheffield in 1995:

- **Opportunities** for learning about the museum or its collections
- **Recognition** of children's interests, knowledge and achievements

- **Interaction** around the building or collections
- **Modelling** of 'learning behaviour' by adults.

Practitioners working with families found that those who find museums most difficult to access needed a number of visits to familiarise themselves with the resources and gain confidence in the spaces. Explorer tools (e.g. magnifying glasses, torches), 'mission'/challenge based tasks (e.g. hunting games), toys, pictorial trails and instructions or information and 'please touch' areas in the galleries encouraged deeper engagement, play and discussion within families.

The emphasis on 'play' in the Manchester Museum study connects strongly with the research literature. Play, along with curiosity, confidence, challenge, control, and communication, is one of six components of an intrinsically motivated museum experience according to Perry (1993). Play is focused upon in the work of Canadian scholar Robin S. Grenier. Drawing from a constructivist view of learning and play research, Grenier explores the potential of play in the unique setting of museums to enhance adults' creative thinking and generate opportunities for new learning.

7.7. Actions taken, or planned, in response to the co-research

The findings are intended to be used in two key developments in The Manchester Museum:

- the development of the new Ancient Worlds gallery
- a temporary exhibition, Unearthed: Ancient Egypt (aimed at families and children).

The museum feels that the findings have given new insights to follow up and evidence that strengthens existing knowledge (thus allowing greater impact of the professional knowledge in the museum's work). Examples include:

- the insights into how younger children and families can engage with objects through different layered interpretation techniques, possibly through sensory and tactile media
- strengthening of understanding about how families engage most strongly with the elements with which they make a personal connection – e.g. jewellery, people both alive and dead, things they can touch, letters they are learning.

Findings have already fed into the development of family and Early Years participatory programmes and other exhibition projects, including an adult programme.

The museum is also keen to respond to parents' requests to be 'the experts' (in the sense that they want to be able to provide accurate information to their children and answer their questions).

Museum practitioners now feel better equipped to undertake action research and – having seen the richness of data that it is possible to collect in a few short sessions – they are now considering the application of the research approaches to other questions of interest.

8. Whitworth Art Gallery

8.1. The question

What factors make a gallery a good space for young people to reflect?

8.2. The co-researchers

- Denise Bowler, Secondary and Post-16 Co-ordinator and Wendy Gallagher, Arts for Health Co-ordinator at the Whitworth Art Gallery

- Yvette Fidler and Micci Bromwich, Researchers at CapeUK

- Matt James, Art Teacher at St. Ambrose Barlow Roman Catholic High School, Salford

- Year 10 BTEC Art students from St. Ambrose Barlow Roman Catholic High School. This group had just started this course and were new to the content and ideas. They had not visited an art gallery before.

NB. Names have been included to allow readers to make sense of the findings but have been changed for children to safeguard the identity of the children involved.

8.3. Methodology

The overall approach was designed to allow the young people to explore the idea of reflective spaces and how a space could effectively support reflection in a gallery context.

Research design

A session before the gallery visits introduced the research and analytical process and gave the young people the opportunity to think about what it meant to reflect and to relate this to their own lives. The session was also designed to introduce ways of capturing 'data' and to record baseline ideas about galleries.

Visits to the gallery were intended to give the young people experience of gallery spaces and an opportunity to research their own reaction and response to these spaces.

Taking this back to the classroom, the young people were able to reflect on their experience. The exact nature of these sessions and the level of structure required was evaluated between sessions by the adult co-researchers, taking a lead from the young people's progress and reaction to the previous session.

As a result the young people were given semi-structured tasks to aid them in analysing their learning about aspects of gallery space. They were then able to articulate their ideas through the creation of their own designs for reflective spaces.

Note: Given the structure required for the lessons and the significant reduction of both the length and number of sessions, the extent to which the young people were able to contribute to the overall

research design was comparatively limited. However, despite this, great efforts were made to retain flexibility within the analytical stages and to follow the young people's lead in terms of the design and level of structure required in the exercises.

Analysis

This case study aimed to give the young co-researchers significant responsibility for the analysis. The first session gave the young people experience and understanding of analytical processes. The last two sessions, back at the school, were the key opportunity for the young people to analyse their own experiences and insights, and to express these through their creative work.

The structured exercises provided data that could be analysed after the research to draw out themes and chart development in design and refinement of ideas and concepts.

8.3.1. Execution and adaptation of methodology

The research project ran over five sessions (an introductory session, two gallery visits and two analytical sessions in the classroom).

Phase 1

The initial session included the following:

- Introductions

- Interactive presentation about research and analysis

- Introduction to the research question and discussion about the term 'reflection' and the young people's own experiences of it

- Introduction to ways of capturing 'data'

- Group exercise to record initial ideas about galleries including exploring options for recording responses e.g. diagrams, sketching, video recordings etc.

Phase 2

Whilst touring the gallery the young people recorded what they would do in each space through a questionnaire and audio recording.

During the second visit to the art gallery they were encouraged to look more closely at what affects their experience of the space. They did two practitioner-led exercises: in the first they explored how their movement affects their experience of the space, and in the second they listened to different music on iPods and recorded their responses on a worksheet.

The young people were asked before and after their visit about what they thought and expected of the gallery.

Phase 3

In the final two sessions the young people began to refine their ideas about reflective spaces though the following exercises:

- *What is possible for a gallery?* This involved a collaborative brainstorming session, using the following headings on flipcharts as a framework: 'Knowledgescape', 'Peoplescape', 'Space and Spacing', 'Lighting', 'Soundscape', 'Art Content' and 'Other Content'. These titles were designed to encompass both the elements explored at the gallery already and other aspects that the young people had touched upon in their responses so far.

- *Designing a gallery with space for reflection*. Using a map of the Whitworth as an outline, the young people began designing their own gallery, overlaying what they would like to see in each of the spaces and looking at the aspect of the space that they would choose in terms of layout, lighting, sounds and content etc.

