

**CHILDREN'S CREATIVITY MUSEUM, A PLACE FOR IMAGINATION
AND INNOVATION**

By

Maria Kipti

08208004

Seminar II

**Submitted in partial fulfillment of
the requirements for the degree of
Bachelor of Architecture
Department of Architecture
BRAC University**

August 2013

Acknowledgements

First of all thanks to Almighty Allah for everything I have achieved until now. I want to thank my instructors Mahmudun Nobil, Imon Chowdhuree, Shakil Ahmed Shimul, Rubaiya Sultana for guiding & helping me through the project & this report. Thanks to all my seniors & juniors, who were with me during my journey. If this thesis project was the most important chapter of my architecture student life, then it would not have been a success without the constant support of Ifreet Rahima, Mehnaz Sultana, Karishma, Mridul, Utsho and Rukaiya. I have to thank my friends Manzana, Farhana, Nazia, Sumaiya, Rubaiya, Ummea, Rubyat, Sibat, Turjo (& many more) for being the relief during my tough times. Last but not the least, thanks to my parents, for whom this was possible as they have helped me all through my journey.

Abstract

Playing is a fundamental right and a vital component of the life of every child. It is an inevitable element of a child's overall development and has a direct impact on physical, mental and social wellbeing. Through the play process, a child transforms from childhood to a healthy adult with the required skills such as cognitive, motor, psychological, health, education, communication and creativity to be a future citizen of a nation. More than two million children live in Dhaka city, the capital of Bangladesh.

Thus, it is important to create a media art and technology based interactive museum to unite children of the city as one. As the children of Dhaka city are being deprived of outdoor play and recreation provision which is affecting their overall physical and mental development and thus affects their creativity, a museum of such will help the children of the city to have a healthy, educative, communicative and creative life.

Table of contents

CHAPTER 1: INTRODUCTION

- 1.1 Project brief
- 1.2 Project introduction
- 1.3 Rationale of the project
- 1.4 Aims and objectives of the project
- 1.5 Given program

CHAPTER 2: SITE APPRAISAL

- 2.1 Site and Surroundings
- 2.2 SWOT analysis

CHAPTER 3: LITERATURE REVIEW

- 3.0 Literature review

CHAPTER 4: CASE STUDY

4.1 Local projects

- 4.1.1 Bangabandhu Sheikh Mujibur Rahman Novo Theatre
- 4.1.2 Bangladesh Shishu Academy, Dhaka
- 4.1.3 National Museum of Science and Technology, Bangladesh

4.2 International projects

- 4.2.1 Glazer Children's Museum, Florida. USA
- 4.2.2 Children's Creativity Museum, San Francisco. USA
- 4.2.3 Technological Museum Of Innovation, San Jose. USA

4.3 Analysis and Findings

CHAPTER 5: PROGRAM AND DEVELOPMENT

5.1 Proposed Program

5.2 Rational of the Developed Program

5.3 Conceptual layout

CHAPTER 6: CONCEPTUAL STAGE AND DESIGN DEVELOPMENT

6.1 Study and Approach of the site

6.2 Concept Development

6.3 Development Phase

6.4 Final Design

CHAPTER 7: CONCLUSION

CHAPTER 01

Introduction

1.1 Project Brief

Project Name: **Children's Creativity Museum**, a museum of imagination and innovation

Function: Museum

Location: Tejgaon Old Airport, Dhaka

Area: 3.5 acres

Client: Ministry of children and women affairs

1.2 Project Introduction

Playing is a fundamental right and a vital component of the life of every child. It is an inevitable element of a child's overall development and has a direct impact on physical, mental and social wellbeing. Through the play process, a child transforms from childhood to a healthy adult with the required skills such as cognitive, motor, psychological, health, education, communication and creativity to be a future citizen of a nation. More than two million children live in Dhaka city, the capital of Bangladesh. It is one of the fastest growing cities in the world but lacks children's play and recreation facilities. Due to land scarcity, outdoor recreational spaces such as parks and playgrounds are being encouraged upon by different profitable land uses. As a consequence, open space for children's play shrunk significantly and resulted in one of the lowest ratios of open spaces to population in the world. As a result, the children of Dhaka are deprived of outdoor play and recreation provision which affects their overall physical and mental development.

Thus, it is important to create a media art and technology based interactive museum to unite children of the city as one. Children's creativity museum will go beyond the conventional environment of play by inspiring kids to imagine, create, share and inspire the innovator in every child in a multimedia environment with every visit, kids will not only walk away with a unique media or art project that reflects and celebrates their innovation and creativities but will also experience firsthand intersection of science, physics, chemistry, mathematics and

geography. These labs will enhance students' museum experience by allowing them to explore different science topics in a more in-depth, hands-on setting.

Therefore, as the children of Dhaka city are being deprived of outdoor play and recreation provision which is affecting their overall physical and mental development and thus affects their creativity, a museum of such will help the children of the city to have a healthy, educative, communicative and creative life.

1.3 Rationale of the project

In a developing country like Bangladesh there are over 60 million children among which 19 million are under the age of five. That's more than the entire population of the United Kingdom. These children will be the future of the country someday and as the saying,

'I believe that children are our future. Teach them well and let them lead the way. Show them all the beauty they possess inside.'

---Whitney Houston

These children need places to groom themselves for the future challenges but due to the lack to opportunities and facilities they are not being able to explore their creative and innovative skills. Thus a media art and technology based museum of such kind 'Children's Creativity Museum' will not only provides a vibrant place for families to share valuable educational and cultural experiences. Its presence will allow children to go beyond the conventional environment of play by inspiring kids to imagine, create, share and inspire the innovator in every child in a multimedia environment with every visit.

The museum will be self-sustaining as it will not only benefit the children of our country but will also bring economic yield by attracting cultural tourism.

Like any new project, the development of the Children's Creativity Museum will likely experience challenges but it will also add a unique element to the city, enriching the quality of life for all of our citizens. Thus it can be said that,

“Creative thinking is not a talent; it is a skill that can be learnt. It empowers people by adding strength to their natural abilities which improves teamwork, productivity and where appropriate profits.”

— Edward de Bono

1.4 Objectives

The aims of this project are –

- To go beyond the conventional environment of play by inspiring kids to imagine, create, share and inspire the innovator in every child in a multimedia environment.
- Target critical thinking and problem solving, increase risk-taking, strengthen teamwork and develop confidence to express one's own unique point of view.
- Create experiences that invite people to learn through play, evoke emotions of wonder and joy, contain solid and accessible science, showing how technology can improve lives, provoke thought and inspire action.
- To promote learning from failures and others' experience to create a culture of feedback and the opportunity for learning from every experience.
- To help students enhance their museum experience by allowing them to explore different science topics in a more in-depth, hands-on setting.
- Help children of the city to have a healthy, educative, innovative, communicative and creative life.

1.5 Program

Children's Creativity Museum will be a fantastic place for hands-on, multimedia arts and technology experiences for the little ones. It will be based on the principles of the “3Cs of 21st-Century literacy: Creativity, Collaboration, and Communication”. The mission is to inspire the next generation to think creatively and act as global citizens. The Museum will feature animation, digital arts, special effects, music videos, and workshop activities together with hands-on experience with tech science labs and exhibits to keep young citizens learning and engaged as they do what children do best ‘have fun! ’

The functional requirements are as follows

- **Creative Studios and Labs**
 - i) Exploring Bangladesh
 - ii) Get Moving
 - iii) Water Exhibits
 - iv) Express Yourself
- **Galleries**
 - i) Science Exhibits
 - ii) Travelling Exhibits
 - iii) Temporary Exhibits
- **Library**
- **Auditorium**
- **Administration**
- **Installation area**
- **Outdoor playing area**
- **Cafeteria**
- **Gift shops**
- **Parking**
- **Miscellaneous**

CHAPTER 02

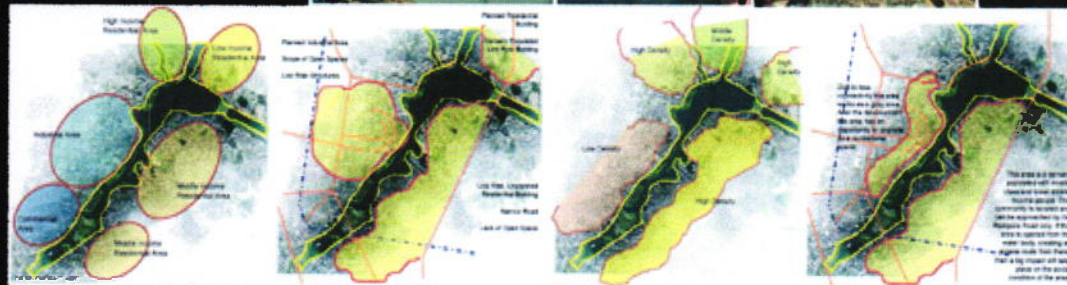
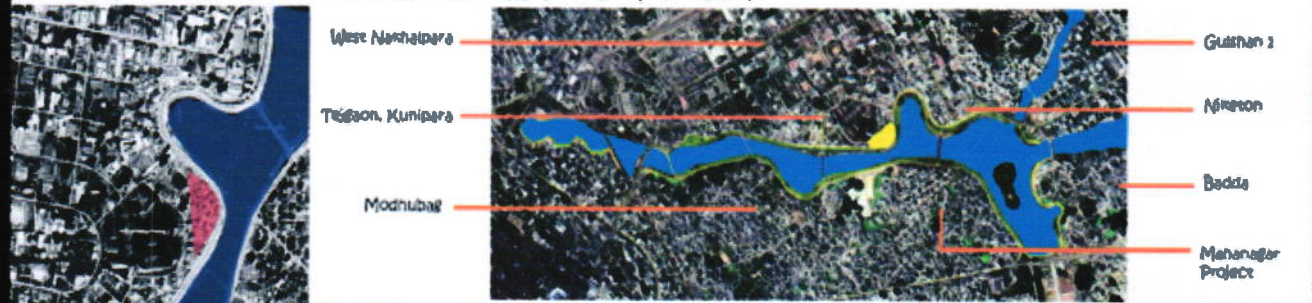
2.1 Site and Surroundings

SITE ANALYSIS

Site location: Kunipara, Hatirjheel

Site and Surroundings:

The surrounding developments are mostly industrial and tin shaded buildings. There are few commercial buildings, educational institutes and other amenities. The most important aspect of the site is its direct relation with the Hatirjheel waterfront and water courtyard. It is located at a very strategic location of the waterfront as well as the city and is surrounded by various sorts of locality.



The whole area works as a backyard for the city. It has huge potential to become an urban oasis for the city.

2.2 SWOT Analysis

Strengths:

1. 30' wide road on the side of the site with a 60' wide road along the waterfront
2. Connecting bridge from Madhubag to Kunipara
3. Possibility to become a major thoroughfare
Landscaping along the roads
4. Defined and sufficient parking areas for the industries.
5. Large pedestrian and a lot of pedestrian activities all around the site
6. Number of institutions
7. A mix of different kinds of civic amenities around the site
8. Waterfront has the possibilities to become the breathing space of the city. This is to influence the environmental impacts of the surrounding neighborhood

Weakness:

1. Mobility
Roads and circulation:
 - Rapid development of infrastructures may lead to unplanned growth
 - Increase in land value
 Pedestrian conditions:
 - Unplanned commercial establishment and encroachment on the pedestrians
 - Poor maintenance can lead to public sufferings
2. Land use
 - Unplanned settlement, unfavorable growth, encroachment
3. Environmental
 - Unplanned development can create adverse environmental impacts and hamper the waterfront public experience

Opportunities:

1. Incorporates one of the east-west arteries of the city
2. Reduce surrounding traffic congestion
3. Become very popular and vibrant street
4. Landscaped and simple pedestrians connecting to the waterfront
5. Create recreational spaces, eventful waterfront
6. Incorporate the green spaces and create large open spaces, parks, green gardens, landscaped plaza etc

Threats:

1. Crime
2. Accidents
3. Hamper to the beauty of the waterfront

CHAPTER 03: LITERATURE REVIEW

About 10 Million people live in Dhaka City, which has one of the highest population densities (14,939 people/ sq.km) of the world. From a small town with a population of only 200,000 people in 1947, Dhaka grew to a city of 4.2 million in 1987 (Islam, 1987), and has now become a mega city of nearly 10 million (BBS, 2001).

Playing is an inevitable element of a child's overall development and has a direct impact on physical, mental and social wellbeing. Through the play process, a child transforms from childhood to a healthy adult with the required skills such as cognitive, motor, psychological, health, education, communication and creativity to be a future citizen of a nation. More than two million children live in Dhaka city, the capital of Bangladesh. It is one of the fastest growing cities. This phenomenal increase of population was not matched with proper physical planning; as a result, Dhaka has become a concrete jungle without adequate room for outdoor play and recreational facilities.

Due to land scarcity, outdoor recreational spaces such as parks and playgrounds are being encouraged upon by different profitable land uses. As a consequence, open space for children's play shrunk significantly and resulted in one of the lowest ratios of open spaces to population in the world. As a result, the children of Dhaka are deprived of outdoor play and recreation provision which affects their overall physical and mental development.

From birth till the age of 25 development of the brain is an ongoing process. When conditions are ideal brain cells richly multiply and branch out widely. Thus, the more they are introduced to the play process the less will be the circumstances to create stress for the children. Stress hormones deliver too much poison and if for a long time it results in loss and damage of the nerve cells. It blocks all possibilities for a child to function well. But due to land scarcity, outdoor recreational spaces such as parks and playgrounds are being encouraged upon by different profitable land uses. As a consequence, open space for children's play shrunk significantly and resulted in one of the lowest ratios of open spaces to population in the world. As a result, the children of Dhaka are deprived of outdoor play and recreation provision which affects their overall physical and mental development.

According to a research by Afroza Ahmed and M. Sohail Khan "Children's Perception on Play and Recreation in Dhaka City" on existing leisure pattern of children of Dhaka city it was found that, Watching TV is the most predominant means of recreation for all groups of children stating at the dropping centers. Some of the adolescent girls of the higher income group watch TV for more than 7/8 hours a day. Outdoor games are the major means of recreation for adolescent boys of the city. Cricket and football are the common outdoor games the children play. Computer games are also a common recreation for the boys. Playing with toy cars and dolls are the indoor games played at home by the small boys and girls. Sleeping is mentioned as one of the leisure time activities and the most desirable habits particularly, among the boys. Reading story books, drawing pictures, playing indoor games like Snake & Ladder "Ludu" are also some of the leisure time activities mentioned by the children of Dhaka city. The adolescent girls spend their leisure time sitting idle, listening to music and walking on the rooftop or sometimes gossiping or chatting with friends.

The result of the research show what are children's dreams and imaginations about the best ways of spending the leisure time or for recreation.

Amusement parks: Visiting different amusement parks situated in and around Dhaka City is the dreams of most of the children living in Dhaka City.

Zoo: The second most desirable place mentioned by the children of all groups is the Zoo.

