

KNOWLEDGE  
QUEST:  
AUSTRALIAN FAMILIES  
VISIT MUSEUMS

LYNDA KELLY, GILLIAN SAVAGE,  
JANETTE GRIFFIN, SUSAN TONKIN



A JOINT PUBLICATION BY  
AUSTRALIAN MUSEUM  
AND THE  
NATIONAL MUSEUM  
OF AUSTRALIA

NATIONAL  
MUSEUM OF  
AUSTRALIA  
CANBERRA

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Staff at the Australian Museum, Sydney and the  
National Museum of Australia, Canberra



## ABOUT THE AUTHORS

**Lynda Kelly** is the Head of the Australian Museum Audience Research Centre (AMARC). She has extensive experience in planning and conducting quantitative and qualitative research for a variety of purposes.

Lynda is particularly interested in Indigenous evaluation, visitor experiences and learning, young children's learning and how these can be measured, as well as the strategic uses of evaluation and visitor research in organisational change.

**Gillian Savage** is Director of Environmetrics Pty Ltd, a company specialising in conducting audience research and evaluation for natural and cultural heritage places. Gillian's tertiary training encompasses education, literature and the social sciences, and she has more than ten years experience researching audiences for Australian museums, galleries, botanic gardens, zoos, cultural attractions and national parks.

**Janette Griffin** is a Senior Lecturer in the Faculty of Education at the University of Technology, Sydney. Janette has experience in primary, secondary and tertiary education and in museum education. Her research investigates learning in museums, particularly by family groups and school groups. She has published a number of papers and book chapters in this area and conducts consultancy projects in museum learning and museum education.

**Susan Tonkin** is responsible for evaluation and visitor research at the National Museum of Australia, Canberra. The study of family visitors is one of a series of audience segment studies which she has helped the Museum to commission. Susan formerly managed National Museum programs at Old Parliament House, Canberra.



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Copies of this publication can be ordered from:

Lynda Kelly	or	Susan Tonkin
Audience Research Centre		Evaluation and Visitor Research
Australian Museum		National Museum of Australia
6 College St		GPO Box 1901, Canberra
Sydney 2010		ACT 2601
Ph: 61 2 9320 6413		Ph: 61 2 6208 5120
Fax: 61 2 9320 6418		Fax: 61 2 6208 5398
Email: lyndak@austmus.gov.au		Email: s.tonkin@nma.gov.au

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## FOREWORD

FRANK HOWARTH,  
DIRECTOR, AUSTRALIAN MUSEUM, SYDNEY



When I walk around the Australian Museum in my new role as Director I have encountered many kinds of families—mothers and sons, fathers and daughters, grandparents and grandchildren— all embarking on an exciting quest for knowledge. What is it that so engages families when they visit museums? How can we harness and build on the joy and pleasure of families as they share their learning discoveries? How can we incorporate into our programs the successful strategies that families have used when visiting museums to make sense of their world?

Research has consistently shown that early experiences shape a person's lifelong interest in visiting museums. As most people make their first visits to museums with their families it is critical that we understand the motivations and needs of this key audience. *Knowledge Quest: Australian families visit museums* is the second in a series of audience research studies published jointly by the Australian Museum and the National Museum of Australia. It provides a substantial body of information about families and includes plenty of practical assistance to enable all types of museums to cater better for this substantial audience group.

This represents a significant contribution to museum scholarship as, for the first time in Australia, information about this key audience has been brought together in one publication. The report has been written in partnership with a cross-section of specialists from the museum, university and private sectors, who all bring a strong theoretical base in museum learning theory and audience research.

I hope you enjoy reading this report and, in doing so, remember that when we were children discovering a museum's treasures from the magnificence of a *Mamenchisaurus*, the beauty of a butterfly, the puzzle of a platypus, to the importance of finding out where we fit within a big and complex world — we shared our awe and wonder with our families.

**CRADDOCK MORTON,**  
ACTING DIRECTOR, NATIONAL MUSEUM OF AUSTRALIA



From its earliest planning stages the National Museum intended to be 'a museum for all Australians'. It was our intention to present innovative and engaging programs, based on sound scholarship but accessible to all. The result was a new museum popular with all age groups and people from diverse backgrounds.

From the beginning, family groups established themselves as a major component of NMA audiences. Of the many visitors we have interviewed in three years of operation the largest segment, 43% overall, are those who attend with a family group. The proportion is even higher in school holidays or during special exhibitions and events. It is therefore highly appropriate for us to research the needs and expectations of this group.

The present study assists strategic planning and programming decisions being made at the National Museum, particularly our commitment to informal and inter-generational learning. Like other museums, we have a successful schools program which addresses the curriculum needs of formal education, but we recognise that learning which takes place during a family visit can be equally valuable and extend to very much wider age groups and subject areas.

Like other audience segments, family groups who visit museums have their own special needs and expectations. These need to be understood before museums can implement changes to foster or enhance the visitor experience. We were therefore very interested in the research outcomes, particularly to hear in their own words people's approach to museum visiting and the benefits they find there. This publication is intended to make those insights available across the Australian museum sector.

The National Museum is especially pleased to be associated in this project with the Australian Museum. The partnership has enabled our resources to extend beyond the individual institutions and develop broader principles from the experiences of families in both Canberra and Sydney.

# 1. INTRODUCTION

'IT IS GOOD TO SPEND TIME WITH MY SON GOING THROUGH THOSE EXHIBITS —  
HE SEES THEM DIFFERENTLY EACH TIME HE GOES THERE.'



Across the world, museums have paid considerable attention to the needs of children and families through the development of targeted exhibitions, activities and programs and special-purpose areas. This study was undertaken to bring together current information about family visit experiences, and is the second of the audience research series produced by the Australian Museum, Sydney and the National Museum of Australia, Canberra. The first publication, *Energised, engaged, everywhere: older Australians and museums* (Kelly, Savage, Landman and Tonkin, 2002) focused on museum visitors aged over 65 years. That report also provided an overview of the museum industry in Australia, trends in Australian society and adult learning. Following on from that, this publication reports research about the family audience, as well as reviewing research methodologies, learning theory and research.

There are two parts to this study: a literature review and field research. The detailed literature review includes studies spanning the past 70 years and was commissioned to obtain an up-to-date information about families; how they are defined, how they use museums and the ways that they learn. It was found that there was a marked increase in the number of studies undertaken in the 1980s, and a second shift in the number and nature of studies in the mid 1990s. This latter shift is important as the nature of the research changed to implementing methods that place more of an emphasis on the individual and their learning within the context of social experience. It also demonstrates that researchers are becoming more interested in the ways that 'successful' museum visitors, such as families, learn in museums and how this can be applied to other audience groups. Although the bulk of the work was undertaken in the United States, there is remarkable agreement between the US studies and those undertaken in various other countries, including Canada, the United Kingdom and Australia. One outstanding finding of the literature review was the depth and breadth of learning which takes place in museums and the social nature of family experiences in museums. Another was the discovery that a museum is a place for social *learning* rather than just a social *event*.

The field research for this study included a total of 29 case study families in Sydney and Canberra who had visited either the Australian Museum or National Museum of Australia. The sample included a variety of family types with children under 12 years of age. Families were interviewed at home within a month of visiting a museum, giving a clear view of each family in their social context and providing additional information about social values and habits. The interviews were semi-structured, with the main topics focusing



on why and how they visited, what they remembered from a recent visit, their access to information which encouraged them to visit and things which discouraged them from visiting.

In exploring these topics, the field research also looked at broader issues such as the dynamic of family groups, the motivation behind educational leisure activities, parenting styles and personal identity.

Our aim is that information in this publication can be used to ensure that programming and marketing continue to meet the needs of this audience sector, with a view to both increasing the number of family visitors to museums and providing better learning experiences for them.

## 2. FAMILIES AND MUSEUMS

'EVERYTHING THAT WE DO IN OUR RECREATIONAL TIME IS CENTRED  
AROUND KEEPING HIM [SON] OCCUPIED AND KEEPING HIM ENGAGED.  
MUSEUMS ARE A PART OF THAT.'



Field research for this study was undertaken at two institutions within Australia's museum sector. Museums Australia defines a museum as '... an institution that helps people understand the world by using objects and ideas to interpret the past and present and explore the future. A museum preserves and researches collections, and makes objects and information accessible in actual and virtual environments. Museums are established in the public interest as permanent, not-for-profit organisations that contribute long-term value to communities.' This definition also includes natural, archaeological and ethnographic monuments and sites, botanical and zoological gardens, herbaria, aquaria, science centres and cultural centres.

Museums in Australia and across the world continue to face many challenges. (For a detailed overview of the museum sector in Australia, including a discussion of these issues see Kelly, et al., 2002). In Australia, funding restrictions and increased competition from many areas in the leisure, educational and tourism industries mean that museums must become more responsive to the needs of audiences, especially those that visit museums and see the value of them, such as families. Changes in family and social structures provide opportunities for museums to play an important role in social engagement and bonding, and for serving the needs of the family audience in an 'information society'.

### 2.1. Museums in this study

The field research was undertaken at the Australian Museum and at the National Museum of Australia. The Australian Museum is located near Hyde Park in central Sydney. It was founded in 1827 and the current site was opened to the public in 1857. It is Australia's oldest museum, with unique and extensive collections of natural science and cultural artefacts. It has an international reputation in the fields of natural history and Indigenous studies research, community programs and exhibitions. The Museum charges admission prices of \$8.00 for adults and \$3.00 for children aged 5–15 years, with a range of family packages available. It is well served by bus and train and parking is available at on-street parking meters or in paid parking stations.

The National Museum of Australia opened in 2001 in a purpose-built building on Lake Burley Griffin, Canberra. The Museum's focus is to tell the stories of Australia and Australians, exploring the key issues, events and people that have shaped and influenced the nation. There is free admission to the Museum, but fees are charged for special exhibitions. It is served by bus and it has its own car park.

## 2.2 What is a family?

The Institute of Family Studies defines a family as a group of individuals related by blood, marriage, adoption or cohabitation. The Australian Bureau of Statistics has a very similar but more detailed description: a family is two or more persons, one of whom is at least 15 years of age, who are related by blood, marriage (registered or de facto), adoption, step or fostering, and who are usually resident in the same household.

There have been significant changes in the nature of family groupings in Australia in the past 20 years. Families comprising couples with children of any age remain the most prevalent type of family in Australia; however, between 1986 and 2001 the number of one-parent families increased by 53%, and couple families without children living with them increased by 33%. Consequently, couple families with children are forming a smaller proportion of all families — 47% of families in 2001, down from 54% in 1986 (Australian Bureau of Statistics). These changes reflect shifts in a range of social and economic trends.

In 2001, a review of data collected about Sydney adults with children aged 0–12 years (Environmetrics, 2001) found that 73% were married, 7% de facto and 9% one-adult families. Seventy-two percent were Australian-born, 15% were born overseas in an English-speaking country and 13% were born overseas in a non-English speaking country. Twenty-six percent also had children aged 13–17 years. Most parents were highly educated with 57% having university or higher level education, 22% having completed matriculation and 21% with some secondary education. Their household income closely matched the general Sydney population with 37% earning less than \$20,000 year; 21% earning \$20,000–29,999 and 17% earning over \$70,000.

