Chapter 4

Learning in Museums
4.1 Introduction

Eilian Hooper Green Hill (1988) stated that a museum is an institution that offers educational experience and provides a learning condition in which the visitors learn different skills (Coomb and Ahmad, 1974).

Schauble L. (1996, 24) observes, “Museums are an important part of the broader educational environment and complement other forms of learning. Museums have developed from being repositories of knowledge and objects, to having a comprehensive, outward looking role as hosts who invite visitors inside to wonder, come across and learn”.

Today museums are considered to be free choice, or informal, learning environments (Falk 2004, Falk & Dierking 2002, Hein 1998, Hein & Alexander 1998). Free choice learning is described as ‘self-directed, voluntary and guided by individual needs and interest. Learning that we will engage in throughout our lives’. Today a wide range of people visit museums, from the very young to the very old and across different groups: families, friends and schools. Museums are an exciting place for visitors as they tell stories about the objects they hold and the research they undertake a variety of ways (Falk & Dierking, 2002).


Since the beginning of the 19th century, museums have been acknowledged as an educational institution. However, it was George Groode who highlighted the efficient role of museum in education (Hein 2006 in Macdonald 2006). Education at the museum focuses on the enrichment of experiences through the process of experimental active learning and aims at the meaning rather than the barrage of information (Dardanou, 2011).

There may be a number of objects and exhibits in many museums which are related to the subjects taught in the schools. Exhibition depicting Harappan culture, evolution of life on electricity and magnetism for example may form part of the display in art, Natural History or Science Museums, as the case may be. They frequently form a part of several other exhibits, some related to the school prospectus. Where museums do not make any exact effort to provide knowledge directly to the school children, teachers have to find ways and means of using those resources
depending to their relevance to classroom teaching. Since the school groups make up the biggest percentage among the museum visitors, the museum should always involve in-large planned exhibits related to the school syllabi.

The potential of museums as institutions that could significant and complement school education has been planned all over the world. Programs for school children have always been among the most frequent educational contributions of museums. The frequent visit of youngsters to museums, not only supplement their classroom teachings, but also generate a love of beauty in many forms, which is properly engaged in this determining stage of mind.

The museum could contribute to the school education in many ways, the most important being, visual communication through objects and materials. Subjects like history, art, science, health and hygiene, natural science, etc. could come alive more brightly and successfully through exhibits in museums. This museum visit is used first as experience that is directly related to the school prospectus and secondly to provide a broader outlook for improving the general knowledge of students (Theano Moussouri, 2002).

4.2 Educational Activities and Programs of Museums

The idea has been developed in some American natural history museums as learning approach. These informal children’s area provides a first-hand experience for them to handle and inspect specimens and contribute to some educational activities. These permit a child to discover and become familiar with a large collection of exhibits.

4.3 Museum educational activities are divided into two categories:

(A) Inside the Museum

In this service museum provides education by different activities which are listed below-

1. Contact with School

It is an important part of the work of any museum to establish strong links with its local school. In house activities can be planned according to the need of school curriculum.

2. Interest of the visiting groups

By providing educational material for a school. After the museum visit children should be asked to write about it.
3. Services for the teachers
Contact between museum education staff and school teachers should begin while teachers are still in training. In this way the teacher understands the educational value of the museum.

4. Gallery talks
When children as visitors visit the museum, a gallery guide should be accompanying them who should explain the exhibitions.

5. Popular lecture
The Museum should organize lectures on different topics to different kinds of visitors.

Chart 4.1 The Educational Activities Inside the Museum

6. Special orientation or activity room
An increasing number of museums now have a room away from the public gallery where special programs are organized for the children.

7. Slide, films and shows
In museums, slide shows are important because slide shows are prepared to take into account the visitors in mind to whom it has to be displayed and films too, create interest among the visitors in the museum.
(B). Extra Mural Activities (Outside the Museum)

1. **Loan kits**
The museum should make special kits with collection and information about them to be taken to school classrooms for learning.

2. **Field trips**
The museum should organize excursion field trips for children to interpret heritage special programs in holidays for children.

3. **Training of school teachers**
The museums should organize training workshops for school teachers to use museum as a supplementary resource for learning.

![Chart 4.2 The Educational activities outside the Museum](image)

4. **Mobile exhibition and travelling exhibition**
The museum should organize mobile and travelling exhibition to school residential colonies those who do not come to museum.