- *Discussion* – including what had been learnt about galleries, reflection, and preferences. The young people were also asked if they had changed their opinion of galleries.

- *Pitching a design for a reflective space*. Working in pairs or alone the young people worked up their best ideas into a pitch to present both visually and verbally to the other co-researchers who would take the role of 'reflection dragons'. The criteria for the pitch were a well thought through idea and an explanation of how the design of the space would aid reflection.

Integration in to the broader learning experience

As the research was taking place within school lesson time, it was important to the school that it provided learning opportunities that would support the course requirements. To some extent the methodology provided opportunities for the development of both practical and thinking skills required by the BTEC course, e.g:

- expressing ideas in a range of meda

- design and creativity

- study of art

- analytical skills

- communication skills

- documenting a creative process.

In the original research design, many additional elements were planned to provide the young people with experiences that would support their study. However, a change in the participating group – and changes to the school's ability to release the young people to spend time in the gallery – meant that plans had to be cut back and prioritise. An 'Art Analysis' session at the gallery was retained, however: this was useful in developing analytical skills for the research while also supporting the BTEC study programme.

8.4.   Findings

8.4.1. Expectations and experience of the gallery

From the outset, the young people within the group had differing ideas about what a gallery would be like and whether or not they would find one interesting. Responses to the first task (finding

items to describe their ideas about art galleries) highlighted their awareness that different people react to art galleries in different ways.   The idea that you couldn't have one space that met everyone's needs was retained throughout the project and was still evident in their final designs.
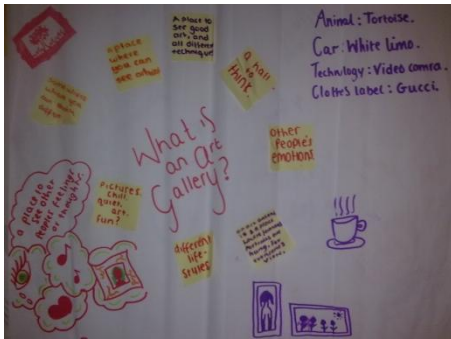
"If the art gallery was an animal it would be: tortoise (slow, some people find it not interesting – others do), elephant (some people find it boring – big, dull and grey) or peacock (some people find it interesting, bright with different pictures, unique and creative)."

"If the art gallery was a car it would be: Mini (stylish, classic and never got old and always been around – also included in some art), white limo (smart but not fast) or Shelby GT500 (because it's nice)."

"If the art gallery was a piece of technology it would be: telly (because it has a picture), video camera (because you don't use it very often) or laptop (surfing the internet for research)."

"If the art gallery was a label it would be: All Saints (it relates to students and you see a lot of them in art galleries), Gucci (stylish and a good label) or Suit (likes to looks smart)."

There were a number of indications that the young people did not anticipate or experience the gallery as a place for them. Within the above task they suggested that the gallery would be used mainly by students and researchers. While in the gallery they said that they thought they might get told off and, when doing the music task, they felt that other people would be waiting for them to make a noise and get them into trouble. Most of the young people felt that the gallery was for older people and that the other gallery attendees would assume the young people were 'getting up to mischief'.

The young people had not been to an art gallery before and some of them were not very keen to go.

(Ben) "Do we have to go to the art gallery?"
(Researcher) "Do you not want to go?"
(Ben) "I'd rather just go on the internet – it's exactly the same."
(Researcher) "Do you think it is the same?"
(Ben) "Yeah it's the same pictures."
(Researcher) "Do you think that the space that a picture is in doesn't have any influence on what it's like?"
(Ben) "No."

 The subsequent visit did not change Ben's view,

Although prior to the visit the young people had tend to think the gallery would not be very interesting or appropriate for them, when they arrived they seemed to be a little more open minded. Before going into the gallery for the first time they were asked for their first impressions. Their responses were more positive than we might have expected, with observations that the gallery looked "*old", "nice", "interesting", "fun"* and *"posh".*

In the movement session, the young people felt that the art gallery was a place to be quiet and move around slowly. They viewed the gallery in the same way as a library – it made them feel suffocated and naughty.

Despite their reservations, some of the young people eventually engaged with the art and started to make sense of it and make connections. When they worked independently or in pairs they felt confident enough to speak with authority about the pictures, and to voice their own opinions;

> *"This painting over here is very bold and colourful... it is by X and it is of the Caribbean and it is from the Louvre."…"It is a village on the west coast of Africa."*

> *"My mum told me about this one...it's London, its 1995, a building being blown up in London and we like it because it's different and it's a real life issue."*

On leaving, the young people seemed pleasantly surprised overall, with only Ben feeling that it had confirmed his expectations as 'boring';

> *"...really interesting and I thought it was a lot better than I expected really."*

> *"It was really good."*

> *"I thought it was really interesting, because at first it looked a bit boring from outside, but it's really really good. I am glad I came."*

> *"It's good and it was better than it looked from the outside."*

> *"It was better than I expected and I really liked the artwork, it was really really interesting."*

> *"It was better than I thought but it was still boring in parts."*

> *"Better than I thought it would be."*

> *"I thought it would be like an art gallery and it is – boring."*

Their suggestions about how they use spaces to reflect did not relate particularly strongly to the gallery, and most of their plans for a 'reflective space' in the building showed a sense of separateness from the gallery. The young people felt most comfortable in the café because they could talk and it felt like it didn't belong to the rest of the gallery.

8.4.2. Factors that influenced the experience of the space

During the second gallery visit the young people used iPods to listen to three different pieces of music. Most of the young people thought the piano music made them think a little deeper about some pieces of art; all of the pupils thought the music distracted from the art itself. When they came to do their own designs for a gallery, if they included sound at all, they preferred to include iPods for a personal music experience.

Daniel and David's design for a Labyrinth included an idea for sound triggers. One person also suggested pictures that 'speak' (when sensors are triggered as visitors approach) as an alternative way of accessing information about the art.