The changing nature of family make-up may well be reflected in the pattern of visitors in museums. These characteristics, such as the broad age ranges within a family, suggest that an increasing proportion of visitors are perhaps being described as ‘adult groups’ rather than ‘family groups’. Families consisting of two adults have been shown to behave more like other all-adult groups than mixed generation families (Falk and Dierking, 2000).

For the purpose of discussion about family audiences in museums in this study, we use the term family to mean ‘... any small multigenerational visiting group’ (Borun, 2002, p.246). Falk and Dierking (2000) describe families in a similar way, adding ‘... those who self-define themselves as a family (in other words, all members are not necessarily biologically related)’ (p.110).

## 2.3 Families in this study

Family groups remain one of the largest components of museum audiences, both in Australia and internationally (Falk & Dierking, 2000; Hooper-Greenhill, 1994; AMARC, 2003; National Museum of Australia, 2003). An analysis of Sydney adults with children aged 0–12 years showed that 32% had visited a museum in the past six months compared with 34% of total Sydney adults (Environmetrics, 2001). Australian Museum exit surveys have shown that 49% of visitors are families, although during peak holiday periods this figure can be as high as 75%. Families were more likely to be repeat visitors, living in the Sydney region and tertiary-educated, spending on average two hours in the Museum (AMARC, 2003).

Forty-three percent of visitors to the National Museum of Australia are families, with peaks in school holidays. Exit surveys conducted between March 2001 and April 2003 found that family visitors were likely to be in groups of two to three adults aged 36–50 years visiting with one to two children aged between six and nine years and tended to spend one to two-and-a-half hours in the Museum. Forty-four percent of parents were tertiary qualified, with 27% earning a household income of over \$90,000 and 25% earning between \$60,000 and \$90,000. A large proportion were Canberra-based (47%), with many visiting the Museum to show it to out-of-town visitors (National Museum of Australia, 2003).

The two museums were visited by a wide range of family groupings with, as the literature search suggests, the stereotypical group of the nuclear family just one of many variants — and not necessarily the dominant one. The following sets were represented in the study sample:

- mother with child/children;
- mother with child/children plus other children (family or friend);
- mother with child/children and another adult (family or friend);
- parents with child/children (including blended families);
- father with child/children;
- parents with child/children and grandparent(s);
- parents with child/children and out of town visitors.

While there were a variety of family types identified, each family had a tendency to visit museums in one or two typical ways. For example, one Sydney family said that they always went as a nuclear family, except on several occasions when grandparents had accompanied them. Another reported that museum visits were always made by the mother and three children because the father was too busy or not interested. A Canberra family noted that, thinking back, all their museum visits were in the company of out-of-town visitors. Another said that her museum visits were usually initiated by a friend, and were made by herself, her children and the friend, who had no children.

#### 2.4 Why do families visit museums?

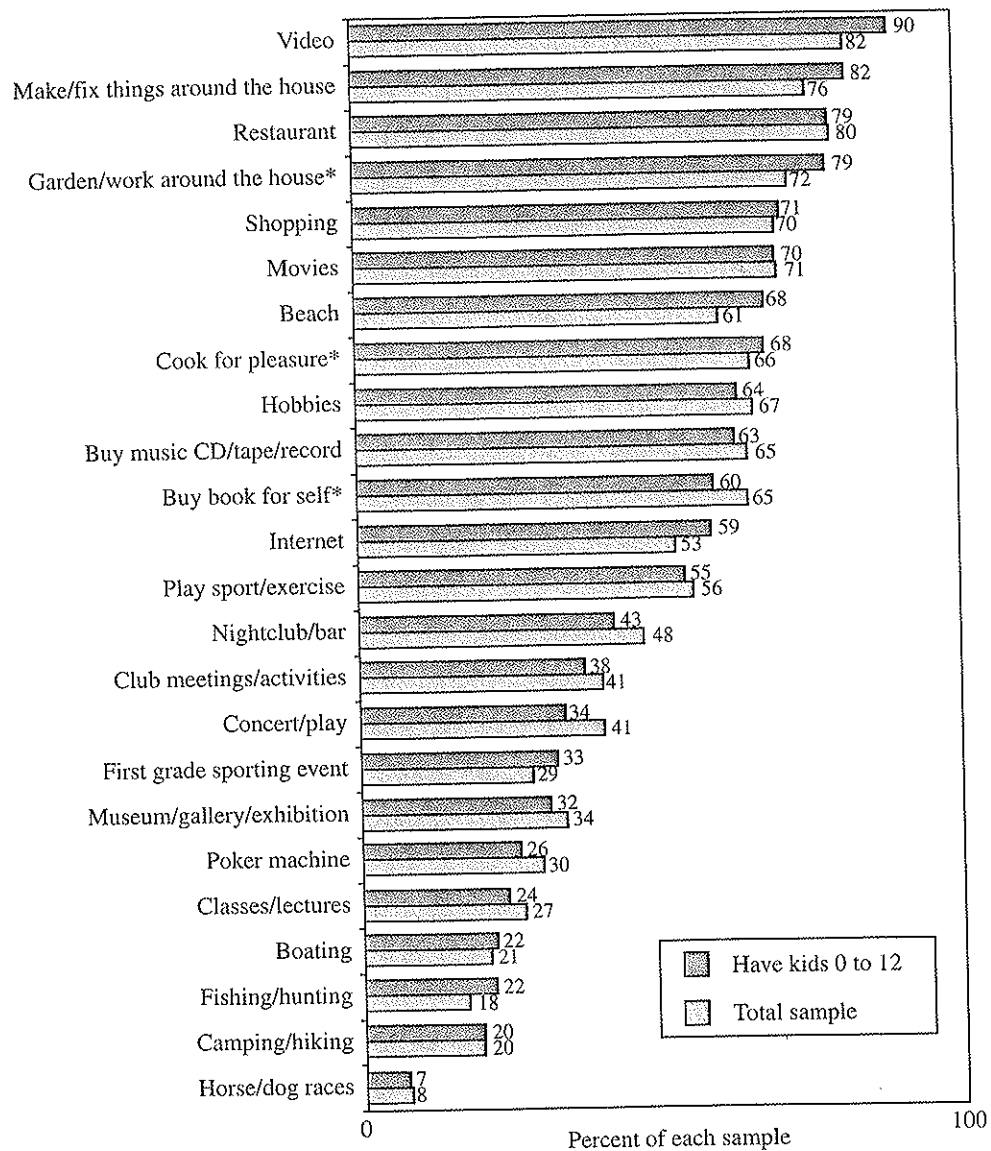
Falk and Dierking (1992) found that families predominantly choose to go to museums for social interaction and learning. Increasingly, researchers are finding that these purposes are intertwined — family visitors go to museums in order to *learn together* (Litwak, 1992; Ellenbogen, 2002; Kelly, 2001a; Mitchell, 1999).

Research undertaken at the Australian Museum in 2001 found that 70% of visitors stated that they visit museums generally because of the ‘interests of children/family.’ This was the number one reason given for specifically choosing to visit the Australian Museum (Kelly, 2001a).

Data sourced from *LeisureScope*®, a twice-yearly survey of 1,000 Sydney adults focusing on patterns and trends in leisure participation (see <[www.envirometrics.com.au](http://www.envirometrics.com.au)>) shows that people with children aged 0–12 years also participate in a wide range of other

leisure activities. Figure 1 shows the range of activities engaged in by a sample of Sydney adults over a six month period. This group also visited a wide range of venues across Sydney, as shown in Figure 2<sup>1</sup>.

**Figure 1. Leisure activities engaged in by people with children aged 0–12 (2000–2001)**

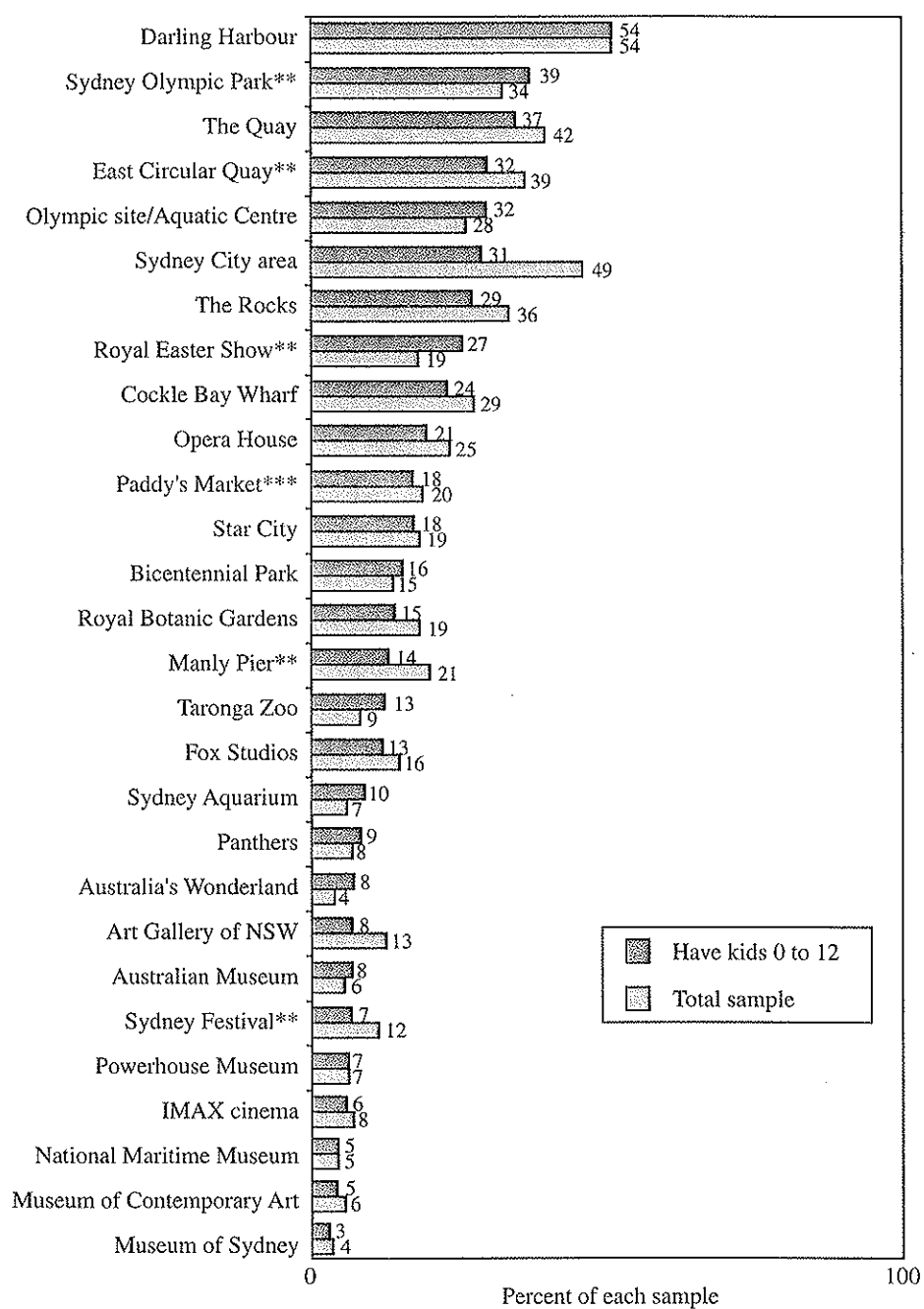


\* Based on one reading only

<sup>1</sup> These figures are from a sample of 1,109 adults from four surveys — Winter 2000, Summer 2000, Winter 2001 and Summer 2001.