**Museum Environment and Play**

Museums are well thought-out cultural and educational institutions, offering a learning environment that has fundamental differences in comparison with that of formal education. This is not only due to the self-directed and self-regulated learning that takes place in every informal setting, but mostly draws from the physical dimension that the museum experience entails. Museum objects, apart from their symbolic, ideological and emotive connotations, have a materiality that affords a
different kind of learning: learning which does not exist only in our minds, in a representational state, but is embodied, that is influenced by the properties of our body and its interaction with the environment. Furthermore Shapiro (2011) stated that the learning process in the museum is structured temporarily and thematically. According to Spatial terms (Winneman & Peporus, 2010).

Huizinga identified four characteristics of play:

1. **Freedom to behavior on enjoyable activities for its own sake**
   
   Museums are structured in a way that could support preferable visits to follow their interests at their own pace. Visitor research both with adults as well as with children, identify museum going as an enjoyable activity; yet children are often required to follow a certain route, especially when it is a school visit, with few chances for child initiated and child led activity. Strictly academic objectives and goals of the museum staff could lead also to a rigid structure, leaving little room for personal examination and connection with prior knowledge and experience (Pekarik et al, 1999, Keplan at.1993, Packer 2008, Muossouri 1997).

2. **Imagination**

   Play mobilizes imagination when pretending. We can imagine being someone else, somewhere else; this helps us develop our sense of identity, difference and otherness. Museum objects are valuable in intriguing imagination. If accompanied by the right prompts, imagine playing could develop and create unforgettable experiences in the museum.

3. **Disinterestedness**

   The play is a non-productive activity, in an economic sense that has a positive effect, enjoyment comes from the performance of the activity, rather than its outcome. Museums have the excellence to support activities that people find enjoyable to themselves. ‘No one flanks museum’ as Franz Oppenheimer of the Exploratorium stated and this fact constitutes a liberating museum quality and playful behavior.

4. **Play involves a contest, doubtful outcomes and chance**

   This is the least likely characteristic to emerge in the museum environment. Situations where visitors challenge themselves or enter in competition are rare. However, modern museums experiment increasingly with interactive or web technologies to create games or events that offer visitors a sense of adventure. Little research has been conducted with regards to children and play in the museum. Most of the research
focused on learning and the use of play as a learning medium, while some
investigated social play or attributes of playful exhibits.

In his book ‘The education of man’ Froebal (1887) stressed the importance of
the child’s self-activity as the essential methods in education. Froebel emphasized the
nature and value of play, the role of parents in the arousal of the child’s physical and
mental powers. Froebal was the founder of the first, Kindergarten established in 1837.
Here, he applied his educational method, which was influential in the development of
early educational setting. One of Froebel’s major contribution to child centered
education is that he initiated a movement which made educators familiar with the idea
that there is a role for play activities in school settings. According to Froebel, sensory
experiences, provided through play should be guided by the teacher in order to
achieve educational results. He stressed that play must not be left to chance. Just
because a child learns through play, he learns willingly and therefore learns much. So,
play like learning and activity has its own period of time and it must not be left out of
the elementary curriculum. The educator must not only guide the play since it is so
very important, but he must also often teach this sort of play in the first instance
(Froebel in Darling, 1994).

During the 19th century, the educational activities offered to children by
museums were basically object teaching and school visits (Hooper Green Hill, 1991).
Object teaching as a museum activity that was developed with school children and
was based on the observation of museum object, such as nature table and sometimes
also the handling of these objects.

Another educational activity provided by the museum at that time was school
visits to museums which could provide students with the school one. However,
schooling was not widespread in the 19th century, so very few children could access to
these experiences. Object teaching and school visits still practiced in museums but
new incorporations have led to new approaches in the field of learning. In this context
of the 19th century, revolutionary educational views regarding child development and
learning are growing these days.

Hooper Greenhill (1999) stated that the educational practices and purposes
have become more central to contemporary museums. Their role in educating the
public has been recognized as being at least as important as their other roles. As more
contemporary knowledge of learning processes has been accessed, traditional views
of how to educate visitors have been revised. In the past, museums held an implicit model of education, viewing and learning as transmission of objective bodies of authoritative facts to passive receivers.