Museum, fair etc.: Museum, fair, "Savar Monument", "Martyred Intellectual Monument", the national assembly building, national museum, and Novo theatre is the places children want to visit. They would like to see the different places of natural, historical and other religious interests. Some of the high income children mentioned about visiting Malaysia and Darjeeling in India as their dream places.

Due to the breakdown to provide the children of the city with their desired facilities children are becoming lazy, less creative and motivated towards work and study which a child needs to transform from childhood to a healthy adult with the required skills such as cognitive, motor, and psychological, health, education, communication and creativity to be a future citizen of a nation.

Some people talk about play as if it were a relief from serious learning or even worse: a waste of time. But for children, play is exceedingly serious and important! In fact, play is a way for children to learn who they are, how the world works, solve problems, and to express feelings.

'What characteristics do children need to become motivated to learn? How do children's experiences and relationships affect their cognitive development? How do you provide learning experiences that meet the developmental needs of every child in your care?' The book 'The Thinking Child' by Pamela May, thoughtfully discusses the key principles of children's cognitive and intellectual development alongside descriptions of everyday practice. It clearly explains the cognitive strategies that children use to learn new knowledge, the development of cognitive milestones such as symbolism, memories and the imagination, meta-cognition and creativity along with research into how the brain processes information.

Throughout the book, the author considers the key characteristics of effective learning and shows how play is one of the primary mechanisms that children use to access new knowledge and to consolidate their emerging ideas and concepts.

Emphasizing the importance of understanding the theory that underpins children's cognitive development, this accessible text shows practitioners how they can use this knowledge to provide learning opportunities that nourish children's thinking and creative skills.

In today's world, technology is increasingly interwoven into the fabric of our everyday lives. The need to know how to use these tools will become essential to staying competitive later on in life. Exposing your children to these new technologies at an early age can be beneficial to their future success by nourishing their thinking and imaginative skills.

'What do new technologies and new forms of communication mean for young children growing up in the 21st century? How are they shaping the mindsets, identities and practices which impact their lives at home and at school?' The book 'Technology and critical literacy in early childhood' by Vivan M. Vasquez and Carol B. Felderman, explores the intersection of technology and critical literacy, specifically addressing what ICTs afford critical literacy work with young children between ages three to eight. Inviting readers to enter classrooms where both technology and critical literacy are woven into childhood curricula and teaching, it brings together literacy, social studies, and science in critical and integrated ways. Real-world stories show the sights and sounds of children engaged with technology in the classroom and beyond. The main focus is on how new technologies can be positioned in early childhood learning communities as tools for engaging in more meaningful, authentic, and interesting learning. It means the more comfortable today's kids are with technology today, the better equipped they'll be to function in the world of tomorrow.

Think about the ways technology has changed the world in the last five years. By considering the pace of those changes, it's staggering. Now imagine how new technologies will transform the way children live in 10, 15 or 20 years. One of the tasks educators are faced with is preparing children for the technological advancements they may encounter not just today but in the future, too. The downside is that finding the right mix of methods and just keeping up can be a big challenge. The upside is that the very technology educators are trying to keep pace with is creating new ways to make teaching more immediate, interesting and varied

According to an article by TLC (<http://tlc.howstuffworks.com>) on 'The Importance of Exposing Kids to Technology', it is said that, preparing children for the future isn't the only consideration. Kids are part of the new information age this very minute. They keep in touch with friends and family using social networking. They make videos on the fly and expect instant access to information. According to a Pew Project for Excellence in Journalism survey, 65 percent of 18- to 29-year-olds rely on the Internet as their main source of news. It's also estimated that 75 percent of kids 12 to 17 have their own cell phones. Here's another point to ponder: According to a Kaiser Family Foundation Study, children between the ages of 8 and 18 spend over seven and a half hours every day using electronic media devices like computers, TVs and cell phones.

The world is changing, and technology is driving much of that change. To be prepared, children need to have a working understanding of current technologies and a high level of confidence in their ability to master newer and more complex tools. That way, they'll be in a better position to tackle practical challenges, and recognize the amazing opportunities, they'll be faced with in the years ahead.

Thus, play is the real work of childhood and for young people today. In a developing country like Bangladesh, where technology is gradually flourishing, a museum to promote children's creativity, technology and innovation will be add on for the society. These children's museums offer play experiences that other settings are not able to give.

"The definition of a museum has evolved, in line with developments in society." Since its creation in 1946, ICOM updates this definition in accordance with the realities of the global museum community. According to the ICOM Statutes, adopted during the 21st General Conference in Vienna, Austria, in 2007:

A museum is a non-profit, permanent institution in the service of society and its development, open to the public, which acquires, conserves, researches, communicates and exhibits the tangible and intangible heritage of humanity and its environment for the purposes of education, study and enjoyment.

The English "museum" comes from the Latin word, and is pluralized as "museums" (or, rarely, "musea"). It is originally from the Greek Μουσείον (Mouseion), which denotes a place or temple dedicated to the Muses (the patron divinities in Greek mythology of the arts), and hence a building set apart for study and the arts.

Museum purposes change from institution to institution. Some favor education over conservation, or vice versa.

Early museums

Early museums began as the private collections of wealthy individuals, families or institutions of art and rare or curious natural objects and artifacts. These were often displayed in so-called wonder rooms or cabinets of curiosities. Public access was often possible for the "respectable", especially to private art collections, but at the whim of the owner and his staff.

Museum planning

The design of museums has evolved throughout history. Interpretive museums, as opposed to art museums, have missions reflecting curatorial guidance through the subject matter which now include content in the form of images, audio and visual effects, and interactive exhibits. Museum creation begins with a museum plan, created through a museum planning process. The process involves identifying the museum's vision and the resources, organization and experiences needed to realize this vision. A feasibility study, analysis of comparable facilities and an interpretive plan are all developed as part of the museum planning process.

Some museum experiences have very few or no artifacts and do not necessarily call themselves museums; the Griffith Observatory in Los Angeles and the National Constitution Center in Philadelphia, being notable examples where there are few artifacts, but strong, memorable stories are told or information is interpreted. In contrast, the United States Holocaust Memorial Museum in Washington, D.C. uses many artifacts in their memorable exhibitions.

Museum design

Most mid-size and large museums employ exhibit design staff for graphic and environmental design projects, including exhibitions. In addition to traditional 2-D and 3-D designers and architects, these staff departments may include audio-visual specialists, software designers, audience research and evaluation specialists, writers, editors, and preparatory or art handlers. These staff specialists may also be charged with supervising contract design or production services. The exhibit design process builds on the interpretive plan for an exhibit, determining the most effective, engaging and appropriate methods of communicating a message or telling a story. The process will often mirror the architectural process or schedule, moving from conceptual plan, through schematic design, design development, contract document, fabrication and installation. Museums of all sizes may also contract the outside services of exhibit fabrication businesses.

Exhibition design has as multitude of strategies, theories, and methods but two that embody much of the theory and dialogue surrounding exhibition design are the metonymy technique and the use of authentic artifacts to provide the historical narrative. Metonymy, or "the substitution of the name of an attribute or adjunct for that of the thing meant," is a technique used by many museums but few as heavily and as influentially as Holocaust museums. The United States Holocaust Memorial Museum in Washington D.C., for example, employs this technique in its shoe exhibition. The basic idea behind exhibiting authentic artifacts is to provide not only legitimacy to the exhibit's historical narrative but, at times, to help create the narrative as well.

The museum attempts, in other words, to archive the unachievable. A well designed exhibition should employ objects and artifacts as a foundation to the narrative but not as a crutch; a lesson any conscientious curator would be well to keep in mind.

Types

Types of museums vary, from large institutions, covering many of the categories below, to very small institutions focusing on a specific subject, location, or a notable person.

Categories include:

Fine arts, applied arts, craft, archaeology, anthropology and ethnology, history, cultural history, science, technology, children's museums, natural history, botanical and zoological

gardens. Within these categories many museums specialize further, e.g. museums of modern art, folk art, local history, military history, aviation history, philately, agriculture or geology. Another type of museum is an encyclopedic museum.

In the early twenty-first century, technological development and globalization have brought profound changes to society that require from individuals critical and creative thinking skills to adapt to change. Swart and Park underline that good thinking became essential to face the challenge of living in a technologically oriented, multicultural world (Swartz, Parks, 1994, Cit. IDES, 2004, p. 9). Knowledgeable thinkers have more opportunities to achieve success, solve problems and take correct decisions in their jobs and lives. Also museums must adapt to change and rethink its role and relevance.

This essay aims to:

- Justify the importance of critical and creative thinking skills in the XXI century;
- Analyze the challenges museums face and suggest possible ways to contribute to the development of critical and creative thinking skills;
- Show evidences of the need for museums to be spaces of knowledge, learning, reflection, development of thinking skills, to prove their relevance for the XXI century.

Museums are appropriate spaces for reflection and critical and creative relations with objects and ideas. The research by Inês Ferreira on 'Museums in the Twenty-First Century – The Importance of Critical Thinking and Creative Thinking', arises from the assumption that thinking tools are important today and might be developed in museums, what might constitute an opportunity for museums to become more relevant and creative in the XXI century.

Creativity is composed by creative thinking, motivation and expertise (Amabile, 1998). Although we find differences in the definitions, all suggest that creativity is related to new and applied ideas, products, processes, analogies or tools. We consider in this essay that creativity is the capacity to create new and applied ideas, capacity deeply dependent on the attitude and decision of the intervenient(s), which always operates some change, detected in the person, in a process, in the involvement or in a product. Together with motivation and expertise, creative thinking, can generate creativity. If the subject is not motivated or has not enough expertise, creative thinking may do not generate creativity. Many researchers, however, use the term

creativity to refer both creativity and creative thinking. Although this research is focused in the thinking skills itself, as the distinction in literature is not always demarcated, we sometimes will refer creativity in both meanings.

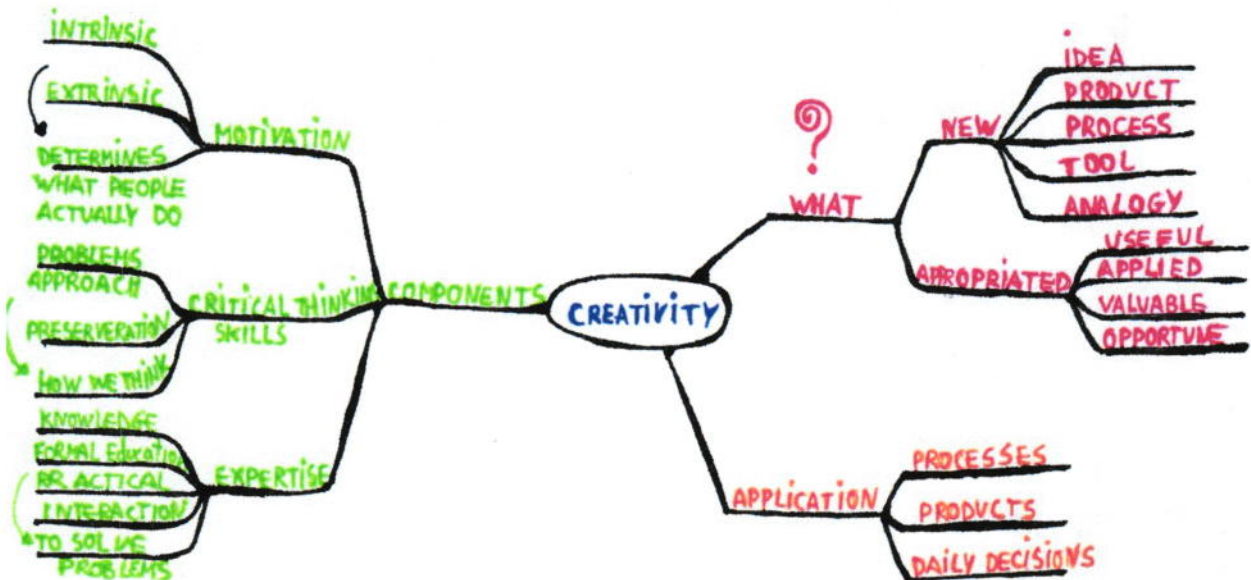


Fig 1: critical and creative thinking

Source: - (Tenreiro-Vieira and Vieira, 2000, p. 28)

Distinctive capacities, critical and creative thinking skills act together. Because of that we will consider them here, as a whole, interrelated. Creative thinking skills need critical thinking to choose between the results of a creative process and take decisions on its results - evaluate, select, develop new ideas. On the other hand, critical thinking skills require creative thinking skills to find adequate answers to problems or to propose arguments and alternative explanations (Tenreiro-Vieira and Vieira, 2000, p. 28), think out of the box.

Occidental societies live new changes that affect everyone and every organization, including museums (Falk et al., 2011). Knowledge became the most transacted product in actual economy, and museums are producers of knowledge. Free choice learning is getting more important and museums are free choice learning spaces. Time people have to free choice learning is growing and will grow more. (Falk et al., 2011, p. 324). Citizens are called to assume a more interventional, critical role and museum visitors are called to participate in museums' decisions. It is in this context that museums, today, attempt to redefine themselves. (Center for the Future of

Museums, 2008, p. 2-3)

As knowledge and learning spaces, museums may be spaces for development of a critical and creative way of thinking. This challenge is an opportunity for museums to answer and adapt to changes, attempting to get relevance.

Museums are free choice learning spaces. There is, however, a dissonance between what museums may be and what museums are. Thus the idea of building a creativity museum for the children is justified.

A Children's museum is defined as an institution committed to serving the needs and interests of children by providing exhibits and programs that stimulate curiosity and motivate learning. Children's museums vary greatly in style, size and content. Because of this creativity and diversity, the field is on a continuum of exciting change.

To more fully understand the definition and use of children's museums, ACM offers some useful publications. The book 'Collective Vision: Starting and Sustaining a Children's Museum ' addresses all the considerations in starting a museum for children including finding space, hiring staff, developing programming, beginning an endowment, writing a business plan and much more. Moreover, the book has collection of noted research, quotes from early learning experts and statistics from the children's museum field that frames the argument for why children's museum are an important and worthy community investment.

According to the article 'Children's Museums and the Role of Play' by Fred Rogers, A children's museum stimulates curiosity and creativity by providing children with opportunities for hand-on-learning, key to their cognitive, social and emotional well-being. These museums are committed to serving the unique needs and interests of children by providing exhibits and programs that create a spark for discovery and lifelong learning.

"These types of museums afford unique opportunities for children, parents, and teachers to explore concepts in math, science, art, music, history, and social studies. In these museums, individuals of all ages are encouraged to play because of the richness of experience that play affords" (Henderson, 2007).

Thus when the term 'creative' is added to a children's museum it gives a new dimension to the museum. These museums have art studios where young children can draw or create from a wide variety of materials. They don't need to try to make something that looks exactly like something they see in the world. Drawing gives them a way to express their own feelings

and thoughts. It's not important that they "get it right." It's important that they do it their own way. Children can try on costumes and different "roles," which give them safe ways of exploring and acting out their concerns and deeper inner needs.