**Figure 2. Sydney venues visited by adults with children aged 0-12 years (2000-2001)**



\* Based on three reading only

\*\*Based on two readings only

\*\*\*Based on one reading only

This data shows that 32% of those with children aged 0-12 years visited museums and galleries, compared with 34% of total Sydney adults. Venues visited included the Art Gallery of NSW (8%); the Australian Museum (8%), the Powerhouse Museum (7%),

the National Maritime Museum (5%), Museum of Contemporary Art (5%) and the Museum of Sydney (3%). The Australian Museum, Powerhouse Museum, National Maritime Museum and Museum of Contemporary Art all recorded an average of two visits by families over this period, as did Taronga Zoo. The Art Gallery of NSW recorded the highest number of family visits with an average of 3.3.

For many families interviewed for this study, a regular family outing was likely to be a visit to a free venue such as a park, beach or friend's house. In Canberra, free-entry cultural venues also formed part of regular family outings. In Sydney, families took advantage of free tickets and special offers to visit venues with entry fees. It was found that entry fees restricted the frequency with which families visited, with those who planned regular visits taking out annual membership.

Many families, including those in higher and lower income brackets, were prepared to spend \$30-40 on a family day out. While a family day out was not reported to be a weekly occurrence, it was also not generally regarded as a rare treat. The notional budget of \$30-40 included all out of pocket expenses, such as travel, food, entry fees and souvenirs. Families appeared to negotiate their own ways of sharing the budget across the expense items. Some economised on transport while others economised on food or entry fees.

Interviews also revealed that a museum visit was often chosen because it was a fair compromise between the interests and needs of various members of the family. Once the decision to visit was made, parents, especially women, were active in balancing the various needs of all group members, including husband, children, accompanying children, accompanying adults, grandparents and out-of-town visitors. Women were more inclined to put their own needs aside to ensure that the needs of others were met. Where there were children under 10 years, parents catered more actively for the needs of the older children, or allowed them to direct the flow of the visit. Younger children were encouraged to join in and were given some time in places designed specifically for them.

Parents emphasised that a museum needed to be fun and engaging for children and that this was an absolute prerequisite for a family outing to one. Parents stated that they chose to visit museums because they knew their children would enjoy being there. They ensured that the children's enjoyment was maximised by shaping their visits to fit their energy and attention. Parents who found that their children did not enjoy visiting museums stopped taking them. Some were aware that they encouraged their children to follow the parents' interests, however it was clear that they were also active in supporting their children's interests.

In cases where a museum visit was part of a family day out, it was often combined with other activities or events in other parts of the city. The museum was usually the main event, supported by special transport (ferry or train), time outdoors (nearby parks), pleasant food (coffee shop or picnic) or shopping (museum shop, markets, specialty shops). One reason for a museum visit was the desire to have a stimulating day or half day out of the house. A day out was seen as a social event where the family could spend quality time together while pursuing the personal interests of individual members. For some, it was enough to be together in the same place.

The first study in this series, *Energised, engaged, everywhere: older Australians and museums*, found that older people enjoy the company of their grandchildren when they are

having a day out with the extended family. They emphasised that they felt it was important for children to visit museums and learn about the objects on display and the associated stories, especially those that facilitated reminiscence and which encouraged them to talk to their grandchildren about their shared histories (Kelly, et al., 2002).

Families in this study also recognised that a museum visit provides an opportunity to engage with the wider community they lived in. The museum presents community values and conveys shared knowledge that is deemed important to the community. It is a public space where parents can foster their children's engagement with wider culture.

Importantly, museums can be very accepting places that help people who are finding it difficult to participate in society, engage with wider cultural values and fulfil the parental role of preparing their children for adult life. A whole range of ways that visitors engage with museums have been recently documented, and several examples demonstrate that museums can act as 'civic spaces' (Gurian, 2002; Sandell, 2002). This study found that for families in distress, museum visits can be helpful in maintaining continuity with core values. For example, one Canberra father, recently separated from his wife and children, said that he took his children to the National Museum when they visited him because he thought museums were important and he knew his wife would not take them. For him, museums were valuable in themselves, but they also represented the life he hoped to lead his children towards. Museum visits during this stressful period of his life were a stabilising factor that helped him cope with uncertainty and loss of confidence.

### 3. RESEARCH AND METHODOLOGY

'AFTER OUR LAST VISIT, THE YOUNGEST ONE SPENT THE FOLLOWING MONDAY  
PRETENDING THAT HE WAS GOING TO THE MUSEUM.'



Families, as one of a range of audiences, have been studied in museums for a very long time. However, the ways that this research has been undertaken has gone through great changes over the past ten years. This project itself is typical of the trend towards large collaborative projects, with multiple partners from museums and other industries working with university researchers. Major projects include the Museums Learning Collaborative, based at the University of Pittsburg in the United States (Leinhardt, Crowley and Knutson, 2002) and the QUT Museums Collaborative, Queensland, Australia (Anderson, Piscitelli, Weier, Everett and Tayler, 2002). A significant early work which focused specifically on families is the PISEC Family Learning Research Project in the United States (Borun, Chambers and Cleghorn, 1996; Borun and Dritsas, 1997; Borun, Chambers, Dritsas and Johnson, 1997).

Currently there is a move towards a 'community of practice' in museum learning (Lave and Wenger, 1991) where research is:

- undertaken across a range of institutions;
- collaborative, both within the industry and the wider research community, especially universities;
- longitudinal;
- creative and innovative, with wide-ranging and innovative methods;
- related to other learning experiences to show connections and relationships;
- and
- theoretically based, using sociocultural perspective as a framework (Kelly, 2001b).

Sociocultural theory emerged from the work of Vygotsky, who first proposed that learning was a socially mediated process where learners were jointly responsible for their learning, accounting for and making explicit the '... unplanned intersection of people, culture, tools and context' (Hansman, 2001, p.44). In a sociocultural model '... learning is not something that happens, or is just inside the head, but instead is shaped by the context, culture, and tools in the learning situation' (Hansman, 2001, p.45).

Paris (1997) outlined the way that sociocultural views of learning can be integrated into a theory of museum learning: '... people learn best when they actively manipulate the information to be learned and when that information builds on previous knowledge' (p.22). He stated that to facilitate meaningful learning, museums need to create environments that

encourage exploration and enable meaning to be constructed through choice, challenge, control and collaboration, leading to self-discovery, pride in achievements and learning, where visitors '... may "learn" more about themselves and their experiences through reflection' (p.23).

Museums are sites where a framework of sociocultural theory can be applied to learning and tested, since most people visit in some type of social group and come with specific prior interests and knowledge. Coupled with this, museums are mainly free-choice, providing a wide range of tools which visitors use to make their own meaning, both as individuals and as part of a community.

### 3.1 The literature review

The literature review for this study showed that research into learning, and into family learning in particular, has become qualitative rather than quantitative over time. Many early studies involved tracking family groups to determine visit patterns (Boisvert and Slez, 1994; Diamond, 1981; Tunnicliffe, 1994) or interviewing and observing visitors at fixed displays (Dierking, 1987; Falk, 1993; Rennie and McClafferty, 2002; Sykes, 1992). Some were experimental in design (for example, Smith and Wolf, 1992; Sorrentino and Bell, 1970). Unobtrusive audio or video-recording of visitors' behaviours and conversations has also increased (for example Allen, 2002; Hensel, 1987; Lucas, McManus and Thomas, 1986; Tulley, 1990) and the last five years in particular have seen a growing number of studies which involve listening to spontaneous visitor conversations (Leinhardt, et al., 2002). Topics which are prominent in the current literature include museum literacy, communities of practice, narratives, identity and visitor agendas.

A wide range of new research into learning in museums, undertaken by the Museum Learning Collaborative (Leinhardt, et al., 2002), includes discussion of learning conversations in art, history, natural history, science, living history museums and other outdoor venues. The research recorded and analysed visitor conversations and investigated the meaning-making revealed through conversations in social groupings, within part or whole exhibitions and in visitors' everyday lives. As this suggests, there is an increasing emphasis on research which gives voice to the visitors themselves.

Chapter 4 of this work, 'Families and Learning in Museums', examines the findings from the literature review in greater detail.

### 3.2 The field research

A case study approach was used as the basis for the research phase of this study. Merriam and Simpson (1995) describe the case study as '... an intensive description and analysis of a phenomenon or social unit such as an individual, group, institutions, or community.' (p.108). The advantages of the case study method are that it allows for generalisation; recognises the situated nature of learning and motivation, often with action-related and practical results, and enables the use of a diverse range of data-gathering instruments (Cohen and Manion, 1994).

The families were recruited at a visit to either museum, and interviews were held within



three to four weeks after the visit. The interviews were held in the family home and were semi-structured and conversational in tone with each recorded and transcribed. In some cases, the children were asked to draw something that they remembered from their visit.

Semi-structured interviews are effective for gathering information from individuals or small groups. A small number of questions, around 10–15, are prepared in advance. These questions convey the focus of the interview, allow for conversational flexibility, and enable the interviewer to become very familiar with a subject or problem area. To be effective interviewers need to be totally acquainted with the interview guide so that the interview can be conducted in a conversational, informal way. The written interview guide is flexible enough to ensure that the interview stays focused on the issue at hand, while remaining conversational enough to allow participants to introduce and discuss issues that they think are relevant. In this way semi-structured interviews can focus on broad issues while also canvassing practical suggestions and recommendations on specific subjects.

Areas addressed in the interviews were:

- motivations for a visit to a museum, focusing on the Australian Museum and the National Museum of Australia;
- factors that influence a decision to visit a museum;
- barriers to visiting a museum;
- description of a recent visit — highs and lows, social interaction, routines and learning;
- sources of information and knowledge about museum programs and services.

The 29 families interviewed in this study (see Table 1) included the following types of family groups:

- families with children under 7 years;
- families with children 7–12 years;
- families from various regions of Sydney and Canberra;
- regular visitors (more than twice a year);
- occasional visitors (once in past two years).