The young people also did some movement work around the gallery. This made most of the young people feel a bit silly at first, but they did enjoy the attention from other people.

> "Normally you'd be just stood in one place and not moving."

The young people appeared to be more open to new ideas when in the gallery and did see it as a 'space to think'. They displayed more maturity than they would have in their usual school environment, and on the whole did not revert to stereotypical 'bad behavior'.

The gallery visits extended beyond the end of the school day. It was observed that, when it came to the normal time to go home, the young people tended to switch off; there was a noticeable change in behaviour.

The young people responded really well to aural and kinaesthetic activities that allowed them to move around freely and make sounds.

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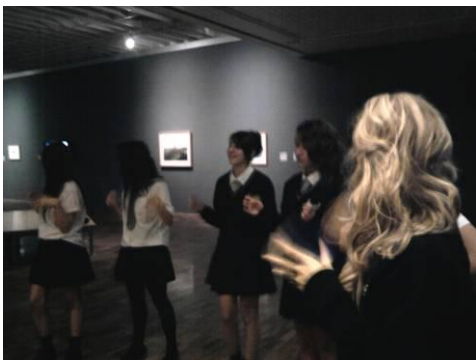
Back at school, when exploring their own ideas for the gallery, the suggestions under the heading 'Movement' were possibly the most diverse and imaginative: these included a complete range of transport (Segways, jetpacks, bikes, roller skates, scooters, dodgems etc.) and a range of moving and bouncing floors, chairs and shoes. Many of these ideas featured in their designs for ways to get around the gallery as a whole, but had less importance when they focused in on one 'reflective' space.

8.4.3. Fitting reflection into the gallery

The young people came into the gallery full of confidence, until they saw a group from another school. They claimed they felt intimidated and wanted to work in different spaces. Back at school they expressed this again when thinking about the possibilities for their own gallery: although their suggestions included a 'teen hour' and 'teen time', other young people voiced concern about 'dirty looks from other schools' and 'paranoid when other schools were there'.

The young people preferred to be left alone to explore the spaces in order to talk freely. This was observed in the recordings made when working in pairs in the gallery. In these recordings the young people can be heard conversing, questioning and considering the art more freely in their own terms:

> *"Oh my God it's a dead bird!" "Who would want to paint a dead bird?" "Someone has painted a dead bird and it's not really… it's different – because no one paints a dead bird because it's just weird" … "must have been a loony person" … "it's good though, because no one paints that."*

8.4.4. Interpretation and understanding of reflection

Initially the young people didn't connect readily with the idea of reflection. When asked how they currently reflect or where they would go to think things over they couldn't come up with any suggestions.

Their final choice of reflective spaces seem to be broadly spaces they would enjoy being in or would feel comfortable in. To some extent the young people's response to the question about reflection could have been interchanged with a question about a space that they would like to be in.

For some the connection with the gallery was all but lost in the pursuit of a space that they would 'like to be in'. Despite explanation and repeated use of the term 'reflection', the boys generally struggled to understand the context. When asked how their space would aid reflection one of the pairings said *"there's a big mirror"*, and on their mindmap they had written *"mirror wall – self reflection"*.

However, two of the girls worked very hard on their designs and included a variety of spaces that could be used for reflection. Kerry described her 'thinking area', as "*quiet – dim light – art work – massage chairs – high ceiling – music – colourful – iPads – big space".*

Rebecca had *"a comfy room with mood lights – a warm room with beanbags, iPods, MP3s – magazines and people talking/videos".* Additionally she described a *"forest that is dark with spooky music – a walk to face your troubles – dark and gloomy".*

The designs that were best suited to 'reflection' tended to be enclosed spaces separated from the gallery. Those that were more embedded in the gallery space had more of an interactive quality. This fits with the young people's early ideas about reflection being something you go away (to a separate space) to do. However as the concepts of reflection and reflective spaces were new to them they would not use such phrases to express these ideas.

Inclusion by some of the young people of features such as discos or bumper cars indicated that they would like the gallery to be more like a night out, or a visit to a theme park.

In their visit to the gallery the young people had expressed that they felt more comfortable in the café where they could talk more freely.

> *"We got a drink of water – it was free." "When we went in there they were talking and it made you feel more comfortable because in the other places it's dead quiet and you feel like you can't talk." "They were making food – it was welcoming."*

The young people's desire for a space to talk freely in the gallery was evident in their designs for a reflective space as they often included space to converse and to express themselves in words and pictures.

The young people were keen on the inclusion of technology – most included laptops, iPads and mobile phones in a space that was for reflecting. This clearly added something to the space in terms of familiarity and interest. To some extent it was almost a 'given' – on a par with other features that a space would naturally have. They nearly all included it but, when presenting their ideas, they mentioned it in passing rather than expressing it as a key feature of the design.

8.4.5. Preferences and proposals

Some pre-existing elements of the gallery were retained in or used to inspire the designs, indicating that the young people had liked them or felt they aided reflection.

The young people did seem to like Olafur Eliasson's 'forest' exhibit[13] and when it came to designing their own gallery, a couple wanted to use a forest.

Comments about the forest included *"interesting", "unique", "exciting", "fun", "instead of just like walls it draws you in"; "it made me feel trapped", "like hide and seek"*.