According to Kronkosky, a charitable foundation, Children's museums play a vital role in the learning experiences of children of all ages, but especially for toddlers. Studies have shown that learning begins at a very early age; both parents and curators of children's museums are listening to those studies. Nearly half of the children that visit children's museums every year around the world are under the age of six and today's children's museums have the latest technologies to help these very young children develop cognitive and physical skills through interactive learning and play (Caplan, 2004).

In today's world museums participate in developing more creative communities by working with government, supporting local community initiatives and ensuring that the role of museums is fundamental to community culture.

Sometimes, museums and galleries are seen as an end in themselves, being described as the stewards of community collections, venues for creative programming and support infrastructure for local artists. They also play an important role in informing, educating and entertaining communities and their visitors. Museums are also community symbols. Along with a courthouse, the possession of a museum enhances the status of a city or town.

The research on 'Creative cities, creative museums' by Museums and galleries NSW has indicated that museums have a valuable role to play in engaging fully in the cultural planning process and that these organizations can strengthen the cultural capacity of their communities. Indeed they are essential to the community's development of a vibrant creative environment to both sustain and nurture the future of that community and ensure a viable future for museums in these communities.

CHAPTER 04

Case Study

4.1 Local projects

Dhaka, the capital city of a burgeoning country like Bangladesh, is going to be the fourth largest city in the world by 2020 with an estimated population of 22.04 million (City Mayors Statistics). With the population growth the demand for different types of public recreational services and facilities increases. Although some efforts have been made to increase the provision of different types of public facilities, the increase in population has far exceeded the expansion of such facilities.

Recreation can be explained as a set of systemized activities during an adjournment period. Recreational activities provide pleasure and satisfaction. It is just not restricted to outdoor activities and places likely park, lakes, it also includes other places, such as, library, museum, drama stages and cinema halls, planetariums to give a break from the daily life.

Recreational facilities enable the development of the younger generations.

The few acknowledged recreational facilities in Dhaka include Dhaka zoo, Ahsan Manzil, Shishu Academy, Lalbagh fort, Liberation war museum, National Museum, two amusement parks, Botanical Garden, Suhrawardy Uddyan, Ramna, science museum, and the Bangabandhu sheikh Mujibur Rahman novo theatre, a planetarium.

4.1.1 Bangabandhu sheikh Mujibur Rahman Novo theatre



The Bangabandhu Sheikh Mujibur Rahman Novo theatre, a planetarium, was established by the Ministry of Science and ICT of Dhaka. One of the major function of the ministry is to support the socio-economic development of the country through research, development, extension and successful utilization of Science and Technology, and the Bangabandhu Sheikh Mujibur Rahman Novo Theatre is one of its major projects, and any matter related to it are handled by them.

According to the DG from the Ministry of Science & Technology under the Government of the People's Republic of Bangladesh, the novo theatre was established to educate and inform citizens through entertainment to learn about space science.

The vision behind the construction was to educate the citizens and create opportunities for research of space and astronomical science. The mission was to develop positive attitudes in the minds of people and to get rid of superstitions about outer space from the society. They wanted it to act like an informal science and educational institute.

This is the first planetarium of the country and was opened to public on 25 September 2004. The total cost of the project was Taka 1,231.27 million, covered by the Government of Bangladesh on 5.46 acres of land.

The purpose and objectives of the Novo theatre were:

- To spread actual knowledge and provide information about space science to the residents of Bangladesh notably students
- To create interest in younger generation to learn about science and space through entertainment.
- To help develop a positive scientific attitude in people to remove superstitions and irrational thinking from the society.
- To exhibit modern scientific discoveries and creation to the general people and encourage them to study science as a subject.
- To provide a platform of research on astronomy and celestial bodies.
- To launch science library for preservation and exhibition of films, books, journals, periodicals, research papers on astronomical features.
- To obtain latest pictures, documentaries, papers on astronomy for collection and preservation
- To conduct seminar, conference regularly to share the knowledge and to keep updated with the world particularly for students.
- To keep people aware about the activities in Novo Theatre through newspapers, radio, television and other means.
- To create a network with schools and educational institutes through publication of leaflets, advertising, and brochures.
- To organize scientific edutainment with the use of modern and advanced technologies and mechanisms like 5D edutainment simulator, Space Ride Simulator, Virtual Planetarium etc.

The Novo Theatre is not limited to an educational center but also provide scientific knowledge among the student community of the city through other means. It is equipped with advanced technological equipment and gadgets inclusive of mind-keeping projector systems such as, Astrotec perforated aluminum curtain, GSS-Helios Space Simulator produced by GOTO Optical Manufacturing Company, Astrovision-70 and many other special effects projectors.

The program of the Novo theatre includes a planet show 'Journey to Infinity' directed by Dr. Bill Gutsch, will give the audience a dream like experience. The highly specialized projector and sky-scan videos produce excellent quality images, taking the audiences to a journey to

the Solar System. It will explain the creation of the universe and Milky Way Galaxy. The film ends by the death of a star and the well-known concept of Black Hole.

Like all the other planetariums around the world, it is just not limited to astronomy but provides information and has illustrations on various topics like Biology, History, industry, Geography and Anthropology.

'Africa: the Serengeti' will be displayed through the projection of Astrovision-70. Along with that different types of award-winning and heart-throbbing IMAX films will also offer the natural beauty of Africa, showing the migration of animals and life in the forest.

Site Maps



Figure 1:- Location Of The Bangabandhu Sheikhmujibur Rahman Novo Theatre

Source: - <http://www.panoramio.com/photo/50824522>



Figure 2:- Connected To the Major Primary Road In Dhaka

Source: - Google Earth

Design idea:

Figure 5:- Construction of Novo Theatre



Figure 6:- View After Completion Of Work

Source: Dhaka daily photo blog

Novo theatre has been designed by Architect Ali Imam and construction was carried out by PWD. The eye catching factor of the building is the light blue metallic dome, bounded by green, a well taken care of lawn. It can be easily identified by its distinctive architectural style, where the key elements are the pillars, use of glass, and the definite geometric shapes. 14 pillars, seven on each side, can be seen at the entrance of the building. The images of these columns are reflected on 3 fountains located before the dome shaped theatre. The staircase is beside it which is in the shape of a telescope like an observatory. It is a 270 seated theatre which has multiple functions including a three dimensional screen, and also used as a space for scientific exhibition. There is an art gallery called the Hall of Fame where photographs of famous scientists like Galileo, Copernicus, Ptolemy, Newton, Einstein, Dr Qudrat-e-Khuda, Satyen Bose, Stephen Hawkins and Dr Qazi Motahar Hossen are displayed. The pictures are life size about 50 feet and were painted by the architect himself. It is a five storied planetarium and the level distribution is as follows:

Level 1: Three-dimensional shows and simulator shows

Level 2: Car parking for 100 cars

Level 3: Hall of Fame and Food Court

Level 4: Exhibition Hall and Theatre Hall

Level 5: Models of various planets and solar systems

There are three exhibition halls at the planetarium, where the evolution process of the animal world is displayed. A 250-seat lecture hall is also available for holding seminars and symposiums on science-related matters. The 215,000 square feet planetarium will have

water fountains, food shops, a lobby, a library and arrangements for audio-video units. A four-story administrative building is located at the back of the planetarium, which also has a car-parking facility for over 100 cars. With the help of a powerful projector inside the planetarium, special shows are displayed on the large curved screen on the ceiling. This curved ceiling represents the sky and shows moving images of planets and stars on a large-screen dome at an angle of 120 degrees. The background audio score of the starry shows is available both in Bengali and English.

Findings

Bangabandhu Sheikh Mujibur Rahman Novo Theatre, it has been found that the planetarium has a group of targeted customers. The main target segment is all the schools and colleges to bring their students for study tour. Both English and Bengali Medium school students of classes 3-9 go for a study tour particularly with their geography teacher. The secondary target customers are the middle, upper middle and higher class urban families who seek place of amusement for their children. The planetarium raised a huge curiosity in the general public and one of the major reasons for it was the structure of the building.

However, besides few artworks and models of planets kept at one small corner at the building, the rest of the large areas have nothing to offer the visitors, unfortunately. There are hardly any decorations, and no sculptures or exhibitions of anything related to astronomy. The Novo Theatre hasn't changed since its opening in 2004. The same models and artwork still remain and no additional features have been added to the building since 2004. The number of customers coming in per day into the theatre is very few, according to the ticket sellers there. Most of the visitors, usually on weekdays come to visit the place for the purpose of dating and not to enjoy the show or for edutainment. There are, however, a few times when students are brought here from different schools on their field trips but such visits are very few.

It is rare to have something as extraordinary as this modern infrastructure in the center of Dhaka city. It aims to engage the public in astronomy but unfortunately, it lacks in a lot of things which inhibit people to take an active interest in the planetarium. There is, however, a great potential for this theatre to be developed into a delightful, informative and an enjoyable place to visit for both tourists and the city dwellers.

The government took steps in improving the Novo Theatre after a lot of years of its establishment. Novo Theatre officials said in the past eight years they had heard about many

development projects but till now no such project was implemented. The planetarium has only two entertainment sections — a 30-seat capsule ride simulator, which takes Tk 20 per person for a ride and a modern tilted domed planetarium combined with a large format motion picture system and the ticket price for this is Tk 50 each person.

Ever since the time of construction only two entertainment projects have been running and people and visitors started losing interest. The government hence should modernize the Novo Theatre to increase the scope of edutainment.

4.1.2 Bangladesh Shishu Academy



Half of the populations of Bangladesh are children. Bangladesh Shishu Academy was established in 1976 with the view to the development of physical, mental, cultural and latent talent of children and thus builds up the future nation builders as efficient citizens. Even 13 years before the Child Right Convention regarding child security and welfare by the United Nations was adopted in 1989, the founding of Bangladesh Shishu Academy played an important role in the development and national interest of the children of Bangladesh.



Figure 1 and 2:- Entrance to the academy

Out of the necessity of Shishu Academy in different districts of Bangladesh, in FY-1980-81 in the then 20 large districts the branch offices of Shisu Academy were established. Later on, in 1993-95 in the rest of the 44 districts and in FY 1996-97 in the 6 upazilas of 6 districts the

branch offices of Shishu Academy were established.



Figure 3:- Logo of Shishu Academy

At present Bangladesh Shishu Academy is an autonomous institution under the Ministry of Women and Children Affairs. Its activities are run by a 13 member board of management. It is the only national institution working for children's cultural and mental development. The main activities of Shishu Academy are operated by the central office. The same activity is followed by the central office as well as in all districts. For the smooth operation of the branch offices there is an operational committee headed by the District Commissioner. There is a local committee headed by the UNO to operate the children activities in every upazila. Thus it has been made possible to start an effective process to bring all the children of the country under the activities of the academy.

Site Maps



Figure 4:- Location of Bangladesh Shishu Academy, Dhaka

It is a unique organization for cultural and mental development of Bangladeshi children has started from 1976. From 1992 their activities have spread out all over the country through district offices. Every year, more than 30 events have implemented all over the country with three regular activities like cultural training, National children award competition and SBK and Pre-school program

The purpose and objectives of Bangladesh Shishu Academy were:

- To develop the physical, mental creativity and latent talent of the children of Bangladesh.
- To publish different books, monthly magazines, dictionary suitable for children.
- To organize different educational programs like quiz, debate and recitation competitions to facilitate children are reading habit.
- To organize national children award competition, occasional competition and different fairs for children every year.
- To create opportunity for the children of Bangladesh to participate in the international painting competitions.
- To make children films.
- To send children cultural teams to different countries.
- To operate informative children museum based on the history and tradition of Bangladesh and different countries' geography.
- To celebrate traditional cultural programs.
- To operate cultural training on different subjects for children.
- To operate informative children museum based on the history and tradition of Bangladesh and different countries' geography.

Bangladesh Shihsu Academy is working in different areas for overall development of the children. The areas are Music, Dance, Painting, Acting, Musical Instrument playing, Recitation, sports, Information technology, Children film, Children publication, Children library, Children Museum, Debate etc. Recently Early childhood development becomes as an important area of activities of Bangladesh Shishu Academy.

The basic programs of the Shishu Academy are conducted from the central unit. The same program is followed by all District Branches including the Central office.

Fine arts program

Children's painting is playing an important role in the development of Bangladeshi culture. The fine arts department of Bangladesh Shishu Academy is working to encourage children in painting and creating opportunity for children to participate in national and international competitions. The fine arts department collects children's paintings from the grass root level through the district branch offices of Bangladesh Shishu Academy, sends those to international competitions and ensures that the winners receive the awards and certificates properly. The children of Bangladesh have already proved their talent by participating in various competitions.



Figure 5:- Children during class

Children Art Gallery

Bangladesh Shishu Academy has a Children Art Gallery to preserve and exhibit the beautiful paintings of the children.

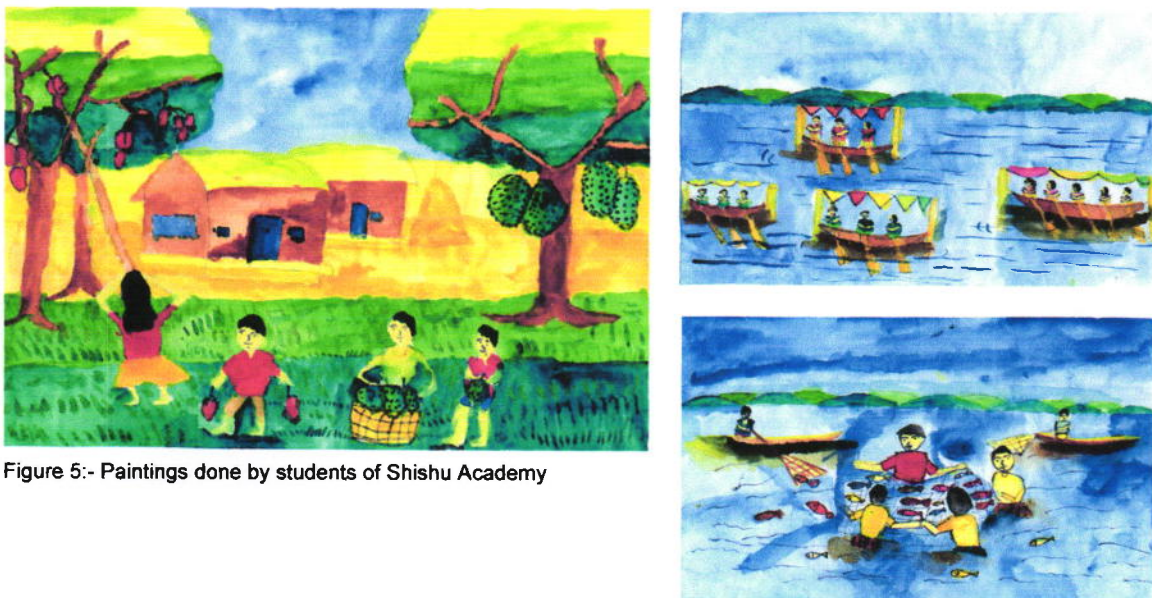


Figure 5:- Paintings done by students of Shishu Academy

Jobeda Khanam Shishu (Children) Granthagar (Library)

From the beginning of Bangladesh Shisu Academy, the library, situated on the first floor in the central office, is serving library facilities to the children. The library has a tranquil environment where 200 children can read at a time. At present the collection of books is 27000 in the sole children library of Bangladesh. Children library does not only facilitate children. Students of Dhaka University, members of various government and non-government institutes, researchers on child issues use this library regularly. In 1990, in the memory of the founder Director of Bangladesh Shishu Academy, Jobeda Khanom, this library has been named as "Jobeda Khanom Children Library".