**Table 1. Sample Specifications**

	Number of families	
	Sydney	Canberra
Children 3-7 years	9	8
Children 8-12 years	6	6

Family types represented included intact families, single-parent families and blended families with between one and five children. There were four families in which at least one

parent spoke English as a second language and one family in which the parents were blind. Some families were regular visitors, while others were first-time or occasional visitors. Although the adults came from a range of educational backgrounds, the majority were tertiary-educated. A notable proportion of families who visited the Australian Museum had a parent with a scientific background.

Further analysis of the findings of the field research can be found in Chapter 5, 'The Museum Experience.'

#### 4. FAMILIES AND LEARNING IN MUSEUMS

'IT MEANS THAT THE BOYS CAN THEN GO TO SCHOOL AND TALK ABOUT THE ANIMAL AT SCHOOL FOR NEWS. THEY GET A BIT OF A THRILL ABOUT IT. IT IS THEIR DISCOVERY. THEY HAVE LEARNT ALONG THE WAY. THE BOYS ARE INVOLVED IN THE WHOLE PROCESS ... THEY'RE VERY INTERESTED IN IT — ESPECIALLY THE OLDER BOYS.'



Why is the family such an important learning unit? Culture plays a strong role in learning survival and life skills, with much of this being learned through the family. Families live and learn together and this is carried throughout their museum experiences. Falk and Dierking (2000) state that 'Family members talk about what they know from previous experiences and memories ... these discussions provide opportunities for parents to reinforce past experiences and family history and develop a shared understanding among family members' (p.93). Research into perceptions of learning and where people access information has found that the family is a strong influence on how people learn in later life, particularly in forming attitudes, values and views of the world (Kelly, in preparation).

Falk and Dierking (2000) proposed a model (first presented in 1992) describing the museum experience for family visitors which summarises much of the research findings described in this section. The 'Contextual Model of Learning' includes three interlinked contexts: personal, social and physical; with the intersection of these contexts comprising the 'Interactive Experience' of visiting a museum. The personal context includes each individual's prior experiences and knowledge, their personal agenda, differences between frequent and occasional museum visitors, and personal expectations. The social context describes the social relationships and interactions which influence visitors' perspectives. The physical context includes the design and ambience of the building or site and the objects it contains, as well as the attention to comfort and support for the visitor. The fourth dimension in the model is time, which recognises that a museum visit is not a solitary and isolated event in the visitor's learning.

In contrast with earlier research which indicated that families are primarily interested in visiting museums for social interaction many recent studies reveal that family conversations and behaviours in museums are centred on learning. Most important is the discovery that a museum is a place for social *learning* as well as a social *event*. While it is now well understood that most families come to museums to learn, this goal is often implicit rather than explicit — museums are 'socially mediated meaning-making environments' (Falk and Dierking, 2000).

A study at the Exploratorium (San Francisco) measured the proportion of 'learning talk' at 83% (Allen, 2002). Interestingly this is remarkably similar to estimates given in research into family members' conversations in Australian museums (Griffin, Kelly, Hatherly and

Savage, in press). However, it has been consistently found that families are also engaged in an amount of management talk regarding orientation and other physical museum issues (Stainton, 2002).

Hilke (1987) found that the behaviour of family groups visiting the National Museum of Natural History, Washington DC, was dominated by learning-related strategies. 'Although family group behaviours appear chaotic and without purpose, they are actually a well-balanced interweaving of personal and cooperative agendas to learn' (p. 15). Borun, Chambers and Cleghorn (1996) described three levels of learning – identifying, describing and interpreting/applying, which were based on the time spent at an exhibit as well as the kinds of reading and talking at the exhibit.

Learning is a key reason for museum visits and is an extremely strong motivation for family visits (Ellenbogen, 2002; Falk, 1998; Falk and Dierking, 2000; Kelly, 2001a). A study of visitor agendas and museum learning found that people who visit museums value learning, seek it in many ways and are usually better educated: 'The primary reason most people attend museums, whether by themselves or with their children, is in order to learn ... [therefore, they are] likely to see museums as places that provide opportunities for them to expand their own and their children's learning horizons' (Falk, Moussouri and Coulson, 1998, p.40).

This was echoed in a study of the values that parents attach to museums (Kelly, 2001a). Parents value museum visits because they provide children with opportunities to learn in different ways by bringing topics/concepts to life, enhancing the school learning experience, stimulating them and opening their minds to new ideas, the world around them, history and other cultures. Work conducted by Stanton (1999) agrees — through visiting museums parents feel that they '... share in the pleasures of learning' (p.8). It is more than something to do on a rainy day; it is a satisfying learning and social activity for all the family.

An Australian Museum study found that parents considered museum visits valuable in creating and strengthening relationships with their children, spending quality time together, sharing experiences and in enabling them to tune into what fascinates their children. Museums were seen as a good day out, something the whole family could enjoy as a different form of education and generally good value for money (Blue Moon Research and Planning, 1998).

Visitors recognise the important role that museums play in learning about difficult or sensitive issues. Adults interviewed as part of a summative evaluation of the Australian Museum's *Indigenous Australians* exhibition felt that it was important for them and their children to learn more about Australia's Indigenous cultures in order to understand and reflect on past injustices and to better comprehend contemporary issues (Kelly and Gordon, 2002). Similarly, a study of parents who had brought their preschool-aged children to an Indigenous program at the Australian Museum felt it was critical that their children were introduced to these issues from an early age to help prepare them for later learning. The role of museums in educating both children and their parents/carers about Indigenous subjects was valued, especially as it also filled gaps in the adults' knowledge and helped them become more confident when talking to their children about this topic (AMARC, 2002).

#### **4.1 Personal agendas, narrative, identity and learning**

One outstanding finding of the literature review was the depth and breadth of learning which takes place in museums and the social nature of family experiences in museums. Across the literature reviewed there was a clear picture that visitors bring, use, adapt, and take away a personal narrative which is related both to their museum experiences and to their personal identity. Visitors view exhibits through the eyes of their age, cultural background and gender. They also view them through the perspective of their knowledge and patterns of experience, and with a particular interpretive stance.

Shettel (1973) observed that people learn more from an exhibition if they enter with some prior knowledge of the topic. He further suggested that the major determinant of the knowledge that visitors take away from an exhibit is the knowledge they brought with them. Since Shettel's study, many authors have confirmed these ideas. Listening to the conversations of the same visitors in different museums, Abu-Shumays and Leinhardt (2002) showed that the depth and analytical content of the conversations varied according to the visitors' entering narrative for each museum, that is, how comfortable they felt with the museum content. Visitors' prior knowledge affects their understanding of exhibits, and family members actively seek relationships between the information in the displays and their own experiences. They use very personal agendas in their pursuit of knowledge, orientated to what they find useful, interesting or engaging. Importantly, then, the dominant perspective from which visitors interpret exhibits is that of their own knowledge and range of experiences. They do not frequently seek relationships solely within the presented content of an exhibition (Hilke, 1988).

Research conducted by Fienberg and Leinhardt (2002) at a history museum found that visitors' attitudes and predispositions influenced the likelihood of their being knowledge seekers. Dierking and Falk (1994) suggest that the personal agendas with which people arrive at an exhibition encompasses a set of desires, needs and expectations for the visit. In addition to prior knowledge of the setting and the content of the exhibitions, the agenda is influenced by motivation and interest. These may have a substantial impact on behaviour and subsequently on learning (Ellenbogen, 2002; Kelly, 2001a, in preparation; Moussouri, 1997; Twiss-Garity, 1995; Wolf, 1986; Worts, 1993a, 1993b). In a series of case studies of families in interactive museums, Moussouri (1997) found that agenda-setting was an interactive process between the visitor and the exhibit. Her work outlined the factors that influenced family agendas and how they were '... refined and redefined after each visit' (p. 246). She also found that visitors' interest and motivation were often stronger after the visit than before, and that visitors' agendas varied according to their plans, age and position in the family structure.

Csikszentmihalyi and Hermanson (1995) discussed applying their research into motivation for learning to museum settings. They suggested that if a museum visitor was interested in an exhibit and engaged through sensory, intellectual, and emotional faculties, they should be ready to experience an intrinsically rewarding, optimal experience. They used the term 'flow' to describe this experience, but pointed out that flow can only occur if the visitor has clear goals that can be met. Then, initial curiosity and interest can lead to a more extensive learning interaction.



Roberts (1997) described the interaction between prior and new experiences in museums as the development of a personal narrative. She considered that personal narratives shape the reasons visitors come and what they take from a visit. 'A narrative view ... suggests that visitors' experiences are shaped as much by who they are as by what museums are like. Second, it suggests that museums may have a far broader impact on people's lives and psyches than is typically acknowledged ... In communicating, they ignite memories, activate emotions, and spark interchange. What visitors do with these possible responses is part of the narrative they craft. What they craft may or may not have anything to do with the messages institutions intend' (p.137).

As Leinhardt and Gregg (2002) showed in their study of student teachers in a civil rights museum, a visit can influence a person's identity. The interplay between the backgrounds that visitors bring with them and their reactions to the experiences and objects can lead to subtle changes in personal views of themselves, their identity and meaning-making, both individually and collectively (Cohen, 1996; Hein, 1998; Silverman, 1995). Similarly, Stainton (2002) found visitors in an art museum to be '... in conversation literally and figuratively with the artwork on display and with the curatorial intent' (p.214).

#### 4.2 Sharing learning

The social interactions within family groups play a critical role in learning behaviours and are at least as important to families as looking at exhibits (Borun, et al., 1996; Dierking, 1992; Kropf, 1992; Laetsch, Diamond, Gottfried and Rosenfeld, 1980; Litwak, 1992). An early study involving two zoos in the United States found that only a third of the reasons given for visiting the zoo explicitly included learning about animals. Other goals included strengthening family ties, watching other people, being able to walk in a safe place, having fun and eating out (Laetsch, et al., 1980). Similarly, museums offer families a safe place to learn and enjoy themselves through social interaction (Gurian, 1999; Pitman, 1999).

Research has consistently shown that social interaction promotes learning and that the role of the parent is critical. One key finding of a study of learning in children's museums showed that '... children stayed longer at exhibits and learned more when they were accompanied by an adult who was actively involved in the activities' (Puchner, Rapoport and Gaskins, 2001, p.255). Dierking (1992) observed that museum behaviours of family members include reading labels together, discussing what they are looking at and asking each other questions. There is evidence that these family interactions stimulate learning, providing an extensive, continuous reciprocal influence on visitor/exhibit interactions (Diamond, 1986). Families are experienced at learning together and bring to the museum shared learning behaviours and practices. The family culture of shared knowledge and learning is enhanced by the visit (Borun, et al., 1996; Dierking, 1992; Ellenbogen, 2002; Hein, 1998; Hilke, 1988), with the notion of 'potential learning' being described as analogous to potential energy (Borun, et al., 1996); experiences and information acquired by each family member during the visit are available to be shared with others at a later date.