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[13] *The Forked Forest Path*, Olafur Eliasson: part of 'The Land Between Us' exhibition
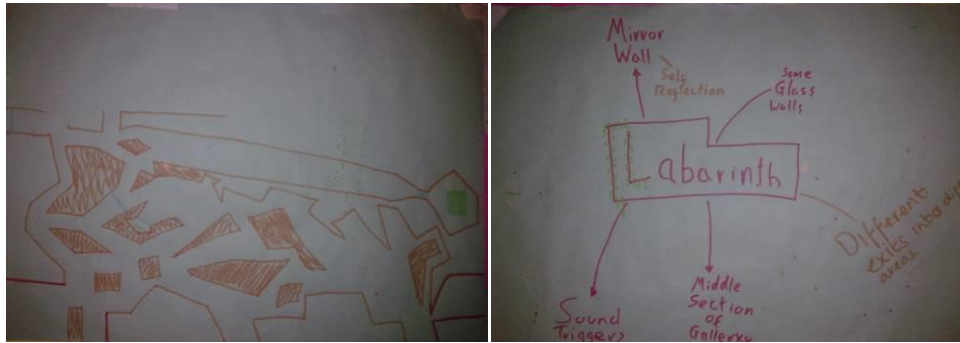
Daniel and David's design appeared to be inspired by the forest; it included a central space through which visitors made their way with many possible exits leading to other galleries and special exhibits. They drew sharp zigzagging orange lines and triangular shapes forming a 'labyrinth' with dead ends and exit. The accompanying 'mind-map' had lines leading to a 'mirror wall' – for 'self reflection', 'some glass walls', 'different exits into different areas', 'middle section of the gallery' and ' sound triggers'. They introduced it as follows:

> *(Daniel and David) "We are doing a labyrinth in the middle and when you get to the edge there's different areas. Inside it there are different sound triggers so that when you walk past different noises come out. There are glass walls so that you think you are out but you walk into the walls. There are different things so someone has put an iPod down and there is a glass wall so you can't get at the iPod, it's a trick. This corridor gets smaller and narrower when you walk down. There is mirror on this wall that make things – different mirrors that make you look smaller."*

> *(Researcher) "Sounds like a place to drive you a crazy – how does it help you reflect?"*

> *(D&D) "There's a big mirror. There are different rooms. There's different things going on, like when you have you have different exhibitions going on in the gallery, in the different rooms for different things."*

> *(Researcher) "Rather than being a quiet space to reflect, is it more about escapism?"*

> *(D&D) "Yeah you can get your head off about certain things."*

> *(Researcher) "Are those little gaps space where you can be on your own?"*

> *(D&D) "Yeah, lots of corners and things."*

> *(Researcher) "It looks like an installation in itself, like an art piece... was it inspired by the forest at all?"*

> *(D&D) "I don't know, it's like the forest where you come out of different parts. There are dead-ends."*

In his gallery design Daniel wanted to keep Gallery 5 just as it was. Gallery 5 was part of the 'Walls are Talking' exhibition[14], displaying wallpaper that looked at gender and stereotypes. Comments made in the gallery indicated that is was also liked by others in the group. The students were drawn to the 'risque' images presented by artists and wallpaper for bedrooms, such as Manchester United and Gladiators wallpaper. Comments about Gallery 5 included: *"the pictures were funny, it was a*

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[14] Exhibition that featured subversive takes on wallpaper by a range of contemporary artists.

comfortable room – it was dead relaxing and chilled out"; "it made me feel weird"; "it was colourful"; "comfortable"; "reminiscent"; "put on a party"; "a lazy day"; "put a bed in there".

Kerry and Rebecca's design included a brick wall, which was also something they had seen and liked in the gallery's Sculpture Court. This space was an extension to the original gallery structure, showing the former exterior brick wall of the gallery next to pristine, plastered white walls, with natural light from high windows creating what could be considered a 'reflective space'.

Interaction and Touch

Rebecca said that she liked to be able to touch artworks; she felt that the prohibition of touch put a distance between herself and the artist. She wanted more interactive activities in the gallery and more technology providing information about the artworks.

The idea of including things that you can touch re-emerged in more than one area when the young people were exploring the possibilities for their own designs.

Many of the designs included interactive elements or opportunities to contribute to the space. Interactive walls and doodle rooms were popular. Other suggestions included 'a public display area for phone photos', 'Manchester home grown show', '3D tours of other galleries' and 'a space to put your own work'.

Gail's design illustrated a room made entirely of whiteboards with coloured beanbags and spots of colour being projected by a light ball in the centre of the room. She also included a mind-map of ideas entitled 'Doodle room' with ideas such as 'renewable – can be rubbed off', 'a room made from white boards', 'bean bags to chill out', 'disco lights'; 'you can doodle all you want on the walls and floor' and 'music on'. She also included examples of doodles, such as a flower.

Sculptures and 3D objects were also mentioned as possibilities and included in one of the designs.

Having designed a whole gallery, the young people were reluctant to settle on one idea and work it up in detail. Many of them continued to include multiple ideas in the single space or divide the space up to include different ideas. There was a feeling that what made a good space was one that offered a variety of experiences. They appreciated that different people reflected in different ways and felt that, in order to get support for their proposal, they would need to be able to cater for all needs.

Kerry and Rebecca said that the difficulty was that one idea wouldn't provide a 'reflective' space for everyone. This linked to their earlier recognition that reflection is different for different people, and they felt that they needed to provide options within the space.

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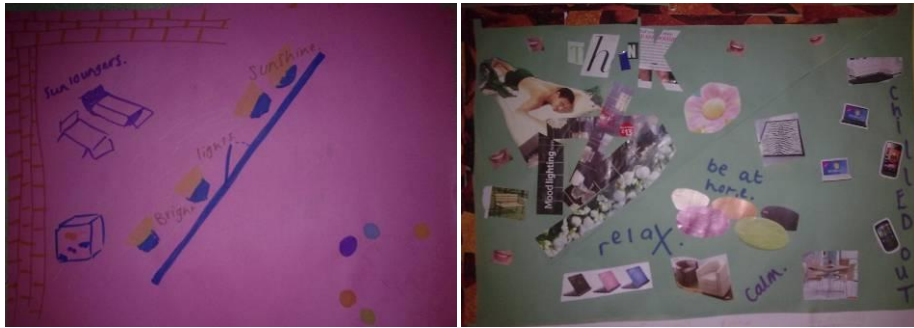
Kerry and Rebecca created a mood board cut in half and stuck together again. One half contained a picture of a man sunbathing, five images of smiling mouths, flowers, a park bench, and mood lighting. The focus in this half was the word 'Think'. The other half contained words such as 'relax', 'be at home', 'calm' and 'chilled out' with images of laptops, mobile phones, colourful rugs, leather sofas and chairs, a 'modern' café table and a 'drawing wall'. An additional diagram showing this diagonally split room revealed an outside space containing sun loungers, a wall and artificially lit 'sunshine'. They introduced it as follows:

> (Kerry and Rebecca) "We have called it Calmout because it's like two different rooms so we thought that if we put chill out and clam down together it would like represent the two rooms. It's like all one room but with a door in the middle. So it is basically one room. Outside there is mood lighting that will represent the outside and a brick wall like there was in one of the rooms upstairs. And it's going to have sun loungers and put smiles on so that people know that it's a happy room. We'll have grass so that it'll look like it's outside. The other room is just like chilling out with like iPods phones and laptops and stuff. Sit on a couch like this. The walls, there are pens and you can just draw on it and write what you want."

> (Researcher) "What made you want to do two rooms in one?"

> (Kerry and Rebecca) "I don't know, well when you are relaxing some people like to be dead quiet like, so that would be like outside, well not really quiet but just like no distractions – really calm. And some people prefer music and like to zone out – like be comfy and that, so you are like chilled out and can do whatever you want."

Ben and Millie's design had multiple spaces in one, giving the visitor lots of options for ways to enjoy themselves.

> "It has all different rooms in and they all go round on one big path. In that room there's loads of lights and a disco ball and music and everything, and there are computers and laptops and you can just chill out. In here, you can get loads of paints and like pens and stuff to draw whatever you want. In here it's a bumper car room."

Nicole and Hannah had a different approach to the difficulty of designing a space for everyone. Finding it unrealistic to make a 'space for all' they elected to make a 'girls only' room themed around fashion.

> "Okay right well, It's a fashion room to inspire people who want to get into fashion or modelling, it's not for lads, it's just for girls and if you are gay you can come in [laughs]. I don't know, it's just to inspire people to draw and that, and there's clothes that they can try on and they can just chill and that. It's just for relaxing, it's not all about working. It's just like a nice environment just for girls."

8.5.   Summary and discussion

The young people did feel that the gallery was not for them in many ways. However, it was evident that it was possible (even in the significantly reduced time that they were at the gallery) for them to move beyond their initial sense of being judged by others to be silly or naughty. They valued activities that were designed for them, as this gave them a sense of ownership of the space and made them feel 'welcome' both on a personal level and in the eyes of other gallery visitors.

However, many of the young people did prefer and value space away from other visitors and this was reflected in both their reactions to the gallery and their own designs.   Most of the young people choose not to include artworks from the collections in their designs, creating separate

spaces to which you could go to think and reflect – but also relax, talk freely and enjoy yourself. These responses may reflect the discomfort that some of the young people felt in the actual gallery and their sense that this was not a place for them.

The young people's designs included many different means of expressing ideas in the space and also creating and displaying their own art work. 'Doodle rooms' or white boards were popular.

The young people had an expectation that technology would be part of any learning experience. There is not necessarily a 'wow' factor linked to this: they merely consider it as a fundamental aid to learning.

The use of 'reflect' may have been confusing for some of the young people as it is not a word in their usual vocabulary.

The young people did not envisage a 'reflective' space that would work for all. They felt that spaces for 'reflection' (and enjoyment) were variable and needed to contain different options to cater for different people's needs, or else the space needed to be explicitly designed for one group.

8.6.   Relating the case study to other research

With a focus on children and young people influencing the design of museum spaces, the View of the Child research network (4.1) led a small scale co-creative project involving secondary school students and the Bridewell Social History Museum in Norwich. The students worked with their Extended Schools Officer, museum curators and learning officers alongside architecture students from the University of Sheffield on a real problem of re-designing the museum. They evaluated the present design of the museum, visited other examples of museum and galleries in their locality and worked through the design process with architecture students using floor plans and constructing 3D models to fully explain their design ideas. The workshop was filmed and a video diary account made by the students is available.

The En-quire programme of action research (En-quire, 2008) was funded by the Arts Council and Engage (the National Association for Gallery Education) in order to gain 'a better understanding of the learning benefits to children and young people of engaging with contemporary art and artists'. It encompassed 128 projects in 40 galleries and the collated findings provided evidence that participants developed essential skills for life, which included working and taking decisions on their own; social skills and the ability to develop relationships; communication, debate and discussion of ideas; team-working; risk-taking and experimentation. Some of the studies have been enhanced by further research, for example Burgess and Addison's (2007) exploration of a cluster of four participating schools which examines the extent to which learning in galleries might enable students and teachers to re-conceptualize teaching and learning. A conclusion that resonates with Creative Spaces is the positive impact on student motivation of:

- acknowledging and valuing pupils' 'voices'
- differentiating activities in recognition of pupils' preferred ways of learning and lived experience

- allowing pupils to participate in public exhibitions of their work e.g. as curators: selecting, organising and displaying work.

8.7.   Actions taken, or planned, in response to the co-research

The findings of this research will help the Learning and Engagement Team to design the initial stages of future projects, prior to further development with the teachers and students. For example, the gallery aims to apply the methodology used in this case study in a longer-term research opportunity for working with young people, working with another school to facilitate flexible visits.

The gallery felt that the time restrictions within this case study meant that it was only able to scratch at the surface of the question. They therefore see it as essential for participating schools to sign up to more time in the gallery in future. Although some students had clearly shifted their perceptions of what a gallery is and how they could benefit from using the space to reflect, particularly if they had an influence on the design of the space, it was clear that their voice needed to be heard.

The gallery's practitioners are already giving consideration to specific audiences in their exhibition planning, and believe that the findings from this research will help them to construct spaces that appeal to young people. They recognise that they would need to consult or co-design the spaces *with* young people to ensure appropriate interpretation of the findings in the new context.