Special Information of this Library:

- 200 people can read at a time
- Members can issue books from the library.
- There is facility to participate in library based programs.
- There is opportunity to be elected the best reader among regular members.

Overview of district children libraries:

- Average number of books is 2500 in each library.
- On an average 30-35 children can read.
- An average number of 200 children come to the library every month.
- Through the implementation of various library based educational programs, activities to enhance children's reading habit are going on.

Museum

Out of the necessity of an individual children museum to make the children aware of history and tradition, in 1980 a plan was taken to establish children museum in Bangladesh Shishu Academy. In 1984 artist Amanullah Siddque and Tapan Kumar Das started to build and establish the designed objects for the museum. At last in 1991, the children museum was founded in the independent building of Bangladesh Shishu Academy.

The three storied children museum of Bangladesh Shishu Academy, with the children friendly illustrations placed on the spacious ground and the first floors, is playing a great role

in making the children aware of history, tradition and science. Exhibits are arranged in three dimensional forms.

Exhibits of the Museum:

- Memories of children freedom fighter

A sequence of description, suited to the children on the social, political, economic and cultural history of Bangladesh from the pre-historic period to the birth of Bangladesh has been put in 72 three-dimensional showcases.

- Science project
- Stamp corner
- 23 showcase of 23 different countries with their Historical elements and information
- Data, Information, Chart poster etc

Auditorium

Bangladesh Shishu Academy has a fully Air conditioned modern Auditorium comprises 650 seats.

The Auditorium is used for different cultural activities for children by Academy and different children group and organization.



Figure 6:- Shishu Academy auditorium

Regular activities of Bangladesh Shishu Academy

The central office of Bangladesh Shishu Academy runs different cultural activities through 64 district and 6 upazilla branch offices. So the programs are mostly guided. District offices have implements those programs with the support from schools, children organizations, and local administration.



Figure 7:- Various activities held in Shishu Academy

- Children Film and Television Production Workshop
- National children's Competition
- Monsoon (Rainy season) competition
- Talent Fair (Ananda Mela)
- Celebration of National and International Occasion
- Cultural Training
- Education Tour
- Pre-Primary education
- Children Health and Nutrition Program
- Program on Environment and Tree Plantation
- Implementation of the Charter of Children's Right
- Special Programs for Girl children
- Sending Children's cultural Teams abroad
- International Painting Competition
- Biennial International Children Painting competition
- Vaccination Centres (E.P.I)
- Publication of Books, Child magazine and Encyclopedia
- Exhibition of Books and Book Fair
- Bangladesh Shishu Academy Award
- District wise Exhibition of Children Film
- Library based programs
- Exchange of inter district Children Cultural Programs
- National Children Drama Festivals

Future plan

- To take initiatives to fulfil the demands related to shelter, education, health and nutrition for the disadvantaged, helpless, street children and make them independent.
- To implement the project titled Advocacy Awareness Program on Girl Child Right to create awareness among all about the girl child rights.
- To start computer training program for the children all over the country.
- To offer scholarship for poor and street children.
- To adopt programs on early learning for child development.
- To build own building of Bangladesh Shishu Academy in every district.
- To establish branches of Shishu Academy in all the upzillas of the country gradually.

Findings

The nature and working pattern of the Academy is unique and uncommon. So the initiative was appreciated nationally and internationally. But due to the lack of publicity, it was really difficult for others to know about BSA and its activities.

5.1.3 National Museum of Science & Technology



National Museum of Science & Technology (NMST) is A Attached Department of the Ministry of Science and Technology, the Government of the People's Republic of Bangladesh. It was formed under an executive order of the then Pakistan Government on April 26, 1965. This museum is functioning as a unitary body.

The museum has several galleries like: Physical science gallery, Fun science gallery, Biological science gallery, Technological gallery, IT gallery and so on. Except those, there is a science park, a sky observatory, a science library and so on.



Figure 1:- Entry to the museum



Figure 2:- Front elevation

The museum arranges different types of educational program like: Popular science lecture, scientific film show, Children science festival and so on. The museum also arranges National Science and Technology each year both district level national on behalf of the respective ministry. The museum also helps the young scientists in developing their works.



Figure 3: Condition inside different galleries

Vision Statement

To build a science minded nation.

Mission Statement

Their mission is to popularize science and technology through display of scientific exhibits & to encourage the young and non-professional scientists for their innovative activities.

Administration

National Museum of Science & Technology is an Attached Department of the Ministry of Science and Technology of the Government of the People's Republic of Bangladesh. It is unitary body. The executive officer of the museum is Director. He is appointed by the government. Other officers and employees are permanent personnel of the museum. Next after director, curator coordinates overall museum activities.

Aim & Objectives

- a) To create awareness of Science & Technology among the common mass.
- b) To popularize Science & Technology among the students and for this purpose:
 - To set up permanent exhibition in the museum.
 - To arrange Science & Technology fair, Science exhibition and to organize various Competitions on Science & Technology.
 - To arrange Mobile Science Exhibitions.
 - To publish journal on different subjects of Science & Technology.
 - To arrange series of lecture on scientific topics, seminars and workshops.
 - To organize research activities on the exhibits for the development of the museum.
 - To arrange studies on space science by establishing a planetarium.

c) To supplement the formal Science education in the schools and colleges through non-formal educational program.

d) To undertake updating program on Science education.

e) To encourage and co-operate the young and non-professional scientist in their innovative works.

f) To depict the chronological development of science & technology through various exhibits.

g) To help create awareness about the benefits of Science & Technology discovered by the scientists for welfare of the human civilization.

Present Activities

The present activities of the museum can mainly be classified into following categories, namely-

a) Exhibitory activities: The following galleries at present are:

- Physical science gallery
- Fun science gallery
- Biological gallery
- IT gallery
- Technology gallery

Except these, some outdoor exhibits including Science Park also existed.



Figure 4: Biology Gallery



Figure 5: Technology Gallery



Figure 6: Fun Science Gallery

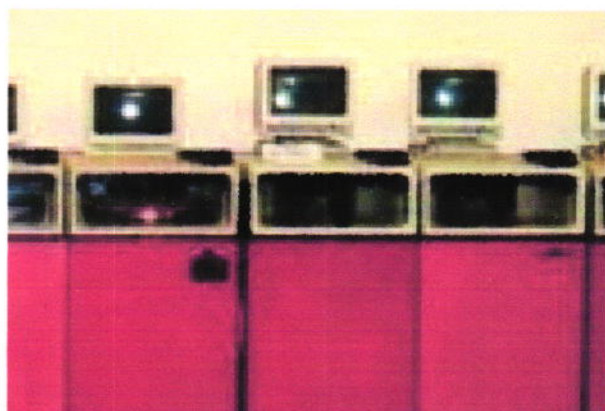


Figure 7: IT Gallery



Figure 8: Physical Science Gallery

Students from schools/colleges/universities can apply in-group wise for above exhibitions through their respective authority. In that case, they can also apply for the free museum bus for their transport if the institution in the Dhaka city.

Sky observation through powerful telescope is held on every Saturday and Sunday evening by a ten take ticket for each visitor. The sky observation is only possible if the sky is cloudless.

The mini planetarium show is only held on every Saturday and Sunday normal exhibition time. Visitor can enjoy this show through a ticket of five taka each.

b) Educational Activities: Popular science lecture, scientific film show, Children science festival, Quiz contest, Seminar and Symposium, Library service, Internet browsing service and so on.

Generally popular science lecture is held for a term of three-month duration on one lecture per week. The renowned scientists of the soil deliver the science lectures. Subject matters may be Astronomical, Astrophysical, Cosmological, Medical, and Biotechnological, Environmental or Contemporary scientific crisis and so on.

Children science festival is held once per year. Only students of class III to class VII can participate on the festival through registration with a fixed amount of money. This is a day long program enhances the scientific creativity of the children.

Quiz contest is held randomly among the group-wise student visitors from educational institutes without any notice. Seminars and Symposiums are arranged on special occasion.

Library service is open for all only in the office time [from Sunday to Thursday on 9.15 A.M. to 4.45 P.M.] This library has more than 5000 Scientific & Technological books. The outside readers can read only but cannot borrow books from the library.

c) Publications

(d) Science Week & activities

NMST arranges National Science & Technology Week every year in both district level and national level. Only two participants (One from junior level and other from senior level or college level) from each district can participate in National level. The viable projects from the science weeks are encouraged to be developed further by Young scientist's activities.

(e) Young Scientist activities

NMST always encourage the young generation and help them in development of their potential projects. NMST helps them both financially and technologically. NMST has an enriched workshop for their development of the Young Scientist's projects and museum exhibits.

Future Plan

- To establish a full-fledged modern Science Museum.
- To establish mobile science exhibition through Museo-buses.
- To establish branch centers of the Museum in order to disseminate her activities towards grass root level.
- To coordinate and synchronize science activities of the nation.

Findings

As it was established in its permanent home in 1981, the museum is quiet old. It is not well maintained since then. Even though it holds many activities all year round for the kids due to lack of publicity, poor appearance and maintenance of the building and lack of new and modern exhibits it is not known to most of the people of the city and the ones that knows about the place are not willing to visit next time.

4.2 International Projects

4.2.1 Glazer Children's Museum



Photo courtesy of Grey Street Studios

Location: Tampa, Florida. USA

Area: 53,000 sq ft Children's Museum/ 1.15 acres (approx)

Designed by: Haizlip Studio

This museum in Tampa, FL and adjacent new Tampa Museum of Art were composed as landmark facilities to anchor an ambitious downtown riverfront and cultural development plan. Museum exhibits, inspired from extensive community input, focus on the natural resources and cultural history of the mid-Florida region, while advancing fine arts, science and engineering programs designed to meet STEM objectives.

The Museum is a place where children and their parents can learn through play and shared discovery. Created specifically for children under 12, it offers 170 'interactivities' in multiple themed areas for families to explore, connect while having fun along the way.

The museum offers the following:

- Exciting daily and weekly programs geared to GROW the minds of children and parents alike.

- Special events throughout the year to keep the Museum experiences fresh and ever-changing.

- A unique, interactive look into the world and community we live in. For instance about the weather, art, communication and much more.

- Seasonal camps for all students K-4 like: Summer, Fall, Winter, and Spring.



Figure 1: Site Plan



Figure 2: First Floor Plan



Figure 5: Fountain View



Figure 6: Dusk View



Figure 7: East Elevation



Figure 8: South Elevation



Figure 9: Night View



Figure 10: Park View



Figure 12: Waters Journey Climber



Figure 11: Lobby View

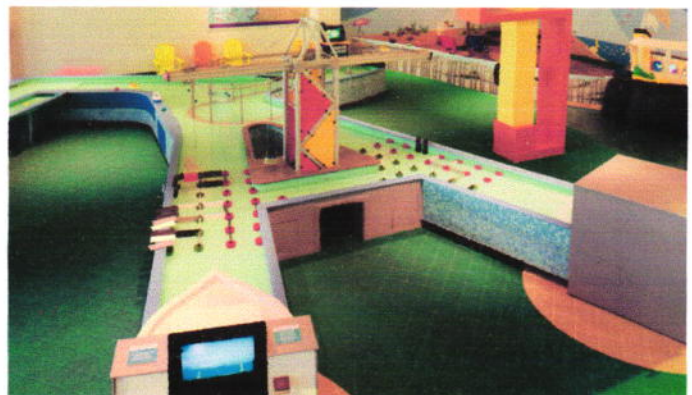


Figure 13: Kids Port Watertable



Figure 14: Kids Port Watertable View

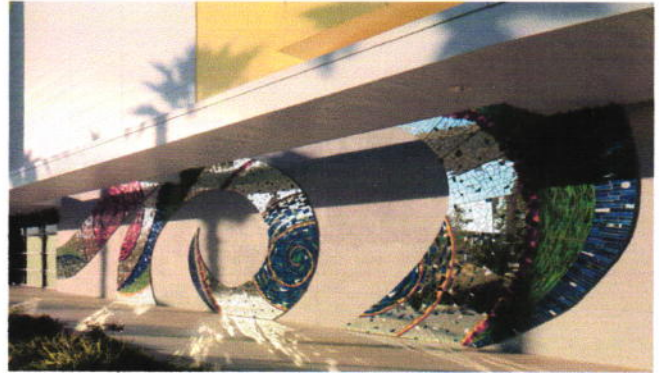


Figure 15: View of Urban Art Installation

Findings

This museum exhibits are inspired from extensive community input. Thus it interests many visitors all year round. The Museum is a place where children and their parents can learn through play and shared discovery. It is created specifically for children under the age of 12.

4.2.2 Zeum: Children's Creativity Museum



Location: San Francisco, USA

Area: Part of 87-acre (350,000 m²) urban renewal project

Architect: Maria Mortati and Gyroscope, an award-winning museum planning firm

Children's Creativity Museum (formerly Zeum: San Francisco's Children's Museum) is a hands-on, multimedia arts and technology museum for kids of all ages located at the Yerba Buena Gardens in San Francisco, California. It is well known for its technology-based exhibits which allow youth to produce their own media through various interactive, creative processes: animation, digital art, live performance, and music production. Children's Creativity Museum is a nonprofit community-based organization.

Thirteen years ago, the San Francisco Redevelopment Agency opened the Children's Creativity Museum after undertaking a comprehensive community planning process with educators, artists, and children's advocates. The agency paid for the planning, design and construction of the Children's Creativity Museum as part of the \$56 million development of the entire Children's Block, which includes the Yerba Buena Ice Skating & Bowling Center, Yerba Buena Gardens Child Development Center, Mo's Grill, 130,000 square feet of outdoor play and learning gardens, and the historic 1906 Children's Creativity Carousel. The agency continues to actively support the museum.

Since opening its doors in 1998, the museum has served nearly 2 million youth and their families through its exhibit experiences, public programs and carousel. It is a part of a major 87-acre (350,000 m²) urban renewal project in the South of Market area by the San Francisco Redevelopment Agency. It changed its name to Children's Creativity Museum in 2011 to increase awareness about the museum's purpose. Although the name 'Zeum' sounded fun, it didn't provide parents with any clues about what they and their children would experience here. After years of struggling with an ambiguous (and difficult to pronounce) name and challenging location (due to visibility issues), they decided to change its name and came up with new innovative ideas to be included in the museum.

Thus after vetting over 200 names with Zeum leadership, it was agreed that the name "Children's Creativity Museum" accomplished both goals. "

By 2015, the Children's Creativity Museum aims to nearly double its annual attendance to 100,000 visitors and become a recognized anchor institution for San Francisco families.