Different levels of expertise can emerge among group members which provides a wider range of explanations than occur among groups with a balanced level of expertise among its

members (Fienberg and Leinhardt, 2002). McManus (1994) described this process as 'foraging' and the family as a 'coordinated hunter-gatherer team' (p.91) who each satisfy their own curiosity about the topic but together are economical in their gathering of information.

There is a two-way sharing of learning between parent and child: each has expertise and experience to share. Diamond (1981), observing family groups at two science museums in the United States, noted that parents used a 'teaching' form of communication with their children. She also noted that different types of information were conveyed from parents to children and from children to parents. Parents transmitted symbolic information, while children conveyed descriptive or operational information. Parents have a role in explaining the symbolic nature of many objects in museums (Callanan, Jipson and Soennichsen, 2002), and both adults and children recognise and value this role (Kelly, forthcoming).

Social interaction and information-sharing about a particular exhibit also help to establish connections between visitors' prior experiences and the exhibit concepts (Borun, Massey and Lutter, 1993; Dierking and Falk, 1994; Laetsch et al., 1980). Crowley and Callanan (1997) found that parents guided their children's thinking while looking at objects and that this led to deeper engagement and understanding. These conversations are a primary activity of knowledge construction. Paris and Hapgood (2002) describe this type of learning as 'conversational elaboration' that is, talk occurring during and after a museum visit that demonstrates how meaning, experiences, and interpretation develop and are intertwined. Stevenson (1991) found that 81% of the time visitors spent interacting at the Launch Pad in the Science Museum, London, was with family members. In follow-up interviews almost all visitors said that they had talked about their experiences after the visit.

Kropf (1992) showed that the level of interaction with exhibits varies according to the family member. Children show curiosity and interact with the exhibit while parents are more likely to watch and read instructions. In natural history museums, where most of the exhibits are behind glass, parents often stop their children from touching open displays, while the children frequently reach out to touch. Koran and Koran (1984) also found that children were more attracted to hands-on exhibits, but their results showed that visitors of *all ages* were more attracted to and engaged more with exhibits that could be touched or manipulated than to those which were behind glass. They suggested that offering the ability to use more than the sense of sight increased opportunities for visitors to satisfy their curiosity and enhance learning.

Hein and Alexander (1998) reported that shared learning can also involve different learning strategies. They described observation studies where opportunities had been introduced for different learning modes (visual, oral, tactile and olfactory). It was discovered that when family group members who preferred different learning modes reunited and talked about their experiences, they had rich conversations based on the different modes they had employed.

Rosenfeld's study into family behaviours in zoos (1980) and Dierking's research into parent-child interactions (1987) both indicated that questioning, particularly by the children, is a dominant behaviour in family groups. On the other hand Hilke (1988), in observing and

recording family member behaviours, found that rather than asking and answering questions, most verbal interchanges were spontaneous sharing of pieces of interesting information. Both of these behaviours increase the total amount of information available to each family member. Most information transfer is among group members, rather than between the exhibits and visitors, however the information transferred is not always accurate and often anthropomorphic (Blud, 1990a; Dierking, 1992; Hilke, 1988; Kropf, 1992). Hilke (1988) noted that children interacted more with their parents than with their siblings, hence placing individuals with the greatest differences in experience and knowledge in direct contact and further facilitating shared learning.

#### 4.3 Gender and learning

In an overview of research into gender differences in the behaviour of family members in museums, Diamond (1994) found considerable evidence for differences in patterns of behaviour between different- and same-sex parent/child pairs. She found a more cooperative approach in the interactions between mothers and daughters, more interaction between mothers and their sons or daughters than between fathers and either child, and more interaction between fathers and sons than between fathers and daughters. By contrast Hilke (1988) found no major age or gender differences in strategies used within a museum and Blud (1990b) found attention being initiated less by girls than boys. Others have found that in groups containing mother, father and children, the father is most likely to take on a leadership role (Koran, Koran and Foster, 1988; McManus, 1987).

The field research for this study found that where both parents were present, the leadership role varied with the topic of the museum. Overall, fathers were more dominant than accompanying mothers at the Australian Museum because they had a stronger interest in the topics presented. In contrast, women were somewhat more dominant at the National Museum of Australia because they were more interested in social history topics than the accompanying men were.

Stanton's work with parents and museum visiting (1999) suggested that men saw museums as places you visited to do 'family business'. They distinguished family business from personal leisure activities, considering it as something the family did together for pleasure and learning. Stanton's study also suggested that women viewed museums as a parenting resource where they exposed their children to a variety of cultural and social experiences. Both genders felt that it was important for their children to understand the world, know how things work and respect and understand other cultures.

However, Dierking (1992) called for caution in generalising about relationships between family members. As shown above, results of gender studies have been varied and it has been suggested that the reasons for this may be found in the variation of the exhibitions, the personalities and relationships within the group and the differences between the museums studied (Blud, 1990b, Kelly, in preparation).

#### 4.4 Fun and learning

Fun and enjoyment is one component of museum learning that is not yet well understood or researched in a great deal of detail (see for example Griffin, 1998; Griffin and Dierking, 2001;

Kelly, in preparation; Packer and Ballantyne, 2002; Roberts, 1997). Griffin (1998) found that school children visiting the Australian Museum felt that if they were having fun just looking around and enjoying themselves, then this didn't necessarily 'count' as what they thought of as learning. Other research, particularly that undertaken with young children in museum settings, has shown that enjoyment and a sense of having achieved outcomes in interesting ways can significantly enhance learning (Anderson et al., 2002; Hein and Alexander, 1998; Packer and Ballantyne, 2002).

When interviewed, families in this study placed varying degrees of emphasis on the two elements of 'learning' and 'fun' with quite a range of perceptions about what constitutes fun and what kind of things are worth learning. A key finding from this research relates to the way families conceptualise the goal of learning during a visit to a museum. In contrast with other research (Kelly, in preparation; Packer and Ballantyne, 2002) the terms 'learning' and 'education' were felt by many to be 'too serious' and too 'focused' to describe the kind of experiences they were seeking. Few families in this research associated their museum visits with specific learning outcomes, preferring to discuss the whole visit as an experience. Even those families who mentioned something concrete they wanted to find out during a museum visit (like what to feed new frogs) put more emphasis on the broader visit experience than on the search for specific information.

The expression that came closest to describing the desired experience for most families was 'stimulating'. In general, most families sought encounters with presentations that would stimulate them by conveying new facts or perspectives or by reviving lapsed memories. A stimulating museum experience was considered to be one which encompassed both intellectual and emotional aspects relating to topics that were important, meaningful or useful. The importance of the topics made the stimulation of a museum visit different from the stimulation of going to see the latest movie, for example.

#### **4.5 Choice and learning**

Paris (1997) described several parameters of learning and motivation which summarise learning in a museum: constructing personal meanings, choices, challenges, control, collaboration and consequences of learning. Visitors value their ability to choose what they attend to, and exploit this strategy in order to pursue their personal agenda and find out things for themselves (Griffin, 1998; Hilke, 1988; Paris, 1997; Wood, 1996). Davis and Gardner (1993) described museums as places where visitors are free to map their own course through the expanse of diverse stimuli.

Choice is also a vital element in the way family members learn. 'Families play an especially important role in screening and interpreting the meaning of settings of all kinds, including those where learning occurs' (Schauble, et al., 1996, p.17). They spend time scanning displays and selecting the exhibits to which they will devote time. Choices may be shared amongst family members. A typical pattern of family movement through a museum is for one member to pull others to something he/she has found of interest. In all instances where this behaviour has been described, including this study, the role of guiding (or pulling) seems to rotate among family members, although it is most frequently taken by a child (Baillie, 1996).

#### 4.6 Attention, interest and learning

Before visitors can learn they need to direct attention to a particular display. Attention to exhibits has been shown to vary according to three criteria: high or low interaction, concrete or abstract presentation and simple or complex information. Boisvert and Slez (1994) examined these three parameters based on attraction (pulling power), holding power (how long people stay at an exhibit) and visitor engagement levels (to what extent they interact with the exhibit). They found that '... attraction levels were highest for exhibits with concrete presentation. Holding power was highest for exhibits with high interaction and concrete presentations. Engagement levels were highest for high interaction exhibits' (p.503). Koran and Koran (1984) also discussed the interaction between curiosity, attention and learning. In addition to the critical role played by the types of exhibits, they also indicated that focusing devices and pre-instruction played a role in increasing learning from exhibits.

Regardless of the content or attraction of a display in any museum, people pass by exhibits which are poorly lit, are difficult to access (for example, too high for young children), or are very crowded (Kropf, 1992). Families consistently stay longer at exhibits that involve interaction, either between the visitor and the exhibit or between the visitor and a museum staff member.

In any type of museum some groups return to exhibits, and will spend longer at them on their second visit. Families will enter a museum with the express intention of revisiting favourite exhibits and relate what they see to familiar experiences (Falk and Dierking, 1992). Taylor (1986) noted that at the Steinhart Aquarium (United States), visitors talked more about animals with which they were familiar than about exotic animals.

Parents interviewed for this study were very finely attuned to the attention span of their children and they shaped the museum visit to fit with the capacity of the children. Many parents had strategies for helping their children engage with museum exhibitions and were active in supporting them. Others appeared to prefer to let their children explore and only assisted when the children asked questions.

#### 4.7 Recall and learning

Studies of children's visits to a variety of museums and galleries found that children were able to strongly recall their visits, and that these recollections were '... diverse, highly individualistic, and idiosyncratic' (Anderson, et al., 2002). Although in this research it was mainly the parents who had much more specific recall of exhibition content, there were a number of examples where children did. One notable case was of two primary-aged children who accompanied their blind mother to the Australian Museum and who had more specific recall of exhibition elements than other children. When approaching this family to participate in this study, our researcher noted their behaviour in a large dinosaur exhibition at the Australian Museum. The children explained the size of the dinosaur to the mother by walking her along the length of the skeleton while describing it. The mother said that she was guided through the Museum by the children. For example, they would show her how big a bird was by tracing its shape on the glass with her hand. It was clear that these children had been taught a range of strategies for communicating visual information to their parents. It is likely that the children retained more detail of the exhibition because they had

explained it to their mother. An implication of this finding is that adults who accompany children to museums and explain the exhibits to them are more likely to recall the exhibition better than adults who do not explain exhibits to their companions. This suggests that exhibitions that foster social exchange may encourage better recall of the content than those that do not, as has also been found in the literature.

It is clear that some visits can impact on visitors' lives for decades. Parents and children in this study were asked about the most memorable aspects of their recent museum visit and were able to name a range of experiences, such as a dinosaur exhibition, live animal displays, performances, stuffed animals and children's areas. Some exhibitions had a powerful impact and were recalled after many years, with two exhibits at the Australian Museum in particular being mentioned often — one for its environmental message and the other for its child-friendly exhibits. Australian Museum visitors who grew up in Sydney recalled key elements of their childhood visits to the Museum, especially the skeletons and the Egyptian mummies. Parents who remembered enjoyable and interesting experiences in museums, either in childhood or adulthood, were keen to foster similar positive experiences for their children. These experiences appeared to transfer quite readily from one museum to another; for example a respondent who grew up in Adelaide and had positive memories of the South Australian Museum was interested in making family visits to the National Museum of Australia. This is supported by many other studies which report enduring memories of museum visits (Falk and Dierking, 1992, 2000; Hein, 1998; Hein and Alexander, 1998; Kelly, in preparation; McManus, 1993; Pitman, 1999).