A new learning space will be created as part of the gallery re-development. It is hoped that some of the key ideas illustrated in the young people's personal gallery designs can be implemented in the new spaces, such as spaces which nurture different types of thinking through use of seating and lighting.

A space for reflection and promotion of wellbeing will be created as part of the plans for the Whitworth's re-development. This space will look onto the park, playing on the relationship between inside and outside. It may not be suitable as a reflective space for young people as the findings suggested that quiet spaces made some of the students feel uncomfortable or even unwelcome; however it will be an ideal area for future research. It is proposed that more activities will take place outside the gallery in the park: this could be an opportunity to look at how young people can best use and respond to the outdoor areas around the gallery.

As a way of continuing the Whitworth's quest for understanding visitors' responses to space, a question or set of questions around the suitability of the space for young people will be included as part of the evaluation of sessions that take place at the gallery.

9. Discussion of common themes

9.1.   Experts and expectations

All three case studies raised issues about expertise and different expectations of where expertise does, or should, reside.

The Tullie House study positioned adults and children as learning together, with shared expertise. In the school context, this was evident in the joint approach to researching the curriculum topic (6.3.1) and the 'expert' roles that children took in their own museums (6.4.5.1). This study highlighted the potential for learning in the museum to be a two-way exchange between adults and children, building upon the interests and knowledge that the children bring with them. This was reinforced in the other studies by, for example, the way in which very young children at the Manchester Museum applied their knowledge of letters and words unprompted by adults (7.4.2) and the connection made by a young person at the Whitworth Art Gallery between an artwork and an event that her mother had told her about (8.4.1).

The Manchester Museum question was premised on the belief that families' own interpretations and stories have validity alongside 'the official version'. This perspective connects two concepts. First, that there is no unequivocal telling of history because any telling is shaped to some extent by cultural perspectives. Second, that the historical dimension is just one plane on which the museum can be experienced; 'permission not to know' can liberate visitors, and possibly museum practitioners, to enjoy the collections in other, equally valid, ways. An artist facilitator at Tate Modern, working on a programme helping families communicate better and feel confident and relaxed in gallery spaces, comments:

> *"I think, for many people, the Gallery can be a stressful place because they are not sure how they are expected to respond. There is a fear of failure, of not knowing the answers, being made to feel 'a fool'. Working with very young children seemed to give us all permission to be less concerned with outcomes. The approach used at Tate is based on the idea that there is no one 'correct' response to an artwork: people bring different things to looking at art…. However, the question of knowledge is important here. I think it's important not to set yourself up as an expert, as someone who has 'the right answer'."*

(Ross et al, 2004.)

However, for the families at the Manchester Museum, the concepts of multiple interpretations and 'permission not to know' were unfamiliar, and in many ways unwelcome. The parents wanted the expertise of the museum to help them provide 'accurate' information for their children (7.4.2). Does their response call into question the idea of multiple interpretations, or merely highlight the strength of existing expectation?   Is there a greater expectation of 'a single truth' in a museum than in an art gallery?

The principle drawn from the Mosaic Approach (3) of positioning participants as experts in their own lived experience had a positive impact on participants' confidence in all three co-research projects. Parents at the Manchester Museum, who, at the outset, saw their role as limited to

supporting their children, were validated as advisers to the museum; the children too had a sense of themselves as VIPs. At the school working with Tullie House, many children spoke very articulately about their museum experiences. The audio recorder, in which children showed a great deal of interest, was a powerful symbol of the value placed on their opinions. At the Whitworth Art Gallery, the co-research activities validated the presence of the young people, some of whom had initially felt that the gallery wasn't a place for them (8.4.1)**.**

9.2.   Scary but fascinating

The sensation of children being scared 'but not in a bad way' is a strong feature of parents' reports of their young children's responses to the galleries at the Manchester Museum (7.4.5). In phase 1 of Creative Spaces, co-researchers aged 10-11 at Tullie House had been attracted, yet also repulsed, by exhibits of human remains and stuffed animals.   There was a similar fascination on this occasion with the mummified remains and bronze head of Asru at the Manchester Museum (7.4.5). There is an interesting link here with Rebecca's response to the painting of a dead bird at the Whitworth Art Gallery (0). She finds the idea that anyone would want to paint a dead bird 'weird' but she thinks it's good because it is different. The first report (Renaissance North West and CapeUK, 2008:40) linked the reaction of being scared but fascinated with an interest in life and death that there are few opportunities for children to explore in the wider world; this would seem to be reinforced in this second phase of the Creative Spaces co-research.

Responses to darkness and confined spaces were also common features of the three co-research projects. There is a sense of 'bad darkness' such as the areas at Manchester Museum that were avoided by the children (7.4.4). There were more ambiguous responses to experiences of darkness and confined spaces in both the cave/mine at Tullie House (6.4.4.1), in which children seemed to enjoy the experience of losing their fear as the environment became familiar, and Olafur Eliasson's installation which, with its mixture of pathways and dead-ends, elicited comments such as 'exciting', 'fun', 'trapped' and 'hide and seek' (8.4.5). Some of the young people then introduced elements into their own gallery designs that would trigger similar responses, such as Rebecca's 'walk to face your troubles' (8.4.4) and Daniel and David's Labyrinth (8.4.5).

9.3.   Touch and interaction with objects

All three co-research projects highlighted the value placed on being able to touch objects as well as look at them. Parents at the Manchester Museum referred to touching on several occasions (7.4.3, 7.4.5), seeing it as central to how young children relate to objects. At the Whitworth Art Gallery, one pupil reported feeling distanced from the artworks that she wasn't able to touch (8.4.5). For the pupils who visited Tullie House, aspects of the collection with which they were able to interact were most memorable (6.4.4.1). In the learning journey from school to museum and back again the opportunity to handle objects was identified as a key aspect of what is distinctive about the museum leaning environment (6.5).