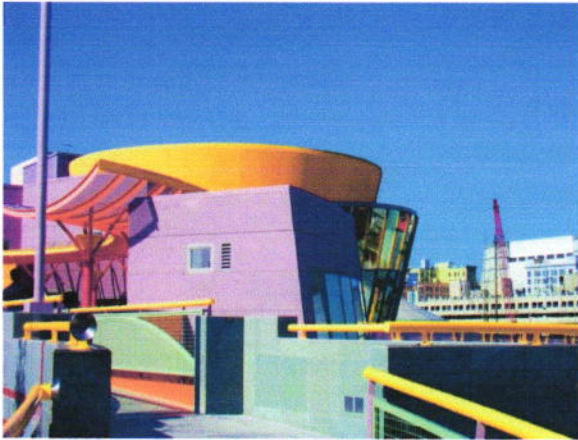


Figure 1: Exterior View



Figure 2: View of the Entry

Young creativity is blossoming inside this space-age glass and metal cone. Children's Creativity Museum is the place for budding kid and teen artists to hone their skills while also discovering new ones. Visual, media and performing artists are always on hand to interact with the museum's visitors. Children are encouraged to help with projects, including stop-action animation, digital photography, and the cutting-edge, new media form of web casting. Do not miss the Charles Loof carousel (circa 1906); its hand-carved wooden animals have been restored to their original baroque perfection. There is also a theater on the premises used for various performances of different genres that stem outside the children's genre. This place is wonderful fun for the whole family.

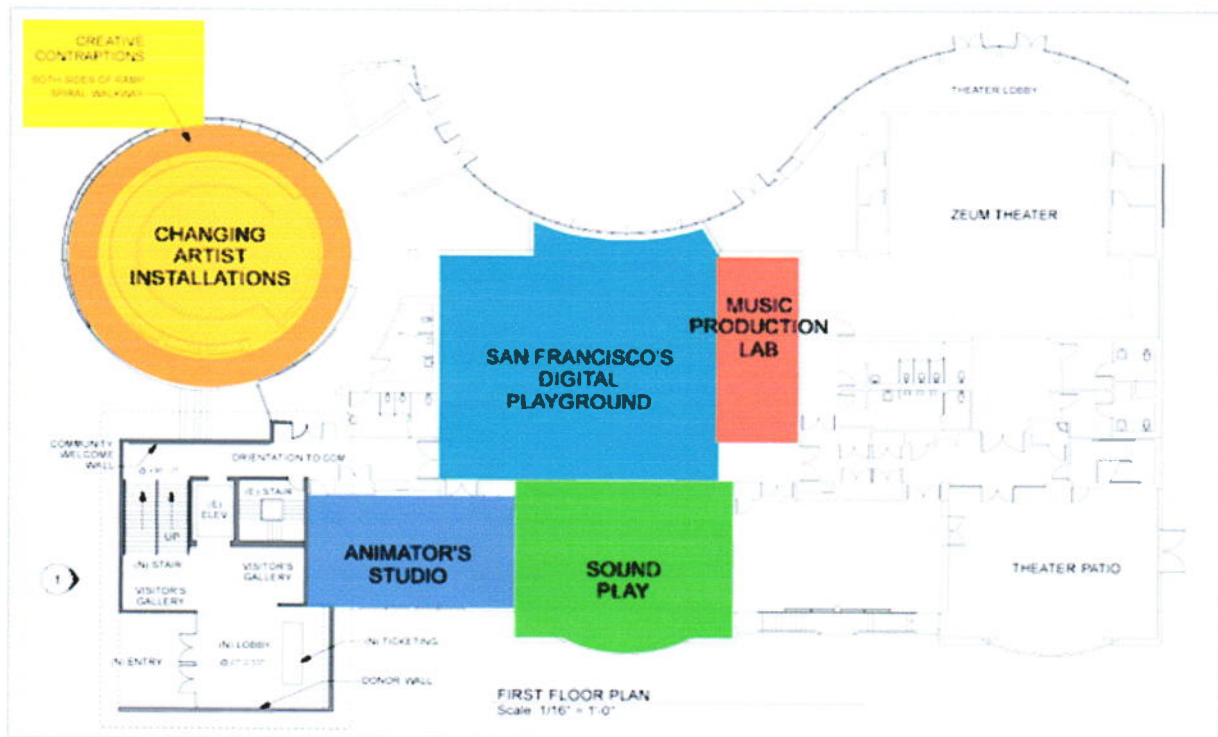


Figure 3: First Floor Plan

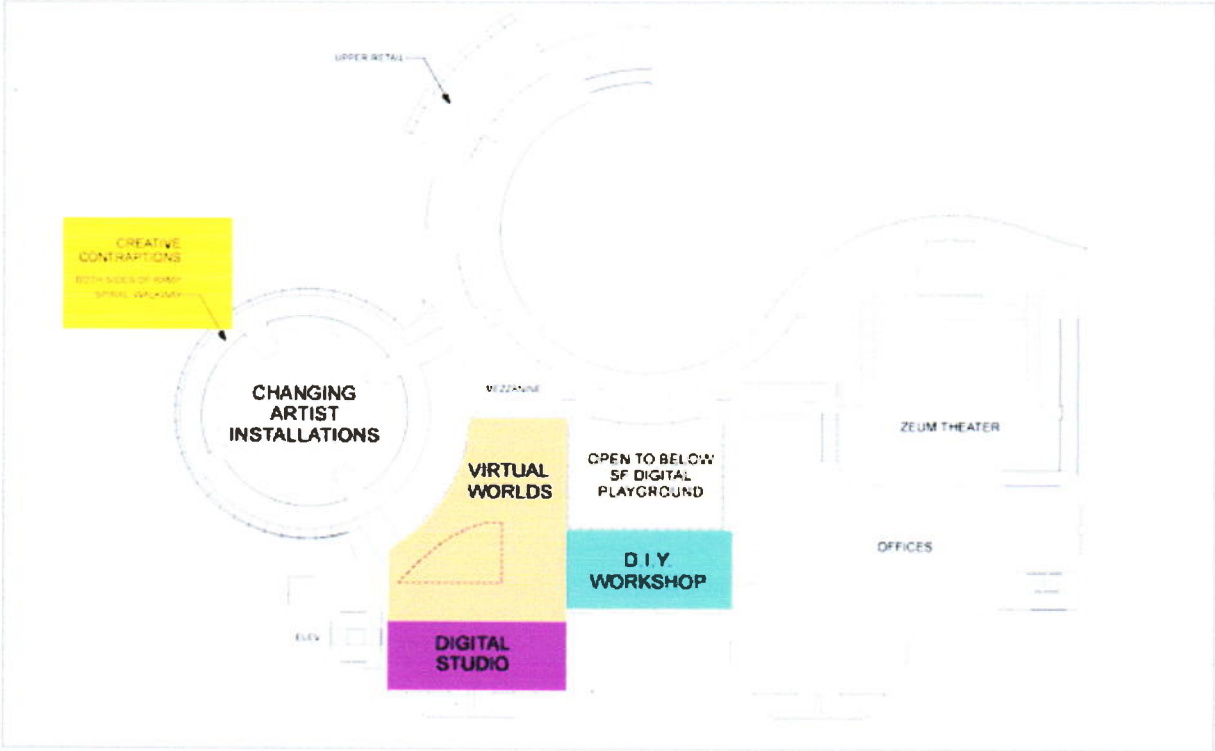


Figure 4: Second Floor Plan



Fig 5: Views of inside the museum- Workshops, entry and other places

In the **Imagination Lab** children are inspired to imagine, create and share. Kids of all ages are inspired to imagine an idea in the interactive hands-on environment, create something original in the studio spaces, and take their work home to share with their friends and families or display in the museum.

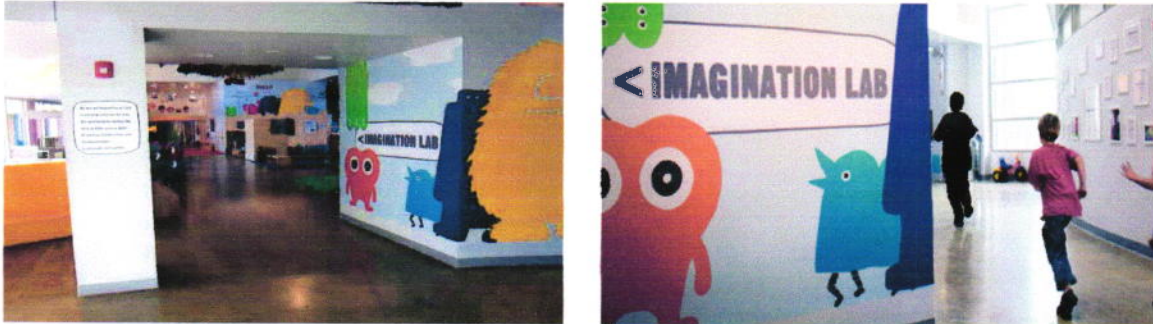


Figure 6: View of the Imagination Lab

In the **Animators Studio**, children can mold clay characters and make their own stop-motion animation movie. In this exhibit, CCM's Educators introduce film making concepts: making a storyboard, building the characters, and producing a stop-motion animation. Afterward, they can visit one of four stop-motion animation stations, choose different set backdrops to set the scene, and capture their footage frame by frame using a video camera.



Figure 7: Children making Clay Models in the model making area

In the **Digital Workshop**, children are shown how to use the basics of Adobe Creative Suite products. There are twelve computers in the Digital Workshop, each with a digital camera. The CCM Educators guide the visitors for picture taking and show them the different applications of Photoshop, such as 'filters', which enable the children to morph and manipulate their pictures and make them look interesting and different.

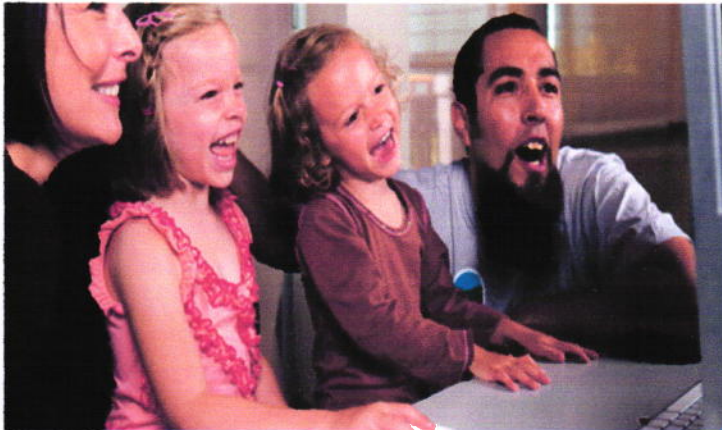


Figure 8: Children busy and enjoying Photoshop

In the **Main Gallery**, children can explore a sampling of traditional and hi-tech art. They can make masks, arts and crafts, play with puppets, or dress up in costume. They can play with soft blocks in Lil Z's Play Lab or slide down the green screen Special FX Slide to play with special background effects. There is a News Production Stage, where can take on the roles as newscasters, weather person, or international correspondent. The News Production Stage includes a teleprompter and green screen technology so children can pick from a variety of backgrounds.



Figure 9: Puppet made by a kid in the museum



Figure 10: Children in front of the green screen Special FX Slide

In **Studio Z**, children can choose music and visual effects to dance against a green screen wall. Z-Dance, an interactive experience developed by John Craford, associate professor of

Dance and Media Arts at the University of California at Irvine, demonstrates how body movements can affect real-time motion tracking using visuals and sounds.



Figure 11: Children performing inside the Studio Z

In the **Music Production Lab**, children can pick from a diverse array of songs, and perform on-stage, where the lyrics pop up, like Karaoke. The educators explain to the visitors what they can do, such as offer them costumes to try on and show them the different backgrounds they can feature in their video. Education interns record the visitors singing, and play back their performance in the "Screening Area".



Figure 12: Children inside the Music Production Lab

In the **Community Lab** children are driven with experiences that are developed in partnership with an artist-in-residence through prototyping workshop. Kids of all ages are invited to share in the process of bringing the exhibit to life.

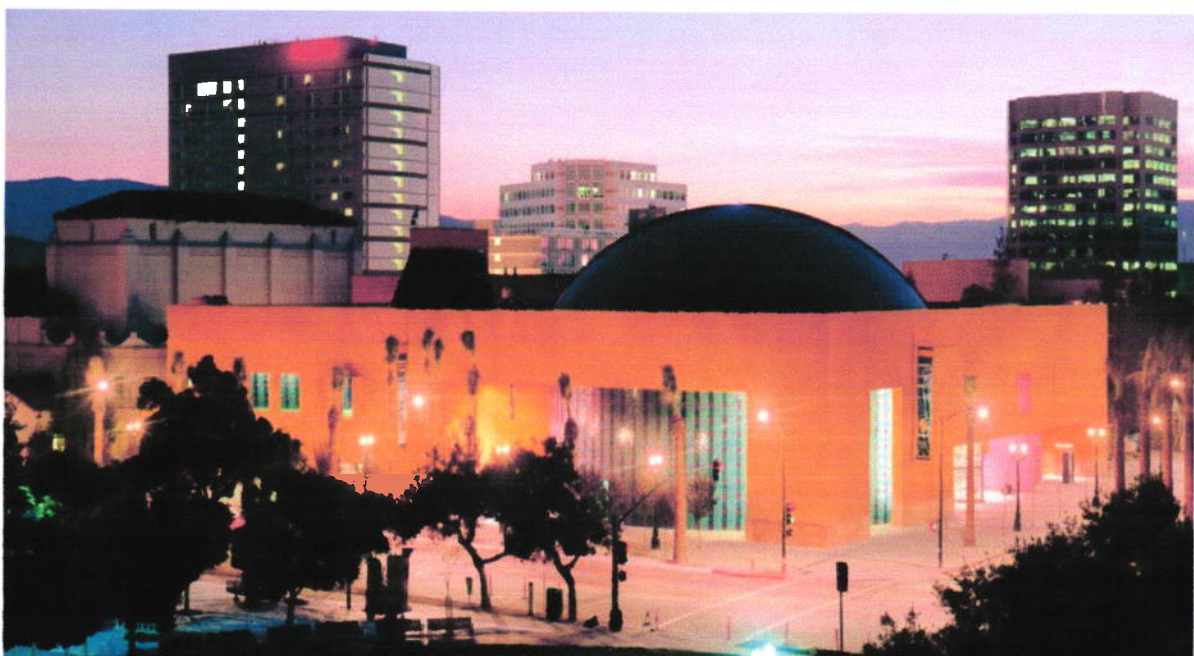


Figure 13: View of the Community Lab

Findings

The museum has served nearly 2 million youth and their families through its exhibit experiences, public programs and carousel even though it faced many challenges for many years since people were not familiar to the idea of such museum thus It changed its name to Children's Creativity Museum in 2011 to increase awareness about the museum's purpose. After years of struggling with an ambiguous (and difficult to pronounce) name "ZEUM" and challenging location (due to visibility issues), its name was changed and came up with new innovative ideas to be included in the museum. This place is wonderful fun for the whole family.

4.2.3 Technological Museum of Innovation



Location: San Jose, U.S.A.