Participants in this study were also asked about the extent to which the museum had been talked about since the visit. It was found that discussion followed a museum visit in several ways:

- discussion about personal interests that related to aspects of the museum visit, such as owls (because of Harry Potter!);
- new interests, for example, one boy asked his mother for materials to make a painting and produced an Aboriginal style painting inspired by a visit to the Australian Museum;
- recall of things seen and done at the museum in conversation initiated by either the parent or the child, or in fantasy play;
- primary school aged children talking about their museum visit during class news time.

As we have shown parents in this study regarded a day out to a museum as both worthwhile and enjoyable. Most families said they did not visit museums for overtly educational purposes — they visited because of the learning opportunities and stimulating environments. While museums were regarded as educational places, family visits were seen as stimulating more than educational.

The field research for this study found that families sought an experience where everyone in the group had a good time while engaging with a stimulating and worthwhile subject, and participants provided many examples of deep learning experiences that were triggered or supported by the museum visit. As Paris and Hapgood (2002) noted, a museum visit can have subtle, indirect and latent impact on a family.

## 5. THE VISIT EXPERIENCE

'WE SPENT THE WHOLE DAY THERE. IT WAS FANTASTIC.  
WE GOT THERE AT 10.00 AND LEFT ABOUT 4.00.'



Families usually visit museums (and other recreational/leisure organisations) in established patterns that govern activities ranging from their preferred mode of transport and visiting routines through to the way they move around a museum and engage with exhibitions and programs. Much of these patterns are site-specific, depending not only on the location of the museum and on the kind of organisation it is in terms of content and interpretive approaches, but also on prior experiences families have had there.

This research uncovered many diverse ways that families access and use museums; the ways in which they access and behave in museums, their interactions with exhibits and how they establish visiting routines. The literature review revealed rich and detailed research findings about the ways in which families use museums as social and learning environments.

### 5.1 Visiting patterns

Research on triggers for family visits to the Australian Museum found that most were unplanned, often taking advantage of other situations, with examples given of just driving past and chancing on a parking spot or 'my wife was having her hair done' (Mitchell, 1999).

A 2001 exit survey conducted at the Australian Museum also found that visits were generally spontaneous. Visitors were asked two questions: how long they had been wanting to visit the Museum and when they had decided to visit. Thirty-nine percent of respondents said they had decided on the day and 29% on the previous day. Overall, 89% had decided to visit the Museum within the previous week and 74% stated that they had been wanting to visit only within the previous three months (Kelly, 2001a). Similarly, many participants in this study had spontaneously decided to visit on the day. For example, one Sydney visitor reported she was driving past the Australian Museum and decided to visit with her eight-year-old daughter, and spent four hours in the Museum. A Canberra family decided to substitute a picnic they had planned with a visit to the National Museum of Australia because it was raining.

Another research study conducted for the Australian Museum found that the nature of planned and spontaneous visits are very different. Planned visits are usually either part of a family day out where people want to see a special exhibition, or somewhere to take overseas or domestic guests. Unplanned visits tend to occur when people just happen to be passing by and are interested in what's on, or are spur of the moment decisions to do something different. This is particularly true for infrequent museum/gallery visitors (Blue Moon Research and Planning, 1998).

Similarly, field research for this study found that some family visits were motivated by routine, others were framed as a stimulating day out and many were triggered by specific factors. The three strongest triggers for a visit the Australian Museum or the National Museum of Australia were: special exhibitions, the museum as an information resource and the museum as a social space. For example, one family who visited the Australian Museum had tadpoles which had hatched and they wanted to find out what to feed the frogs. Visits to the National Museum of Australia were often triggered by the desire to see the new Museum. Other reasons included pleasant activities for children combined with interesting things for adults to see.

Many of the families in this study were found to be regular museum visitors with well established routines. Visitors to the museum were triggered by the pattern of their routine. One Sydney family, for example, had evolved a pattern where the mother took her two boys (aged eight and five years) by train into the CBD most Sundays to attend church at St Andrews Cathedral. This was followed with a visit to the Australian Museum, the park or some other activity. In order to enhance their visits they had joined The Australian Museum Society, which offers its members activities (such as tours and family-based activities) and free general admission to the Museum.

The research found that generally, families who visited less frequently were likely to stay the longest. For most of the families whose routines involved frequent visits, the duration of a visit was limited to less than two hours, with some specific exceptions. For example, one mother took her three children (aged eight, five and two years) to a museum about once a month. Her husband did not accompany her, she travelled by public transport and spent the whole day at the museum. Perhaps being a trained kindergarten teacher made such visits possible for her – other Sydney mothers could not envisage taking their children out for the whole day by public transport without the support of their partner or another adult.

## 5.2 Getting there

Sydney families in this study used either car or train to visit the Australian Museum. Those who travelled by train lived near a station and used it as a matter of course. For these families, the journey was often an enjoyable part of the whole outing, as children like a train ride and a walk through the park. Those who usually travelled by car would not consider using public transport but also had familiar routines. For example, one family parked in the father's work car park, caught the monorail and then walked to the Museum. This was their usual way of making a family outing to the city centre, as it was cost effective (the car park and monorail were free for them), enjoyable (the monorail was a novelty) and fairly quick. In this way, Sydney families capitalised on the benefits of the location of the Australian Museum, adjacent to a large inner-city park (Hyde Park), railway stations and in the city centre.

These families did not emphasise difficulties with transport in their trips to the because, as regular visitors, they had worked out a mode of travel that suited them and their expectations were in line with the reality of traffic and parking costs in the CBD. Consequently they were not discouraged by their travel experiences.



In Canberra, all families travelled by car and the journey was seen as a serviceable way of getting to the National Museum rather than as an interesting part of the experience. None had developed a routine that capitalised on the lakeside location, which is one of the assets of the Museum site. It is likely that routines which take advantage of the Museum's surroundings will increase with time and familiarity. The above findings suggest generally that future programming and promotional activities for museums with considerable outdoor assets could encourage walks, bike rides and outdoor picnics to take advantage of the 'day out' pattern of visiting favoured by many families.

### 5.3 Trekking around

Hilke (1987) found that visitors' attention is split between obtaining or exchanging information, moving about in or paying attention to the setting itself and social interactions. Her figures indicate that about two-thirds of the time is spent on gaining or sharing information, with the remainder split equally between social and setting issues related to the building itself. Based on his observations, Falk (1991) showed that the relative amount of time spent on information, setting and social activities varied over time; as attention to exhibits reduced, attention to the setting increased, while attention to the social group remained reasonably constant throughout. He also found that most visits to a museum last less than two hours and are commonly between 60 and 90 minutes in duration, findings which are also reflected in Australian studies (AMARC, 2003; National Museum of Australia, 2003). Falk (using his own and earlier studies) also described the elements of a typical visiting pattern for many family groups, particularly occasional visitors, as: Orientation, Intensive Looking, Exhibit Cruising and Leave Taking (1991).

In the **Orientation** phase, lasting 3–10 minutes, visitors take time to look around, discuss the visit with their group, obtain guidance from maps or staff, and eventually move towards displays of their choice. Hilke (1988) suggests that the questions in family visitors' minds as they enter and orientate themselves to an exhibit are:

1. What looks interesting in here?
2. What is there in here that I recognise?
3. What don't I understand in all of this?
4. How is all this related to things that I already know or should know?
5. Is there something to do in here?

The **Intensive Looking** phase, lasting 15–40 minutes, involves close and systematic inspection of an exhibit, looking at each display, reading labels and discussing the exhibit. Frequent visitors tend to spend most of their visit in this phase. The onset of the **Exhibit Cruising** phase, lasting 20–45 minutes, is apparently caused by fatigue (particularly in children) or realisation by the family that they will not be able to 'do the whole museum' if they keep moving so slowly. At this point, visitors begin to skim displays and move randomly to exhibits that attract them.

The **Leave Taking** phase, lasts 3–10 minutes and may begin after little more than an hour, when museum fatigue becomes paramount. At this time attention turns away from

exhibits to other visitors, the physical setting, the proximity of restrooms, the coffee shop or the exit, as well as what else there is to see. The amount of time initially allocated by the family to the visit is a major determinant in the decision about which of these paths will be followed.

Participants in this study were asked to describe where they went in each museum and how they moved around. From their responses, three modes of approach were identified that are applicable across organisations (Table 2). Some families used only one mode, while others moved between different modes.

**Table 2. Modes of Visiting**

Visit mode	Description
<i>Ambient</i>	<i>Ambients</i> wanted to enjoy the spaces, the general stimulation of a museum setting and social exchange. <i>Ambients</i> moved into exploratory mode when their interest was engaged.
<i>Exploratory</i>	<i>Explorers</i> wanted to discover what the place, either the museum as a whole or a particular exhibition, presented and were more common amongst first time and occasional visitors. <i>Explorers</i> often had a general, non-specific idea of what they wanted to see and do, but were interested in discovering new things.
<i>Specific</i>	<i>Specifics</i> wanted to pursue an interest or topic, see a particular exhibition or attend a certain program. They had a more focused idea of what they wanted to learn during the museum visit. They often moved into exploratory or ambient mode after their specific purpose was achieved.

The main pathways used by families interviewed for this study depended on whether they were first-time or repeat visitors and whether they had come for a special exhibition/event or just a general day out. First-time visitors would explore to see what was generally in the museum using signs, maps and staff advice (*Exploratory*), whereas repeat visitors tended to have either favourite general areas or specific child-focused areas (*Specific*). If the visit was primarily to see a special exhibition this would be done first, followed by either general exploration or visits to favourite parts of the museum (*Specific-Exploratory*).

It was found that wayfinding was particularly important for families because of the need to supervise children and keep the group together. Older children were allowed to go off separately, but only when the parents were sure that the children knew key landmarks in the building and some main pathways. In both the Australian Museum and the National Museum, most families reported that the children often led the way. Parents took an overall coordinating and supervising role, deciding when to eat, when to re-convene, when to leave, often allowing one of the children to lead the way through an exhibition or decide what to do next. Children who could read often took charge of the map for part of the visit.

The difficulty for many museums is that as they have developed, grown and changed, pathways have become more confusing and harder to navigate. Visitors interviewed in this study reported that they would access maps and signs, and were often happy just to 'learn their way around', with multiple pathways allowing them to take short-cuts or bypass things of less interest. The problem here, however, is that visitors can either miss places that they would like or only discover a small part of what the museum has to offer.