The co-research methodology at the Manchester Museum, with the use of sticky notes and cameras, itself provided a means of interacting with the collection that was valued by adults and children (7.4.1.) There was a sense here of being special and allowed to do something that other

visitors could not. A value was also placed on leaving behind a trace of the family's experience (the sticky notes) and taking away a record (photographs and video). This helped to make the visit a two-way learning experience, not only receiving ideas and information but also giving responses. The value placed on this by participating families resonated with a finding of market research conducted at Manchester Art Gallery in 2002. Responses indicated that visitors appreciated an opportunity to take something away and to leave something behind. There are already many ways in which museums and galleries encourage such responses, for example, inviting visitors to write their own labels for art works. However, additional approaches could be taken from the co-research methods and applied to on-going practice.

9.4. Interpretation and interaction between visitors

The parents and carers at the Manchester Museum had been frustrated by the difficulty of using the written information on display to engage their children, reporting that it would need a significant amount of translation in order to make it accessible or relevant and that some was difficult for them to understand themselves (7.4.2). For a parent/carer there may be a finite amount of time to absorb text and translate it into information at the appropriate level before a child loses interest and moves on. The co-researchers at the Manchester Museum suggested layered interpretation (text with differing level of detail and complexity for different ages and/or interest levels of visitor). However, the research findings also highlighted the potential of tools to encourage and support two way conversations between adults and children.

The parents' request for information at the Manchester Museum that is accessible to children of different ages (7.4.2), the interest at Tullie House in the stories behind the objects (6.5) and the suggestion that the Whitworth Art Gallery should use technology to provide different information about the art works (8.4.4), highlight the value of flexible and responsive means of providing information. Several museums in the North West are exploring the use of new media in interpreting and supporting learning in their galleries. The Manchester Museum, Museum of Science and Industry and Bolton Museums have all worked with local City Learning Centres[15] and young people to explore the use of OOKL software and hand held devices in the galleries. OOKL software enables staff to 'tag' museum pieces with detailed information and images which can then be uploaded to an OOKL web space for use back in school.

9.5. What is possible: playing in a museum

The children visiting Tullie House approached the visit with an expectation that playing and learning would be intertwined, although some children also had a sense that behaviours that they would consider as 'having fun' would be prohibited (6.4.1.1). During the visit itself, the children were drawn to interactive aspects of the displays (6.4.4.1) but their use of these was quite limited. For example, although children dressed up in animal costumes they didn't then play in animal roles. In a similar vein, the parents at the Manchester Museum struggled to see the museum as a place for play and their ideas for what might be possible in the space were restrained (7.4.3). Unlike the other

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[15] A City Learning Centre is a facility which provides state-of-the art industry linked ICT-based learning opportunities for the pupils at the host school, for pupils at a network of surrounding schools and for the wider community.

two co-research groups, the young people at the Whitworth Art Gallery did not initially feel that they were welcome and sensed that they and their behaviour would be judged by staff and other visitors – including other groups of young people (8.4.1, 0). In the cases of both the Manchester Museum and the Whitworth Art Gallery it was the 'extras' – the orange juice and biscuits, the permission to use sticky notes and cameras, the activity that gave the young people authority to make a noise and move around – that built a sense of ownership.

Two thoughts come to mind about why more play did not take place. The first is a sense that when adults take children to museums, an aspect of the learning that they anticipate for the child is 'learning how to behave' and that what is deemed appropriate behaviour is shaped by how *adults* behave in these contexts.   The second is that the physical experience of a museum can tend, particularly when groups are quite large, to be more of *moving through* than *being in* the spaces. There are many excellent examples of museums enabling children and families to play; this co-research has simply highlighted the strength of the counter expectations. There is a need for museums to communicate a very clear message that adult/child play is not merely permitted but actively encouraged. This message will be communicated, or counteracted, by the design of spaces, the reactions and interactions of museum staff and the resources provided – for example, family seating areas around activity boxes, museum practitioners who model play, dressing up clothes in a variety of sizes and interpretive tools that encourage interaction between adults and children.

10.   Reflections on the co-research process

10.1.   Developing a co-research model

If one relates the experience of the Creative Spaces co-research to the spectrum of participation presented in section 4.2, it is evident that the participants were co-producers, co-developers and co-researchers at different stages of the process. For example, while the families involved with the Manchester Museum case study did not frame the research question, they did shape the development of the project and their opinions, ideas and 'playful' engagement with the collections will influence museum gallery redevelopments. During their first visit to the museum, families were asked to share their thoughts and feelings about how the spaces made them feel – at this stage they were co-producers. Families subsequently used the museum's collections to inspire their own play and conversations, and took part in reflective discussions with the researchers and staff regarding what they had talked about and negotiated as a family during their visits, i.e. they made some analysis of the data that the researcher had recorded.

When designing a model of participatory engagement for a co-research project, a cultural venue should consider:

- the types of visitors it wants to attract and engage

- the types of information required

- the level of control it wants to retain over the process

- whether there is a preconceived outcome/output

- the capacity of staff and the timescale

- the skills and knowledge it would like participants to gain.

The term 'co-researchers' implies a group of people with a common goal and shared interest in a research question. This could be achieved by:

- forming a group and then work together to find a common interest

- deciding on the area of research and locating co-researchers who share that interest

- deciding on the area of research and encouraging interest and commitment to it from a targeted group.

It is the third option that was taken in the Creative Spaces co-research programme.

The question development was undertaken by the museums with support from the CapeUK researchers. This enabled the museums to identify areas of interest and frame research questions that could lead to practical outcomes. However, as the process of developing a research question is often an opportunity to build common interests and shared understandings, the absence in our co-research of the full team's input to this stage presented CapeUK with a need to develop other

means of achieving a sense of ownership of the question. This proved challenging, and unrealistic in some situations. For example, much more time than was available would have been needed to develop a shared purpose with the young people working with the Whitworth Art Gallery.