Area: 11,000 m²/3 acres approx

Client: Technological Museum of Innovation

Executive Architect: The Steinberg Group

Interior Design: SMWM and Legorreta Arquitectos

Year: 1998

The structure was conceived as a horizontal block “shaped” by the diversity of events taking place inside. There is a cylindrical massive IMAX tower over the whole, culminating in a metal dome, which becomes the focal point on the corner.

The museum is composed of three floors, each with its own significance. The ground floor has the main entrance, a gift shop and cafe, the Imax Theater, and a recreational area that is reserved for special events. The Tech Store contains various gifts, shirts and souvenirs. The ground level is a location where Segway and other robotic demos are displayed and given. The Tech Museum's architecture is the work of Mexican architect Ricardo Legorreta.

Four major theme galleries fill the upper level and lower level of the museum: Communication, Exploration, Innovation and Life Tech. These galleries are constantly being revamped and changed to fit the theme movies and exhibits. On the lower level there is also a public piece of artwork titled “Origin”, which is inside a 45-foot-tall (14 m) cylinder.

The facades were designed in correspondence with the urban context. One is supported by the massive joist framing the groove that functions as the main entrance. By contrast, the rest of this facade is a long wall with a series of apertures allowing access to the cafeteria, gift shop, and a terrace leading to the park.

The other facade is more abstract, functioning as the secondary access for groups coming by bus, and therefore less visible. It also provides access to temporary exhibits and to the 300-seat IMAX auditorium.

A spectacular atrium, of great high, presides as the focal point of each side of the hall. The curved wall of the cinema identifies the north side with its richness in texture and color. The south side is very dynamic with two stairs –on to the higher level and the other to the lower level –that crosses the atrium from side to side, emphasizing the space's sense of movement, of which the visitor becomes an active participant. A conical dome and a series of smaller square domes above the atrium allow in natural light and create an even more dynamic abstract composition.

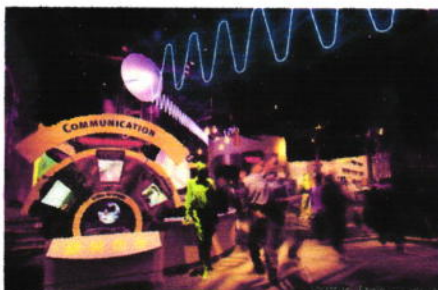




Figure 2: Views of the Interior, Workshops, Galleries and Exhibits inside the museum

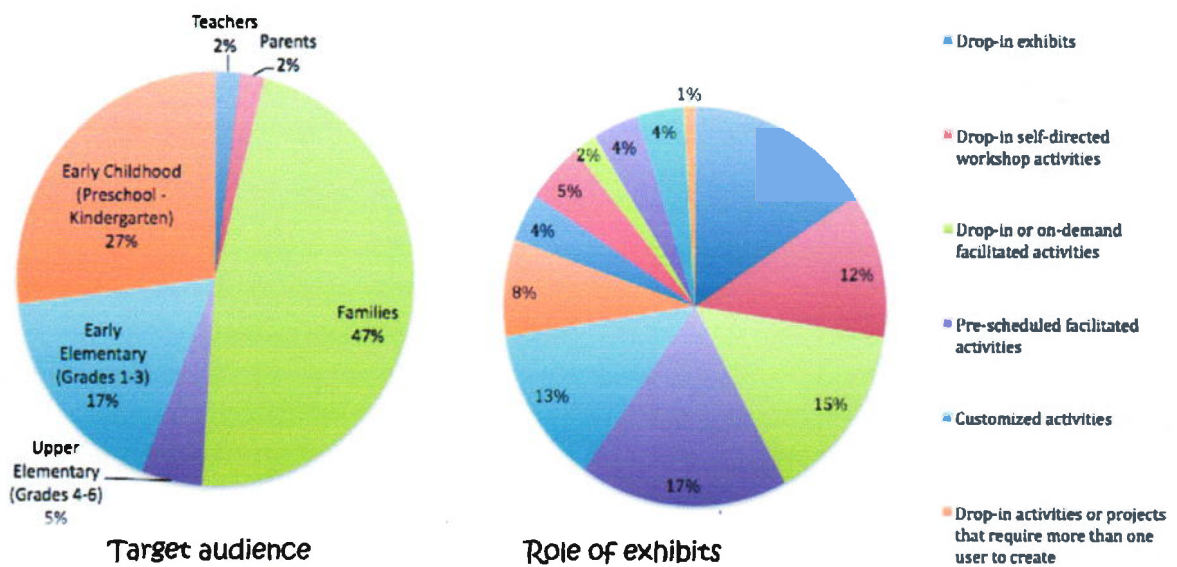
The 132,000 sq/ 1.4 acres museum is divided among themed galleries that focus on innovation, the internet, the human body and exploration. A 299 seat domed Omni Max Screen Theatre is the architectural and programmatic centre of the facility, and is served by an adjacent café, a gift shop and a large public lobby/ atrium that features several exhibits, both stationary and suspended from the ceiling. The museum also contains a variety of public meeting rooms and staff offices.

Findings

The museum is a well designed, high maintained building with well technologically and developed interactive exhibits, labs and studios. It attracts many visitors and school going students all through the year.

CHAPTER 05

PROGRAM AND DEVELOPMENT



In order to develop the program first the target audiences and the role of the exhibits were found. According to the findings the program for the museum was developed.

5.1 Proposed Program

	Space	No.	Number of users	Area [sft]	Total
Entrance	Gathering space/ main lobby + ticket counter			1,000	
	Books and Gift shop	1		5,00	
	Visitor's service office	1		100	
	toilet			500	
	Sub Total			4,100	
	Circulation 30%			1,230	
	Total				5,330
Administration office	Director's room + attached toilet	1	1	400	
	Secretary	1	1	100	
	General office	1	10 person	850	
	Artists and educators or volunteers room	3	35 person	2000	
	Conference room	2	10 person	900	
	Tea room	1	1	100	
	Security and supervision	1	4	200	
	Mech.dept	1	4	150	
	Toilet	1	1	250	
	Reception lobby	1		550	
	Sub Total			6,050	
	Circulation 30%			1,815	

	Total				7,865
Library (for book collection of approx 20000)	Lobby and Information			400	
	Reading space		100	2,000	
	Archive	1		800	
	librarian	1	1	150	
	Spaces for book collection			2,500	
	Toilet			500	
	General office + toilet	1	4	550	
	Library storage			400	
	Sub total			7,300	
	Circulation 30%			2,190	
	Total				9,490
Galleries	Exploring Bangladesh				
	Alphabet Trail	1		1,500	
	Climbing Map	1		1,500	
	Total				3,000
	Water exhibits				
	Water's journey	1		1,000	
	Kids port	1		800	
	Tub boats tots			800	
	Total				3,100
	Express yourself				
	The Art Studio	1	15	2,000	
	Imagination and Innovation Lab	2	15	1,500	
	Animation Studio	1	15	1,000	
	Digital studio	1	10	1,000	
	Total				6,500
	Science Exhibits	1		4,500	
	Total				3,000
	Get Moving				
	Funtopia		30		

	Walltopia		30		
	Ropetopia	1	30	1,600	
	Total				3,500
	Travelling Exhibit Hall	1		3,000	
	Temporary Gallery	1		3,500	
	Outdoor Exhibits				
	Discovery Garden	1		4,000	
	Outdoor interactive dance floor	1		800	
	Outdoor installation area	1		3,000	
	Outdoor Cafe				
	Total				9,300
Museum maintenance	Other/stores/Misc./loading dock			2,000	
	Sub total			24,300	
	Circulation 30%			7,290	
	Total				66,990
Auditorium		1	400	10,000	
Cafeteria / Food court		1	100	4,500	
	Sub total			14500	
	Circulation 30%			4350	
	Total				18850
	Grand Total				106,525

5.2 Rational of the Developed Program

Site Area, A = 6.5 acres = 283140 sqft

Road width around the site = 60 ft (highest)

$$= 18 \text{ m}$$

So, for public spaces, FAR = 5.5

$$\text{MGC} = 50\% \text{ of A} = 141570 \text{ sqft}$$

Total Built Area, TBA = FAR x Site area

$$= 5.5 \times 283140$$

$$= 1557270 \text{ sqft}$$

Total floors can be built (maximum) = TBA/MGC

$$= 11$$

Setback for the site :

Front = 1.5 m

Back = 3 m

Each side = 3 m

Grand total of built area required (with 25% circulation & services)= 106,525sqf

5.3 Conceptual layout



OUTDOOR

- CAFE
- VISITORS SERVICE AREA
- CHANGING ROOM
- SPLASH FOUNTAIN
- INFINITY POOL
- PLAYGROUND
- WALLTOPIA + ROPETOPIA
- COMMUNITY GARDEN
- MAZE-LIKE SEATERS



**INSIDE
MUSEUM**

- SCIENCE EXHIBITS
- TEMPORARY GALLERY
- TRAVELLING EXHIBITS
- EXPLORING BANGLADESH
- GET MOVING
- WATER EXHIBITS
- ADMINISTRATIVE AREA
- AUDITORIUM
- LOBBY

CHAPTER 6

CONCEPTUAL STAGE AND DESIGN DEVELOPMENT

6.1 Study and Approach of the site

Design of a children's museum requires a very imaginative and fun progression. In this, design function is not more important than the experience, logic, justifications. When I begin to study about how these kinds of museums functions, I was looking for their notions, philosophies dreams about giving children of the country something new. It will be a new kind of experience to share with all. A platform to explore and display their creative and imaginative sides. So, I wanted to visualize this museum as a place where children could not only spend few hours and enjoy themselves with their family but it will be a place

Review Phases?

that can be enjoyed by people of all ages all through the year. It will give a new direction to the playing and imaginative experiences for the children of the country.

SITE

Hatirjheel is centrally located in Dhaka metropolian area under Dhaka metropolian master plan area. Its position in terms of roads and waterway transportation creates immense potentialities to develop as a hub to cater a vital connection to the eastern expansion of greater Dhaka. Its central position even connects and bounded by three of the major four North-South bound communication corridor for the north-south elongated metropolitian Dhaka.

Thus, it forms the most suitable site for a interactive museum for children where children with their families can come here and have a great learning experience in the form of play.



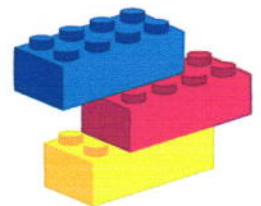
6.2 Concept Development and Development phase

The concept was generated from the idea of how lego blocks are placed.

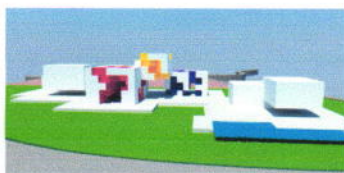
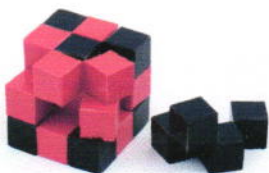


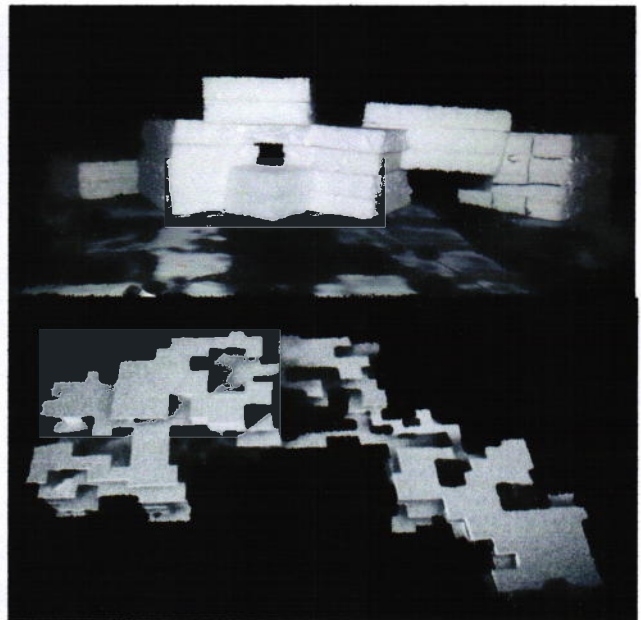
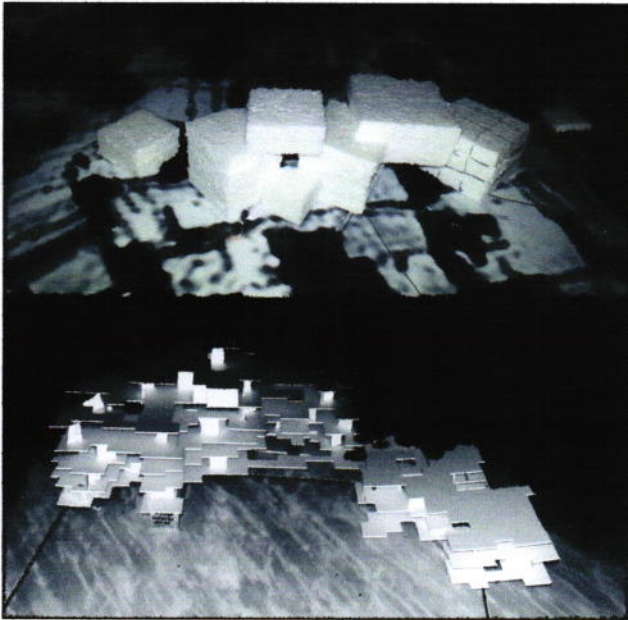
LEGOS are a child's best friend. Kids don't just play with legos, they are the building blocks of a child's creative mind. These are the reason why I chose Lego blocks as my concept:

- _____ colorful
- _____ easily expressable
- _____ unit of creation



Form derivation





Initial Study Models

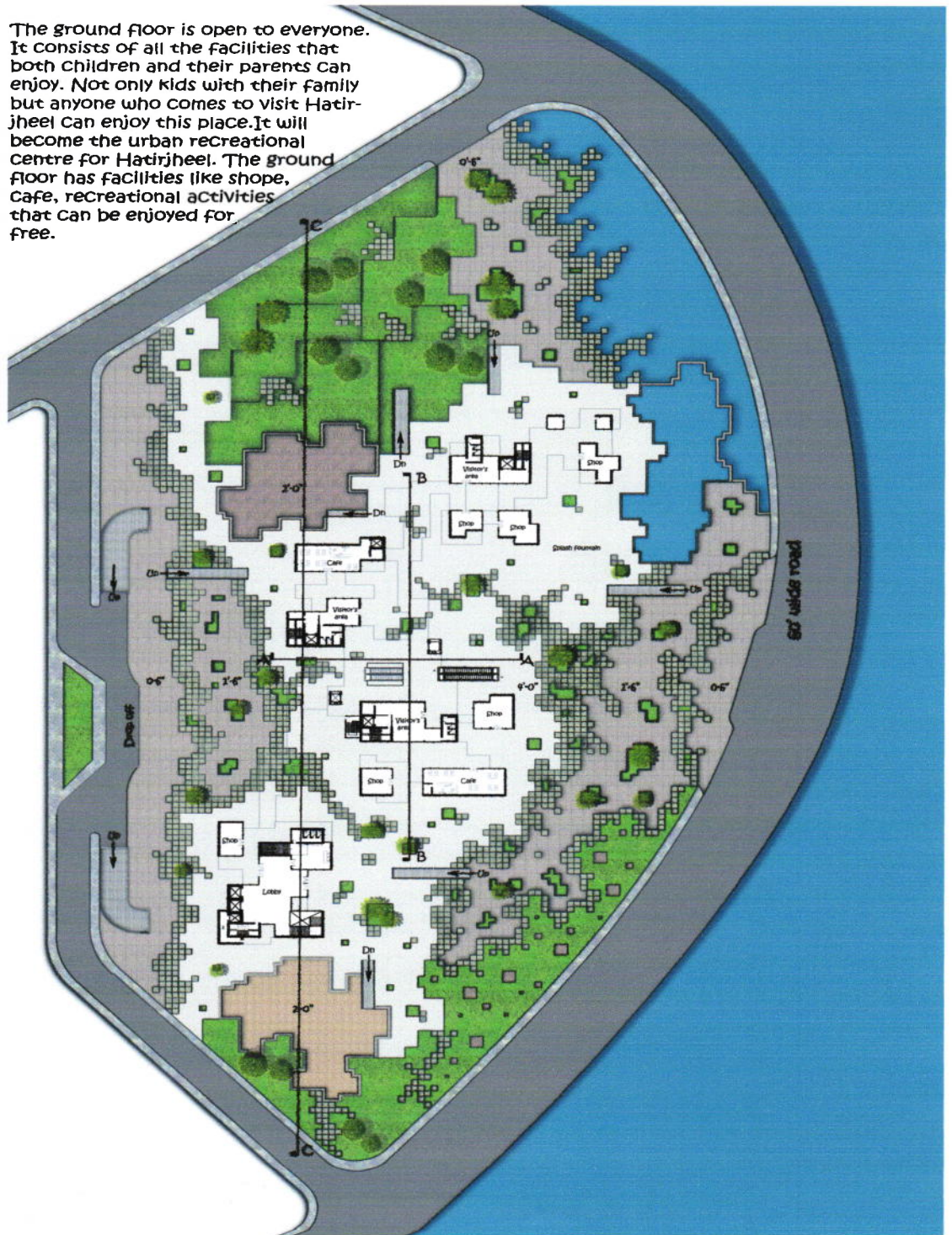
6.4 Final Design

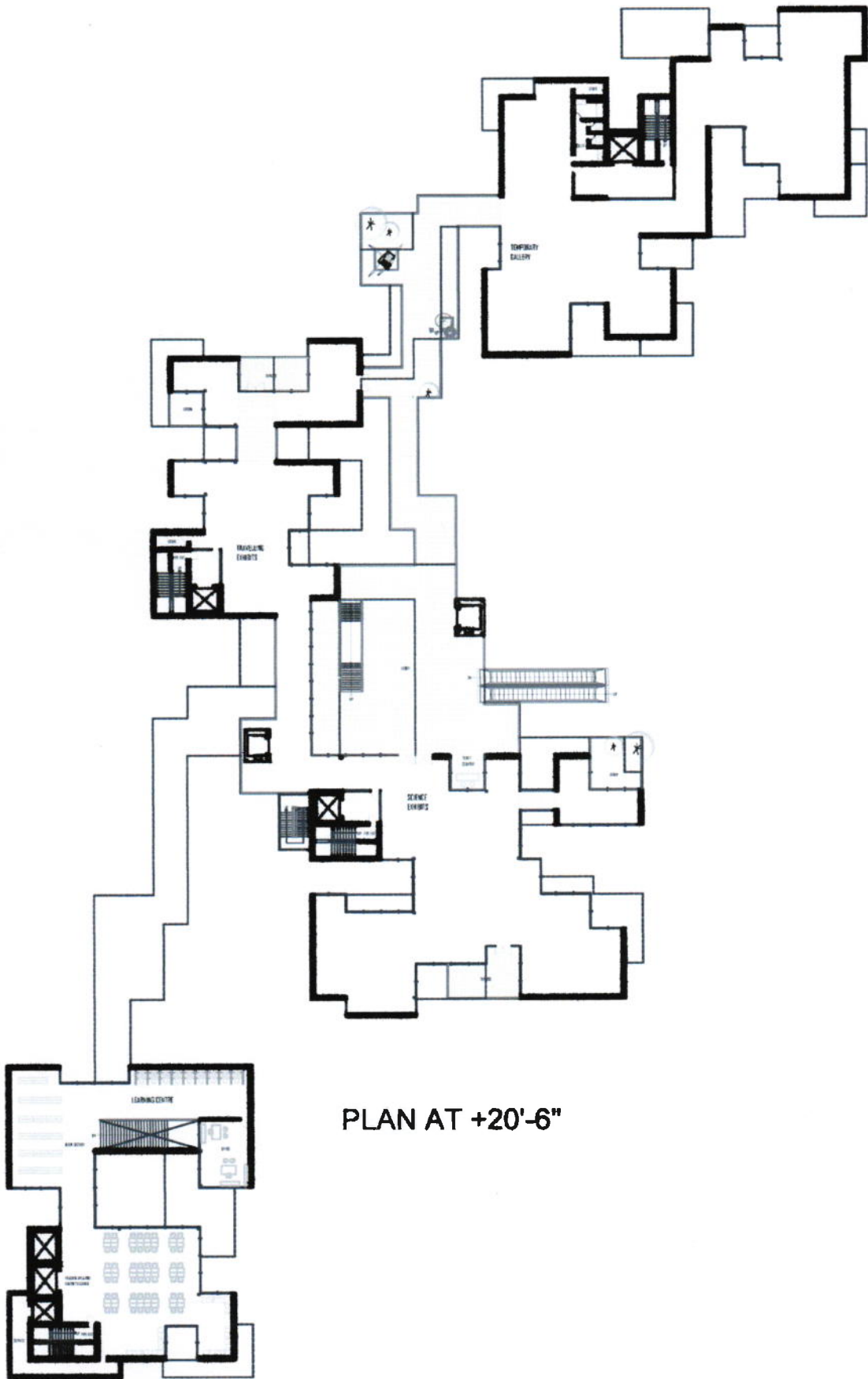


Roof plan

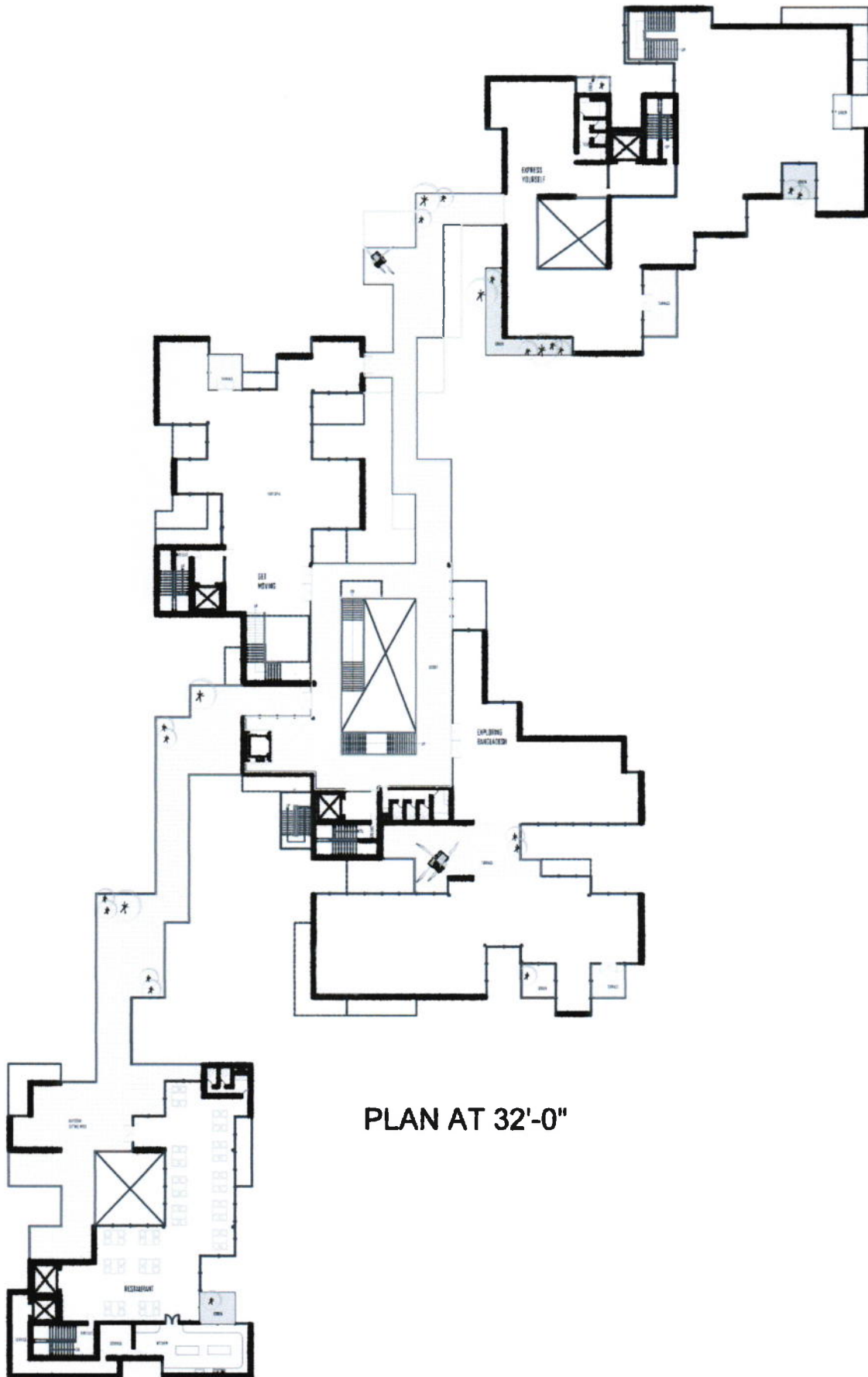
Master plan

The ground floor is open to everyone. It consists of all the facilities that both children and their parents can enjoy. Not only kids with their family but anyone who comes to visit Hatirjheel can enjoy this place. It will become the urban recreational centre for Hatirjheel. The ground floor has facilities like shops, cafe, recreational activities that can be enjoyed for free.





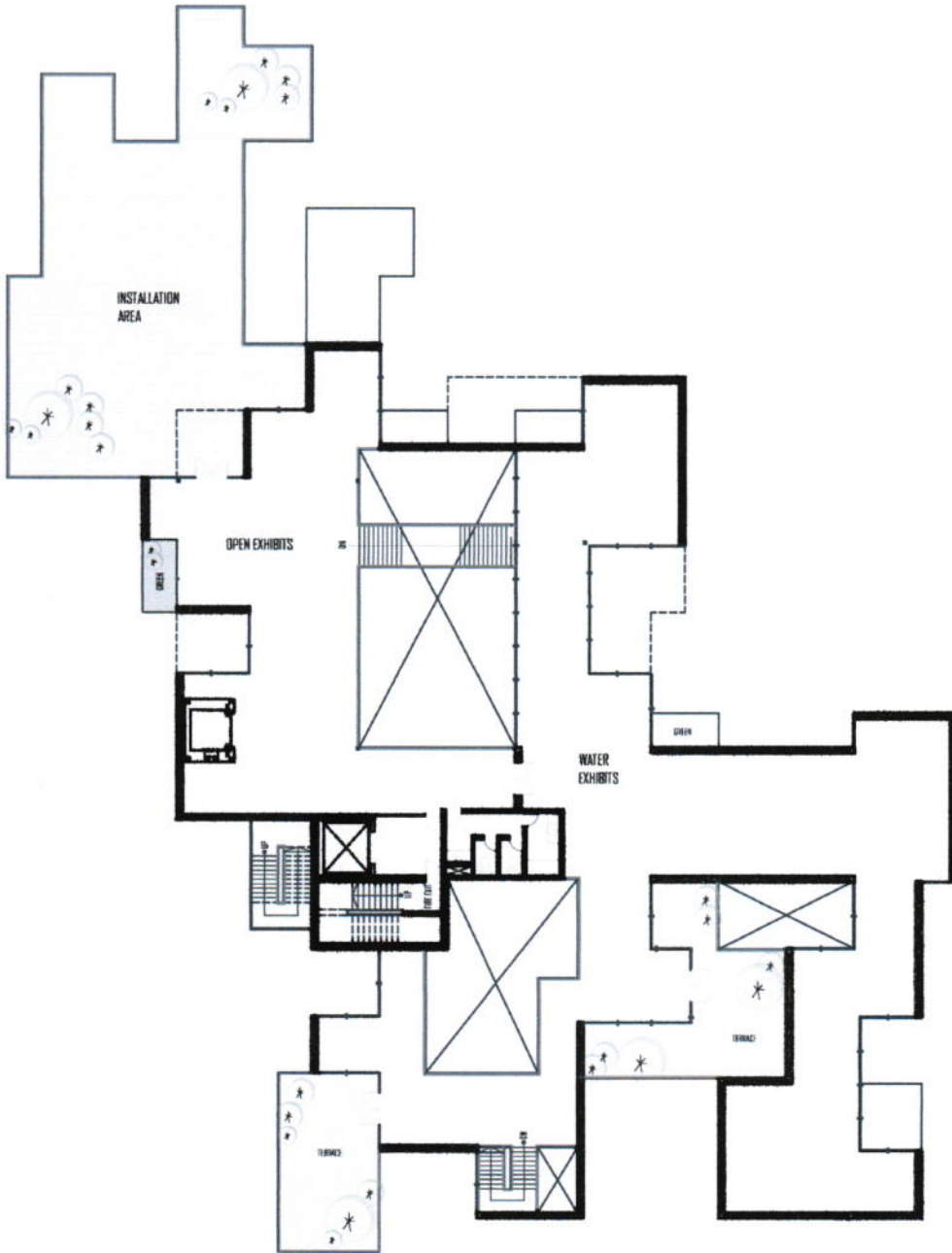
PLAN AT +20'-6"



PLAN AT 32'-0"



PLAN AT 43'-6"