Hooper Greenhill (2000) states that in many museums, a new and large category of visitors are young children. However, most of what is known about learning in galleries and museums concerns adult or primary school aged children. Very little is known about how young children learn in these kinds of learning environment.

The physical scale of the environment to enable children better physical access to exhibits, the inclusion of hands on and multi-sensory experiences such as sensory basket and replicas of gallery object to promote discovery learning through concrete rather than abstract experience and packaging children’s experiences through the provision of pre-determined trails and activity sheets to ensure that children are guided towards the most appropriate selection of art works (Caulton 1998, Desantis 1997, Thomas 1996).

It is undeniable that the adoption of developmental guidelines has proved to be beneficial for helping museum educators to reconfigure their exhibits for better access by young children. While not important to point out that to develop, mentalist constructions of a child are being critiqued outside the museum field. There are some examples of how developmental approaches have worked to ‘open up’ museums for younger children.

One example that illustrates how effective attention to child development can be in a study by Cox (1996). She described the art gallery in which she worked and where as a result of her evaluation study, it was decided to court the youngest of audiences, the preschool aged children. One of Cox’s motivation for evaluating the gallery program was her observation that although some parents took their young children to the gallery because it would be good for them. She also noticed that preschool aged children were significantly under-represented in visitors’ figures. Her findings suggested that it was important for the museum as well as the staff to provide spaces designed to make families feel comfortable, for objects to be given some assistance in familiarizing themselves with the exhibits in order to improve their confidence in their ability to help their children.
She emphasized the use of playful approaches to learning in the gallery and maintenance of playful components in the exhibits. As a result of her study, young children became the main target audience for the museum. The approach adopted suggests a traditional early childhood orientation that selects activities suited to a ‘generic child’ stage of development. Clearly the use of traditional early childhood development information about the children was an effective strategy for enabling access for young children.

A reliance on developmental information alone neglects important aspects of the social, cultural and political contexts that affect on learning. The perspective on children’s learning in art galleries and museums represented above suggests that museums have tended to overlook children to see them mainly as a homogeneous mass called children, to see as too young to represent their own views or, when they have been included, to see them only as representations. The impression that is gained from background studies is that the image of young children in the museum context is closely related to the perceived role of museums. It seems that the more the museum’s mission is linked to knowledge transmission and formal schooling, the more children are thought of in a student capacity. Moss (1999) and Piscitelli (2002) mentioned that the more museum’s role is linked to leisure experience and to social aims, such as social/cultural inclusion and accessibility imperatives, most young children are seen in their own right and in connection with other settings as part of their life experience.

### 4.4 Educational Role of Children’s Museum

In the United Kingdom, the Board of Education in 1931 published a memorandum ‘Museum and School’. It increased co-operation between public educational institutions and public museum. It is clear that there was no Children’s Museum in Britain like the Brooklyn children’s museum. The memorandum also cited many examples of good practice in museum education abroad as well as in the United Kingdom.

The chief investigator of a research collaboration and training program involving museum and galleries, Piscitelli, with her team has provided case studies that focus explicitly younger children’s experiences in museums. Her studies draw on both developmental psychological and socio cultural approaches. Her work illustrates the benefits of using developmental information effectively for young children in
museums and augments this information by paying attention to social and institutional dimensions that may affect children’s learning.

The study by Kinder and Darras (1998) was focused on young children in museums. The purpose of their study was to identify children’s conceptions about museums. The investigator Weltzl-Fairchild (1995), also took children’s views into account and resisted being constrained within a developmentally appropriate framework. Weltzl Fairchild’s purpose was to explore children’s meaning in the making of a museum and art gallery. She noted that most research on children’s understanding of art was from a developmental psychological perspective where attention has been given primarily to cognitive responses of children and where notions of stage of growth have dominated the results.

Vygotsky (1978) reported that learning awakens in children a variety of internal developmental process that can operate only when they interrelate with additional skillful people in their surroundings and in co-operation with peers. Children grow in a social matrix that is formed by their relationships and interactions with other children. The social environment is the main contributor to the cognition of children because of the open area of communication that exists which allows them to communicate and negotiate ideas as well as contribute to each other’s understanding.

The Natural History Museum in London was among the first museums in the United Kingdom to see the psychological and educational research finding to guide the development of exhibits, starting with the human biology exhibition in the 1970 (Theano Moussouri, 2002).