10.2.   Forming co-research teams

10.2.1.   Families

Working with families multiplies the challenges mentioned above. Finding whole families that share an interest in the research and are available to attend together on more than one occasion is challenging. Getting the whole family to participate is further complicated by busy family lives and schedules; working parents often struggle to find time to be together as a whole family. If this remains an important part of the research, the scheduling of sessions needs to be carefully planned: getting multiple families together at the same time can be unrealistic. In the case of the Manchester Museum case study only one parent per family attended (although in one family there was a swap where the father came to the last session). There are also issues around defining 'the family' when the modern family takes so many forms.

10.2.2.   Partner organisations

Rather than recruiting individual children, families and young people to the co-research teams, participants were engaged through a primary school, family centre and secondary school respectively. Working through partner organisations has distinct advantages in terms of engaging participants and sustaining their involvement; however it can diminish control over their selection. In the cases of Tullie House and the Whitworth Art Gallery, once their partner schools were on board, the selection of the pupil/student participants was largely determined by the identification by the school of the partner teachers. In the case of the Manchester Museum, the original intention was to target families who had not previously visited the museum. The first approach to recruitment, inviting participation from families using the Children's Centre might have accommodated this criterion but, as described in 0, it proved difficult to recruit in this way. Once the approach changed to 'piggy-backing' an existing Children's Centre programme, such a stipulation became inappropriate. The nature or purpose of a pre-formed group may also determine certain characteristics of the participants and these characteristics might not match the research intention or may influence the findings (such as described in 7.5, paragraph 7.)

The identification of the partner organisation should be determined by the research question. There is a clear logic, for example, to teachers and children/young people in 'school mode' co-researching a question that links schools and museum learning. This was the case for Tullie House; the opportunities and constraints afforded by the school's participation were entirely relevant to the research focus. It was true to a lesser extent for the Whitworth Art Gallery case study and mainly in relation to early thinking in the framing of the question (5.3.3) about how schools support emotional intelligence. Other aspects of the research question might have been more effectively addressed if the young co-researchers had been recruited through an informal youth setting.

10.2.3. Schools

A significant concern highlighted by the co-research is that it can be very difficult for schools to give pupils and students a free choice as to whether they participate; schools are unlikely to be able to accommodate those who decide not to do so. Yet, for participants to make an active and informed choice about the involvement is key to the ethics of co-research.

The experience of this research also demonstrated that the connection between a research question and the learning opportunities that a school is seeking to provide for its students needs to be clear and strong in order for the research design to withstand the pressures – such as lack of time – under which schools operate.

10.3. Balancing objectives

10.3.1. Meeting the needs of partner organisations

The needs of partner organisations must be accommodated within or alongside the research process. This is particularly true when the time for the research replaces or overlaps time allocated to other objectives of the organisation – for example, lessons with curriculum objectives in schools. Elements were included in each case study to achieve a balance between the requirement of the research and the objectives of the school or centre involved, thereby integrating the research within a broader learning experience. In fact this approach is common in participant research, where the needs and motivation for participation are a central consideration in good research design (usually as a means of avoiding bias and achieving diverse and representative samples).

10.3.2. Meeting the research objectives

The programme benefited greatly from initial activities that introduced participants to the co-research process, enabling them to both find their individual place within it and to bond as a group. The extent to which individual co-researchers chose to input to the research processes that followed depends on a number of factors:

- the extent to which they felt part of the group

- their level of interest and engagement in the question and the process

- their level of confidence

- their understanding and awareness of options and possibilities for exploring the question.

Supporting the engagement and contribution of all co-researchers throughout the process was challenging. Our approach was to work flexibly in order to create possibilities for input from all, respond to the organic development of the process and enable directional control to be taken by co-researchers.

11. What has been achieved?

The most tangible evidence of the impact of the second phase of Creative Spaces is the changes to practice that have already taking place in the three museums. However findings that affirmed current practices were also valued by the museum practitioners. Some aspects of impact may never be documented but will exist in the ways that the participating museum practitioners, teachers, children, young people, parents and carers think or do things differently as a result of their involvement. Elements of our findings could inform practice in a wide range of museums and art galleries. We also hope that our reflections on the process will encourage others to undertake co-research with children and young people.

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Appendix 1

The CapeUK research team

Dr. Catherine Burke, Senior Lecturer in the History of Education at the University of Cambridge acted as a mentor to the team, helping to refine the question, shape the methodologies and guide the analysis. She also had a specific role in locating the co-research findings in the broader context of educational research.

Rosie Marcus, North West Director of CapeUK, co-ordinated the overall programme and led the co-research at Tullie House Museum and Art Gallery.

Yvette Fidler, Project Development Manager of CapeUK, undertook the data analysis for all three programmes, led the co-research at The Manchester Museum and contributed to the co-research at the Whitworth ArtGallery

Jael Edwards, CapeUK Associate, worked with Manchester Museum on the framing of the research question and design of the methodology and took an overall role in connecting the co-research with work being undertaken in other galleries and museums nationally and internationally.

Micci Bromwich, CapeUK Associate, supported the sessions with St. Ambrose Barlow Roman Catholic High School.

This report was written by Yvette Fidler and Rosie Marcus with support and significant contributions from Dr. Burke and Jael Edwards. Additional material was provided by Denise Bowler and Anna Bunney.

Appendix 2

Data generated

Material created by children, young people, parents and carers:

- photographs
- maps
- posters
- checklists
- mood boards
- mind maps
- flipcharts of collaborative responses
- sticky notes of responses to object
- drawings
- sketchbooks
- journals
- sticky notes recording individual views

Observation notes and photographs of activities

Audio recordings of:

- discussions between CapeUK researchers and
  - small groups of children/young people
  - parents and carers
  - teachers
  - gallery and museum staff
- discussions amongst participants during the activities in the schools/children's centre and visits to the galleries and museum
- presentations by young people
- Semi-structured interviews with
  - teachers
  - gallery and museum staff