#### **5.4 Museum literacy**

Bain and Ellenbogen (2002) describe museum literacy as '... a command of the language and an interpretive framework for studying objects' (p.159). They consider that it is the role of the museum to help orientate visitors to the language and ways of interpreting exhibits to lead to a purposeful use of the available resources. Museum literacy considers the role of the visitor's interaction with the museum; the construction of narratives shaped jointly by the exhibit, its creators and the visitor, rather than just the transmission of meaning from the object to the visitor.

Parents play a crucial role in helping children to become museum literate. They introduce their children to specific skills used in reading, interpreting, and learning from a wide variety of tools including objects, visual materials, and print. They also help with broader skills needed in searching, selecting and attending to museum displays and programs (Leichter and Hensel, 1989).

Dierking (1992) argued that visitor behaviour is predictable and defined by the social norms and expectations of a particular museum setting. Parents have a sense of what behaviours are expected in museums and they model and teach their children 'museum behaviour'. Accepted behaviours vary according to the type of museum. In a 'traditional museum' children are disciplined if they make noise or move too quickly. Kropf (1992) observed that this is less frequent in open museums, children's museums, zoos and science centres. Cone and Kendall (1978) also found that children learn appropriate museum behaviour from their parents, and noted that the few incidences of discipline they observed suggest that many museums offer settings where it is easy for children to achieve the desired standards of behaviour.

#### **5.5 Energy ... and fatigue!**

The issue of museum fatigue has been described in studies as far back as Gilman's work in 1916. Melton, Feldman and Mason (1936) were the first of many researchers to show that visitors spend more time in the first few halls of a museum than they do in later ones. More recently, Screven (1995) distinguished between physical fatigue, which he describes as too much standing or walking; and psychological fatigue, which he describes as difficulty in concentrating, tiredness and confusion. He observed that family groups actively sought reduction of museum fatigue by sitting where the opportunity presented itself, or by having a refreshment break. Screven reported an earlier study in which visitors were observed and post-tested in the same exhibit at times when chairs were present and not present. He found that the presence of chairs dramatically increased attention to the exhibit (by 80-90%) and

significantly improved learning about the exhibition content. This may however be site-specific; in work conducted at the Science Museum, London, no evidence of museum fatigue was found (Stevenson, 1991).

In this study, participants reported that the energy of the children in the family was a strong determining factor in the pattern of their visits to museums. Families with pre-school children (aged under 5 years) often restricted their visits to 1–2 hours because the children would tire and become fractious. Coupled with this, public transport was more tiring than car travel for families with young children. At the other end of the energy spectrum, families with very energetic children had special difficulties in managing a museum visit because they had to supervise the children closely. Families found it easier to manage their children's energy (both low and high) in places with a range of facilities. For example, cafés allowed tired parents and children to re-charge, while activity spaces gave children a chance to express their energy in large movements.

The field research and literature search for this study showed clearly that energy and fatigue are key factors influencing how families visit and behave in museums, and once they have had enough, they really have had enough!

### 5.6 Safety and supervision

Safety and supervision are critical issues for parents and families, particularly those with very young or very active children. Parents interviewed in this study felt the need to supervise their children in order to:

- keep them safe from accidents, getting lost, or the actions of others (such as aggressive children, adults with ill intent);
- help them enjoy the museum experience;
- ensure that they do not annoy other visitors;
- ensure they follow the rules of the place.

Many parents find supervision to be quite demanding and tiring. Benton (1976) found that the leadership style within a family determines the relative amount of time spent on discipline versus exhibit-directed behaviour. In the present study, the parents of more active children seemed to feel the weight of protecting others from the boisterous nature of their children while at the same time allowing them some form of outlet for their energy. These conflicting demands can cause unnecessary stress for the whole group, negatively impacting on their experience.

Although parents in this research showed a wide range of concerns for the safety of their children in public places the actual level of supervision varied, as shown in Table 3. Some were extremely sensitive and kept a very close watch on their children, while others were more relaxed. Most parents had finely-graded modes of supervision depending on the age and temperament of their children. Supervision was loosened relative to the degree that the children showed they could act responsibly. Children were usually allowed more freedom of movement when there were two or more of them, providing they stayed together.

**Table 3. Safety and Supervision**

Type of supervision	Child
Close physical supervision so that children are within reach	Children under 4–5 years and more boisterous children
Within sight but not in immediate reach	Children aged 4–7 and more boisterous children
Allowed to go to a separate place for a defined time	Children over 8 and those with other children, depending on the reliability of the children
Allowed to explore for a defined time	Children over 10 with other children, depending on the reliability of the child

Parents often share the role of supervising the children, taking turns to stay with them. Contained areas with only one entrance/exit and good sightlines help parents supervise young children, with some parents finding it nerve-racking trying to supervise children in areas without these features. Places where supervision was relatively easy were heavily used and highly valued as both appropriate for children and relaxing for parents.

Overall, the above results show that parents value the opportunity to balance the close supervision required in exhibition spaces with the looser supervision possible in more open spaces. All the parents stated that at some point in a museum visit they need to take children outside or into a play space to let off steam. While this was usually expressed in terms of the child's needs, it was also clear that parents also needed time out from the demands of close supervision.

### **5.7 Interacting with exhibits**

While respondents in this study said that museums need to offer more than just looking and reading, many expressed an appreciation for well-presented object and text displays. Based on her studies at the Natural History Museum, London, McManus (1989) disputed the common belief that visitors do not read labels. She found that visitors' conversations often echoed the label text and suggested that visitors very quickly scan labels as they approach an exhibit and as they overview a display. These behaviours had not been noticed in previous studies, as researchers had attempted to establish label-reading by observing facial movements.

Several studies have noted that parents read aloud to their children, or read labels in silence then interpret the text for them (Allen, 2002; Diamond, 1986; Dierking and Falk, 1994). Research also shows that parents recognise their role as interpreters both with and for their children (Borun, 2002; Kelly, forthcoming) and that well-written, legible and clear text is critical in facilitating this.

Families in this study emphasised the need for museums to provide hands-on experiences for children (and adults). It was quite common for parents to identify whether or not an exhibition space was 'child-friendly' by visual cues such as specific children's activities, things to touch and computer interactives. They expected to spend less time in areas that lacked these visual cues, and sometimes skipped them altogether. All kinds of hands-on opportunities were appreciated. Parents of children aged under seven noted that the activities could be simple and familiar activities such as sorting, colouring, touching, moving, rearranging, linking, puzzles and dress ups. Parents of older children appreciated opportunities for children to use equipment such as microscopes and computers, though there was some ambivalence about screen-based audio-visual presentations. While they were appreciated for conveying information and bringing personal stories to life, there was caution about over-use.

Floor activities, such as touch tables, activity stations and presentations facilitated by staff were also well-appreciated. When American museum visitors were asked what they remembered of museum visits which, in some cases, had taken place many years earlier, interactions with staff were commonly mentioned (Falk and Dierking, 1992). Kamien (1992) also discussed the powerful and attractive aspect of human beings in exhibit halls. Many science centres in particular have recognised this and place staff among displays to interact with visitors.

This study found that for most families, museums were expected to have collections of important and interesting objects and it was expected that these would be at the centre of the visitor experience. Parents also noted that the more 'traditional' exhibits, such as showcases full of many stuffed animals, still held fascination for their children and as well as themselves.

## 6. CONCLUSION: ENGAGING FAMILIES IN MUSEUMS

'I WANT TO SHARE HER KNOWLEDGE QUEST.'



Research conducted recently in Australia provided evidence that '... museum experiences embedded within children's familiar culture and contexts are powerful mediators of memory, enjoyment and learning in these settings' (Anderson, et al., 2002, p.229). Important elements that emerged from the literature review for this study include:

- the importance of linking new museum experiences with familiar prior knowledge;
- the strong tendency to share learning with family members;
- accounting for the physical needs of visitors and their 'natural' viewing itinerary;
- the importance of curiosity and choice in learning selections.

Visitors' prior knowledge and experience of museums, their view of themselves as museum-goers, and the personal nature of the narratives they construct both independently and collectively all contribute to the nature of the meanings they make from the experience.

The literature review also showed some key characteristics and behaviours displayed during family group visits to museums. Families:

- voluntarily choose to visit museums;
- have joint purposes of learning and social interaction in a recreational context;
- take time for orientation;
- enter with a sense of curiosity;
- bring with them a set of prior experiences and a personal agendas;
- link what they see to their own prior experiences;
- are most attracted to concrete and/or interactive displays;
- have a common viewing behaviour which involves looking very closely at each display in the first gallery, then skimming and moving randomly in subsequent galleries;
- learn 'museum behaviours' relevant to the site;
- modify behaviours with increased experience with the setting;
- like to revisit favourite displays;
- share their viewing and learning in a social context;
- enjoy and remember interactions with people from the institution; and
- respond to physical needs by sitting or having a break after little more than an hour and generally stay for less than two hours.

From a sociocultural learning perspective, Falk and Dierking (2000, p.95) show that:

- parents facilitate learning when exhibits allow for collaborative participation and they feel comfortable with the information;

- adults' views of knowledge, such as understanding the tentative nature of science knowledge, influence the way they interact with their children and how they convey the learning process;
- parents make use of learning facilities such as open access libraries and activity kits if they know they are there and understand their role;
- family members each take notice of different aspects of an exhibit and construct a shared meaning together; and
- museums are only one part of the family's free-choice learning activities.

The 'personal narrative' view implies that museums need to consider the significance of messages to viewers; the languages and modes by which viewers receive them and the prospect that messages can be processed in unanticipated ways. This means that museums need to '... deepen their knowledge about visitors in order to better anticipate their responses and to refine working models of learning goals and outcomes' (Roberts, 1997, p.138). Paris and Hapgood (2002) have shown that museums need to provide: '... opportunities to construct personal meaning, making choices, exercise control, engage in collaboration and conversation, adjust task challenges, and derive consequences of performance that promote self-efficacy' (p.41).

Borun and Dritsas (1997, p.180) developed a checklist of characteristics of family-friendly exhibits as follows:

- Multi-sided — where the family can cluster around the exhibit.
- Multi-user — where interaction allows for several sets of hands (or bodies).
- Accessible — able to be comfortably used by children and adults.
- Multi-outcome — with observation and interaction being sufficiently complex to foster group discussion.
- Multimodal — catering for different learning styles and levels of knowledge.
- Readable — arranging text in easily understood segments.
- Relevant — providing cognitive links to visitors' existing knowledge and experience.

The interviews conducted in this study found that parents particularly valued the following features in family-friendly spaces:

- **One entrance/exit** gave them peace of mind as they wanted to know where their children were at all times. Children were very closely supervised when young and were allowed further from the parents as they grew older.
- **Good sight lines** enabled them to supervise their children effectively and make sure that they were acting appropriately and were safe from environmental dangers. Dim lighting made visual supervision harder.
- **Physical activity** was seen as very important because children were happier when occupied with physical activities, and many parents believed that children learned more when they were physically engaged. Physical activity was also seen as a necessary release from the



contained behaviour required in general display areas.