The main stream of psychological and educational thought is the interaction or constructivist conception of learning and development, which sees cognitive development as an active interaction between an individual and his physical and social environment. The developing/learning child as necessarily active and that developing/learning were not automatic (Wadsworth, 1971).

### 4.5 Learning Theories for the Development of Children Museum

The first theory to describe learning in the museum was proposed by Falk and Dierking in 1990s. Teaching and learning in the museum will be examined for affective and cognitive benefit to the learner. There are two theories about how learning takes place in the museum-
4.5.1 Contextual model of Learning (CML)

Falk and Dierking (1992) originally created the interactive experience model with three overlapping contexts: personal, sociocultural and physical. This model was revised in 2000 to include time as an additional context. Falk and Dierking (2000) built upon Dewey’s constructivism and Vygotsky’s sociocultural theory. In the CML, visitors bring their personal context, including their prior knowledge and motivation to explore various exhibits. The museum presents cultural content that the visitors usually experiences with other visitors, usually friends or family who are exploring the museum together. Thus, creating a socio cultural context. The physical context of the museum includes the building as well as everything in it, including exhibits, bathrooms, gifts, shops and café.

4.5.2 Museum Education Theories Model proposed by Hein (1998)

A second theory proposed four domains for learning in museums: Traditional, Behaviorist, Constructivism and Discovery Learning. Hein bases his ideas of the traditional museum education on Gagne’s Instructional design figure principles. Hein discovery museum educational theory describes learning as an active process, physically and mentally, with one right answer to be learned. Hein constructivist education theory appears to be built on Dewey (1997), who believed that learning is an active process, physically as well as mentally where learner co-construct the meanings (Wojton, 2009).

These theories work the bases of birth of the child centered children’s museums where participatory exhibits and activities were the main focus.

According to these educators and psychologist three major streams of psychological and educational thinking can be identified. They presented different conceptions of the developing/learning child and suggesting different methods of education.

1. Behaviourism

Child development was seen as reliant on the connected concept of motivation and response and support. The behaviourist model options that child learns through direct instructions (Wadsworth, 1971).

2. Maturationism

Maturationists such as Montessori, maintained that it is important for the environment to offer the elements which help to unfold the inner characteristics of each child.
3. Constructivism

The child is seen as having a natural curiosity about the world and critically instrumental in constructing and organizing a personal view of the world from the inputs he/she takes delivery of the environment from.

Dewey’s first writing on education were ‘The school society’ and ‘the child and the set of courses. In which he cleared the idea that the educational process should be built on the interests of the child. Dewey discussed important aspects of his educational thinking such as his ‘Theory of Experience’ the nature of freedom, and his views that education is growth of an individual and fundamentally a social process.

4.5.3 Early Childhood approaches for Learning

Many museums have looked into learning theory developed outside of the museum, primarily in schools, in revising their educational approaches (Hooper Greenhill, 1999b & Hein 1998). Various examples of approaches such as those that would be familiar with many contemporary early childhood settings, have been mined for their application in museums (Jensen 1982, Desantis 1997, Edeiken 1992, Hein 1995, Sykes 1993). These learning approaches are derived from research in developmental and educational psychology and based on the cognitive theories of Piaget.

Goncu (1999) formed a positive relationship in socio cultural approaches such as Wenger’s communities of practice differs from Piagetian and Vygotskian approaches commonly adopted in early childhood. They situate children’s development and contextualize it so that it is no longer possible to see a child as a representative of the psychological constructed, generic child.

Rogoff (1990) observes that children come to any learning situation with cultural and social background that effect their learning depending on, among other things, the goals that a particular culture or family has for its children. When early childhood practitioners focus observations on an individual child and make an assessment and planning decisions based primarily on the child’s developmental status; they can miss the powerful kind of mediation that occurs within social interaction. In main stream early childhood programs, the focus on the individual child’s development creates a tendency to teach within developmental norms.
Programs become need based and geared in instrumental ways to match tasks and play opportunities to children’s perceived developmental level.

Farver (1999) states that historically, the data on which current developmental theory rests were collected by European and American children who were raised in predominantly white, middle class families. This means that the traditional early childhood knowledge base must be seen as ethnocentric and to represent therefore, only a relatively small proportion of the world’s children (Burman 2002, Dahlberg et.al 1999). The traditional early childhood reliance on a universal view of development as its primary knowledge base is beginning to change newer sociocultural approaches that are critically important as a way to address the limitations inherent in a narrow developmental list approach.