- **Things that stimulated learning** were seen as an essential part of a high quality museum visit. Spaces that offered a physical outlet but had little content were not regarded as highly as those that offered both.
- **Multi-generational learning:** parents who needed to supervise young children closely were appreciative of settings that stimulated them as well as their children. Many parents expressed a keen interest in sharing their child's exploration, discovery and learning.

Table 4 outlines major findings that emerged from the interviews and the implications of those findings for museums.

**Table 4. Interview Outcomes**

Finding	Implication
Family visitors included a variety of groups comprising combinations of adults and children.	Family-friendly exhibitions and programs should cater for mixed adult-child groupings.
Some families use museums as a routine part of their recreational and educational activities.	Family-friendly spaces, resources and programs can support family use that is regular and committed.
Regular routines help families manage the demands of young children.	Regular programs (weekly, monthly, holiday) will appeal to young families.
Many families visited museums for a stimulating day out, a social outing that engaged the interests of adults and children.	Museums support the family day out by offering material at both adult and child level and fostering social exchange.
Museums provided public spaces where parents could share community culture with their children.	Museums have a role to play in presenting historic and contemporary topics in a form that both adults and children can engage with.
For families under stress museums can provide support for continuity and stability of the parenting role.	Family-friendly practices will be supportive of families under stress, even though the families may not be identifiable as such.
Families said they would not visit museums if the children did not enjoy the experience.	Child-centred spaces, activities, displays and programs are essential if families are to be encouraged to visit.
Families said they wanted museums to offer stimulating learning opportunities.	Age-appropriate learning opportunities are essential for meaningful family visits to museums.

Family visitors wanted to engage with material that was important, meaningful or useful.	Presentation methods should not lose sight of the value of the topic.
Families sought experiences that were stimulating for both adults and children.	Museums can meet the needs of families by offering materials at different levels in the one display or in adjacent areas.
The strongest trigger for a museum visit was a special exhibition or program. Families responded most strongly to offerings that were clearly child-orientated.	New offerings on relevant themes refresh the interest of visitors. Child-orientated elements should be strongly promoted to families.
Some visits were triggered by the available information resources.	High quality information resource centres will attract visitors who seek information. Conversely, museums that don't offer family-friendly information resources will not attract those families that seek this service.
Wayfinding was especially important to families because they need to supervise their children for safety reasons and it takes considerable energy to move around with children, especially if there is a stroller.	Museums need to give families extra assistance in wayfinding. Family-friendly pathways and interest points will assist first time visitors. A good map, excellent signage and a clear definition of distinctive exhibitions are especially important in large museums.
Children who could read often took charge of the map for some of the visit.	Maps should be designed to be user-friendly for primary-aged children.
Families placed high emphasis on safety and supervision of their children. The following features made supervision easier: <ul style="list-style-type: none"> <li>• good sightlines and lighting</li> <li>• contained spaces with a single entrance/exit</li> <li>• engaging activities for children</li> <li>• distinct areas and clear wayfinding so parents and children can describe how to get to particular places.</li> </ul>	Family-friendly space designs should be founded on the principles of easy supervision.
Parents avoided places that were hard to supervise or had hazards.	Spaces should not only allow easy supervision, but should be safe for children.

Family visitors appreciated the full range of ways of interacting with exhibitions. They put particular emphasis on hands-on interaction.	Incorporate more opportunities for hands-on learning in general exhibitions. Exhibitions with a child-focus content should have plenty of children's activities. Exhibitions with children's activity areas need to communicate this more explicitly.
Parents often acted as interpreters of the text for their children.	Label text needs to be well-written, legible, clear and make sense when read aloud.
Parents recalled exhibition content better than children did.	Displays that encourage visitors to explain or discuss subject matter are likely to foster learning outcomes. Reflective and social spaces also encourage learning.
Some exhibitions were recalled years after they were seen.	Museum exhibitions can have a major impact and convey messages powerfully.
Many families gave examples of conversation and activities that followed their museum visit.	Museum experiences that are strongly connected with values and interests will be woven into family life.
Families were cost-sensitive and sought ways to visit museums economically.	Museum membership makes regular visits to museums with entry fees affordable for families that are enthusiasts.
Families typically spent a total of \$30-\$40 on an interesting and worthwhile day out.	Museums can encourage visitors to spend their budget onsite by offering attractive food and souvenirs.
Families found it easier to manage energy levels at venues with a range of features, including food, activity areas and outdoor spaces.	Museums should promote the range of facilities onsite and nearby that are relevant to families.
Spaces for children were valued and praised as appropriate and engaging, and encouraged repeat visits.	Museums should regularly review their approaches to families to ensure they continue to meet their needs systematically. This should include a review of spaces, exhibitions and programs to develop a strategy to meet the needs of families with children of different ages.
Families enjoyed a museum visit in conjunction with a variety of other recreational/social activities as part of the same outing.	Future programming and promotional activities for museums with considerable outdoor environments could encourage walks, bike rides and outdoor picnics:

## APPENDIX 1: FAMILY-FRIENDLINESS CHECKLIST



This checklist was developed by Denise Fowler, Public Programs Coordinator, National Museum Australia (d.fowler@nma.gov.au), as part of a Master's degree in Environmental Education and Interpretation at the Queensland University of Technology. It has been modified (with permission) for this publication. Another useful online resource/checklist is *Making your museum child friendly: The 'Family Friendly' checklist* (<http://swmlac.org.uk/mli/audience.htm>) published by the South West Museums Council, Museum Learning Initiative, United Kingdom.

Principle	Y/N (✓)
<i>Pre-visit</i> <ul style="list-style-type: none"> <li>• effective promotion aimed at families</li> <li>• pre-visit family packs and/or activity guides</li> <li>• resource and reference material available</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<i>Orientation</i> <ul style="list-style-type: none"> <li>• clear map with family facilities marked</li> <li>• attention to families' social agenda</li> <li>• handouts aimed at children/families</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<i>Exhibit design</i> <ul style="list-style-type: none"> <li>• safe, robust and easily maintained</li> <li>• indoor/outdoor access</li> <li>• accessible</li> <li>• multi-sided: more than one person can access</li> <li>• multi-user: promotes and encourages social interaction</li> <li>• multi-modal: reflects multiple ways of doing and knowing</li> <li>• multi-outcome: allows for variety of learning outcomes and information</li> <li>• multi-sensory: engages all the senses</li> <li>• open-ended</li> <li>• participatory, interactive, hands-on</li> <li>• encourages children to apply principles rather than just push buttons</li> <li>• staffed</li> <li>• appeals to different ages and stages of development</li> <li>• offers choice</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>



Principle	Y/N (✓)
<ul style="list-style-type: none"> <li>• text provides concrete information about the exhibits</li> <li>• child's language used where appropriate and possible</li> <li>• humour used where appropriate</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<i>Programs</i> <ul style="list-style-type: none"> <li>• opportunities for families to be together</li> <li>• facilitates developmentally-appropriate child-centred programs</li> <li>• opportunities for storytelling activities</li> <li>• allows for role play and play</li> <li>• provides inter-generational programs</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<i>Practical considerations</i> <ul style="list-style-type: none"> <li>• shopping opportunities, with suitable merchandise to suit family budgets</li> <li>• access for strollers, with alternatives to stairs</li> <li>• family tickets</li> <li>• opening hours and program times suitable for families</li> <li>• adequate cloak rooms, appropriate toilets and parent rooms</li> <li>• access to simple, reasonably cheap food in clean, cheerful surroundings</li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>
<i>Audience-specific</i> <ul style="list-style-type: none"> <li>• Infants and toddlers: <ul style="list-style-type: none"> <li>• programs are language-rich</li> <li>• centred around one-on-one interactions with a significant adult</li> <li>• encourage imagination, role play, and dress-up</li> <li>• reflect the child's environment and everyday life</li> <li>• include music, drawing and sculpture, dance, tactile experiences and group activities</li> <li>• activities involve exploring, investigating, and imagination</li> </ul> </li> <li>• Primary/secondary: <ul style="list-style-type: none"> <li>• programs build upon curriculum goals</li> <li>• make interdisciplinary connections with learning across subject areas</li> <li>• provide opportunities for practical and investigatory work</li> <li>• written materials and resource lists provided</li> <li>• links made to other information sources</li> </ul> </li> </ul>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>  <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>

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## APPENDIX 3: INTERNET RESOURCES



### Families

Australian Bureau of Statistics, Family and Community Statistics  
<http://www.abs.gov.au/websitedbs/c311215.nsf/20564c23f3183fdaca25672100813ef1/f01de14b31b9fc0dca2568f2001fcd2!OpenDocument>

Australian Federal Government Families Portal  
<http://www.families.gov.au/internet/famport/famport.nsf/WEB+Portal?OpenForm>

Australian Institute for Family Studies <http://www.aifs.gov.au/home.html>

Create Foundation, Australia <http://www.create.org.au/>

Families in Museums Bibliography, Museum Reference Centre, Smithsonian Institute, United States <http://www.ahha-museumservices.com/Bibliographies/BIBFamilies.htm>

Families Australia <http://www.familiesaustralia.org.au/index.html>

United Nations Tenth Anniversary of the Year of the Family  
[http://www.un.org/esa/socdev/family/TenthAnv/10th\\_anvrsry.htm](http://www.un.org/esa/socdev/family/TenthAnv/10th_anvrsry.htm)

### Learning

Adult Learning Australia Inc. <http://www.ala.asn.au/>

Adult Learning Theory, Open Learning Agency, Canada  
<http://www.cln.org/inservice/itpd/alearn.html>

Campaign for Learning Through Museums and Galleries, United Kingdom  
<http://www.clmg.org.uk/homepage1.html>

Evaluation and Visitor Research Special Interest Group, Museums Australia  
<http://amol.org.au/evrsig/>

Family Learning in Museums, TEAMS Exhibition Collaborative, United States  
<http://www.montshire.org/teams/teams1/family.html>



George Hein, Lesley University, United States  
<http://www.lesley.edu/faculty/ghein/george.html>

Informal Learning Experiences Inc., United States <http://www.informallearning.com/>

Museum Learning Collaborative, United States <http://mlc.lrdc.pitt.edu/>

Museum Learning Initiative, South West Museums Council, United Kingdom  
<http://swmlac.org.uk/mli/audience.htm>

Museum Victoria InfoZone Learning Resource Centre, Australia  
<http://infozone.museum.vic.gov.au/finding/lrcmcl.html>

Queensland University of Technology (QUT) Museums Collaborative, Australia  
<http://www.fed.qut.edu.au/ec/museums/col.html>

### **Museums**

Australian Museums Online <http://amol.org.au/>

Australian Museum Audience Research Centre <http://www.amonline.net.au/amarc>

National Museum of Australia, Canberra <http://www.nma.gov.au/>

Visitors to Museums and Galleries in the United Kingdom, *re:source*: The Council for  
Museums, Archives and Libraries  
<http://www.resource.gov.uk/information/publications/00pubs.asp>