In many museums, a broadening of perspectives on knowledge and the means of knowledge acquisition has become apparent in changing educational practices. (Hein 1998, Hooper Greenhill 1999b, Robert 1997). Newer perspectives, see knowledge as socially constructed and produced, both by the museum and by its visitors. The terms of learning theory emphasis are beginning to focus on perspectives that see learners as having more control of their learning as they construct their own knowledge through active engagement with the social and physical world (Blais 1999, Hein 1991, Hooper Greenhill 1999, Falk et al1998). Museums have begun to appreciate that visitors bring with them the rest of their lives, their specific experiences. (Hooper Greenhill, 1995) and that there elements affect what and how they will learn. (Falk et.al.1998).

A popular learning approach currently of interest in museums is offered to as constructivist approach (Hein 1991,95,98). Hein (1998) explains that constructivism is really a continuum of approaches. A variety of views on learning as construction of knowledge versus transmission of knowledge constructivism in Hein’s sense are by no means universally adopted although many museums have embraced a more responsive visitor centered view of education as a way to cater more effectively to visitors. Very recently there has been a further shift to include approaches to museum education loosely referred to as sociocultural.

It is difficult to compare these two theoretical orientations because the meaning of both terms, constructivist approach and sociocultural approach are still
being defined and approach are still being defined and debated (Crowley and Collahan, 1998).

In the past, children have generally not been included in the measurement of the museum’s visitors where they formed the largest group of visitors (Merriman, 1991). A few educators have begun to design alternative data collection techniques that are more inclusive of young children. These techniques allow to represent their views in more multi model ways, such as through video tapes drawing audiotape and so on. (Cox, 1996., Hein, 1995., Hooper Greenhill 1996, Ingle 1999, Massey 1988, Moussouri 1998, Piscitelli 1991, Smith 1996 Thomas, 1996). The most common approach when preschool aged children are present has been to leave them out or to ask their parents or other adults to represent their views for them (Massey, 1998).

4.5.4 Pestalozzi and the Concept of Experiential Learning

Johann Pestalozzi, who was the educational reformer was influenced by Roussedi’s writing. Rousseau’s opinion that the work was the turning point between the old world and the new in educational matters (Pestalozzi, 1994). He believed, like Rousseau in the concept of education as the development of the child’s innate faculties and in the endeavor to base education on the nature of childhood. His pedagogical ideas stressed that instruction should proceed from the familiar to the new, from observation to comprehension and his curriculum included activities such as drawing, singing, physical exercise, model making and field trips.

4.5.5 The Social aspects of Education of Dewey

Dewey believes that education has a social function. According to Dewey, the child learns through interacting with social environment, either a school or a family. Dewey maintained that traditional education was not preparing children for the needs of a shifting society. Dewey’s philosophy, due to its stress on the role of personal experience, social context and the freedom of the learner, has had a great influence on 20th century educational thought.

4.5.6 The Role of Sensory Experience in Childhood Proposed by Montessori

Montessori’s theory can be seen in a line of succession from Pestalozzi’s and Froebel’s thinking. The two have many things in common, both have organized experimental schools; both have emphasized the freedom, self-activity, self-education of the child; both have made large use of practical life activities (Kilpatrick in Lillard, 1973). According to Montessori, the child develops through stages, called sensitive
periods and thus, it is not possible to divide sensory from academic activity since they form an essential part of the learning process.

“In order to build up the mind, a child must have objects in his environment which he can hear and see must develop himself through his environments, through the work of his hands; he has needs of objects with which for his activity."

Montessori’s view, work and play are often the same thing to the child. According to her, if children are allowed to work at their own rate in finishing ‘cycle of activity’ children will develop and grow mentally. An adult should not oblige their self-centered view of the world of the child, but should approach him or her with humility (Lillard, 1973). Montessori thought that attention on activities was an important condition of thinker development.

4.6 Summary

The present chapter brought into light that the face of children learning in the museum and educational activities inside the museum and outside the museum and gave early childhood approaches and a deep insight into the development of the children learning theories of various experts (Vygotsky, Heins, Montessouri, Pestalozzi and Dewey) given in detail.
References