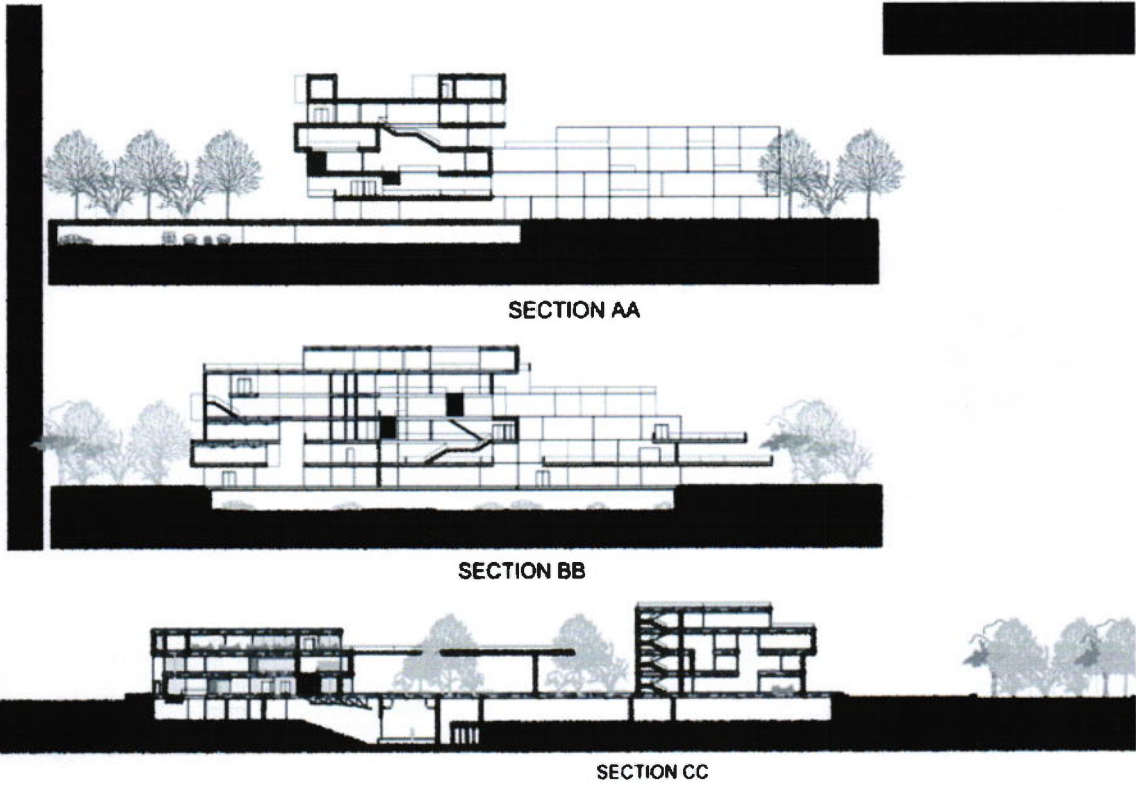


PLAN AT 55'-0"

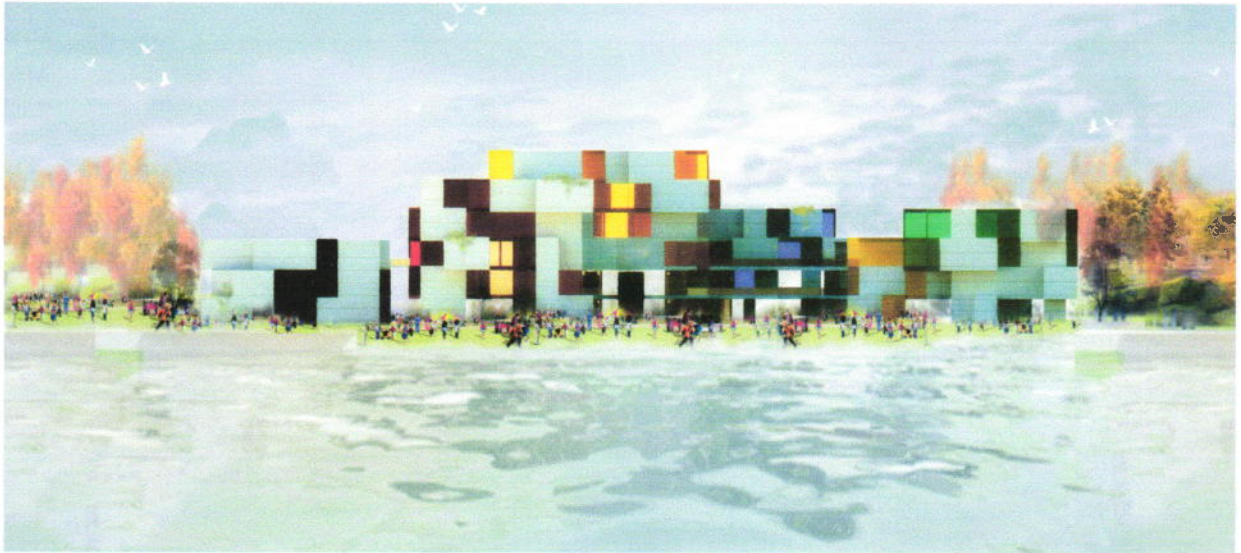


PLAN AT 66'-0"

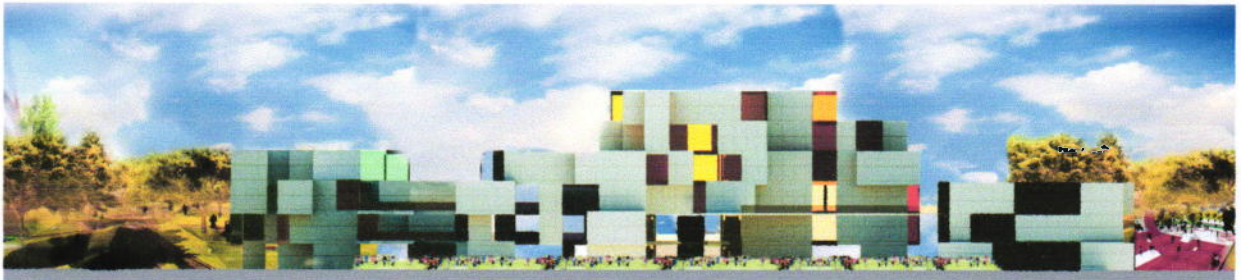
Sections



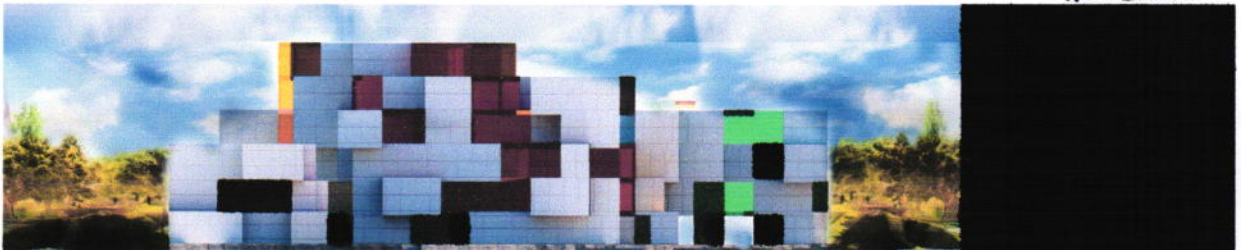
Elevations



East Elevation

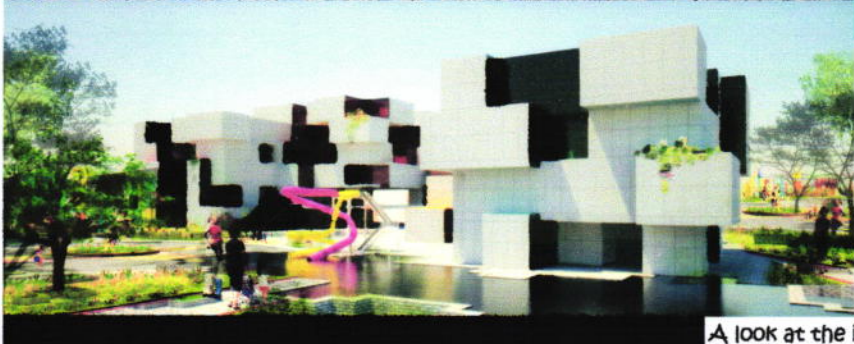
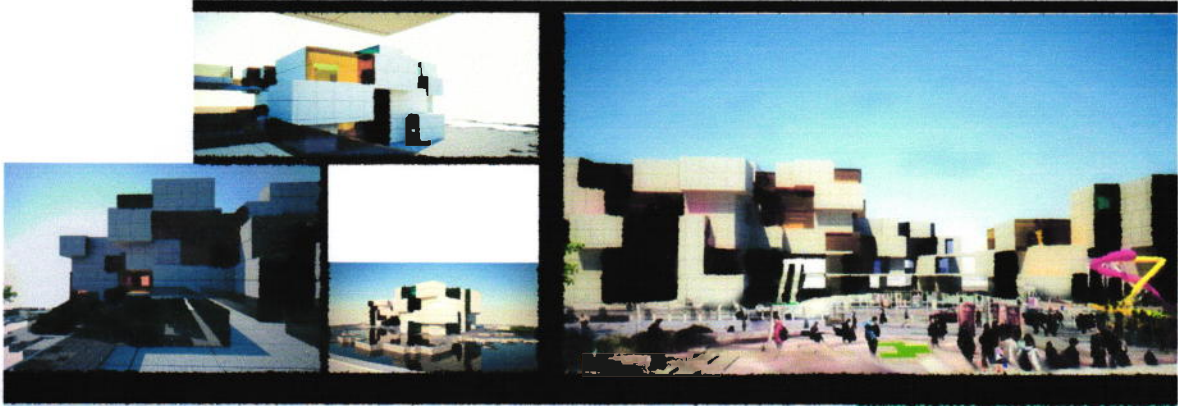


West Elevation



South Elevation

3D Images



**Children's
Creativity
Museum at a
glance**

A look at the infinity pool



Playground area



View from the plaza

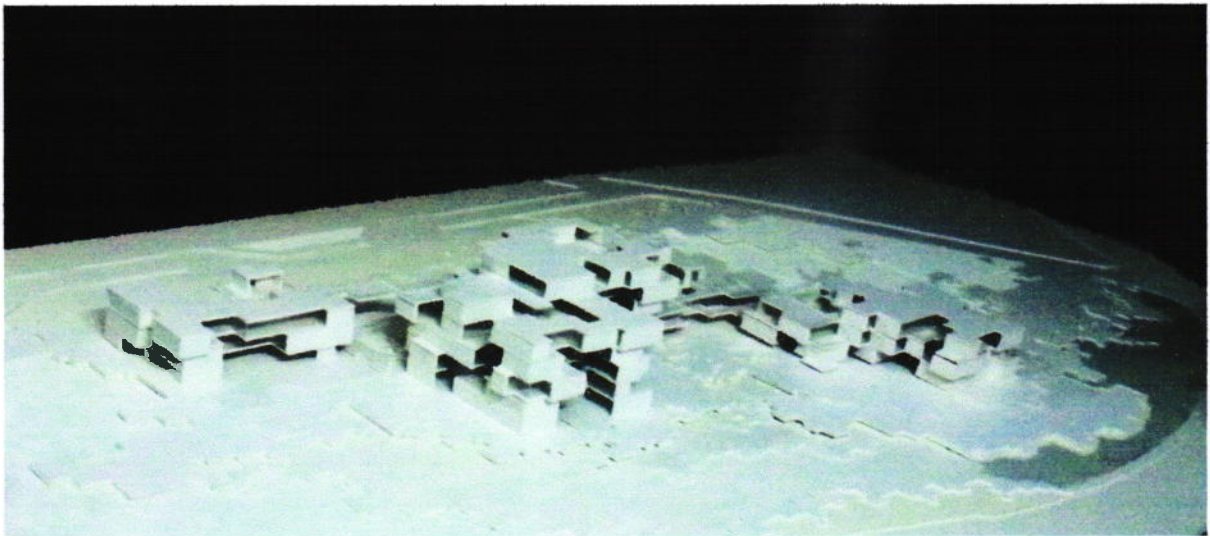
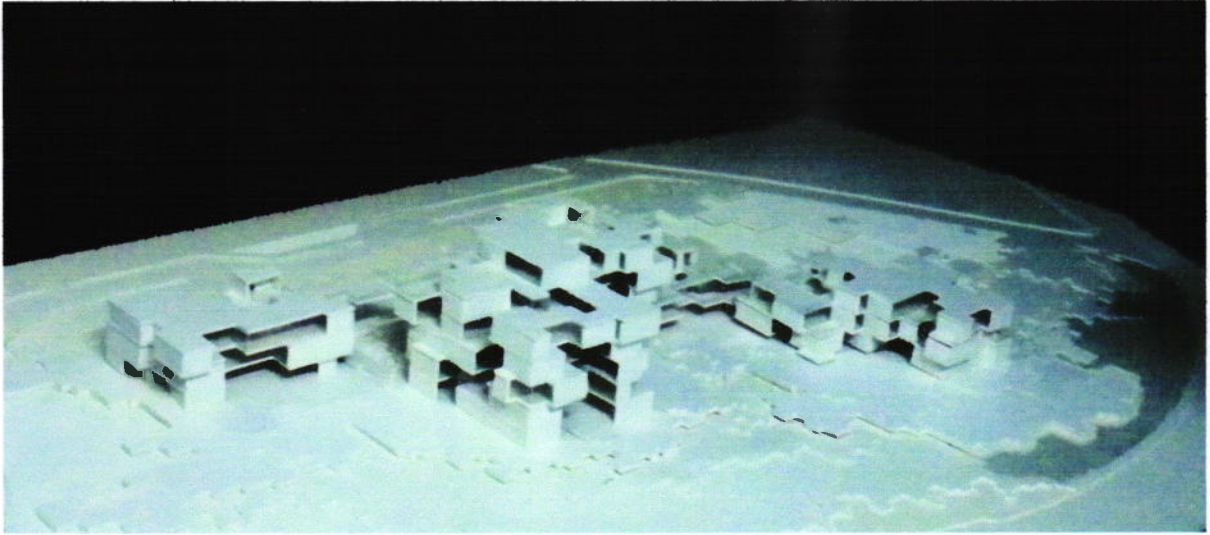


Boulders and sitting area near the public plaza



Community garden

Model Images



CHAPTER 7

CONCLUSION

The stated above chapters include the process & journey of completion of the design of Children's Creativity Museum. It can have a huge impact on the life of the children of the city as children need places to groom themselves for the future challenges but due to the lack to opportunities and facilities they are not being able to explore their creative and innovative skills. Thus a media art and technology based museum of such kind 'Children's Creativity Museum' will not only provides a vibrant place for families to share valuable educational and cultural experiences. Its presence will allow children to go beyond the conventional environment of play by inspiring kids to imagine, create, share and inspire the innovator in every child in a multimedia environment with every visit.

The museum will be self-sustaining as it will not only benefit the children of our country but will also bring economic yield by attracting cultural tourism.

Like any new project, the development of the Children's Creativity Museum will likely experience challenges but it will also add a unique element to the city, enriching the quality of life for all of our citizens.

REFERENCE

1. http://www.asiaticsociety.org.bd/journals/June_2009/contents/Jahangi%20Hossain.htm
2. <http://www.leeds.gov.uk/museumsandgalleries/Release%20Documents/AM%20what%20is%20a%20museum.pdf>
3. http://nameaam.org/uploads/downloadables/EXH.spg_11/5%20EXH_spg11_What,%20if%20Anything,%20Is%20a%20Museum__Dillenburg.pdf
4. <http://www.nfer.ac.uk/nfer/publications/55502/55502.pdf>
5. <http://answers.yahoo.com/question/index?qid=20080930002529AAIbIVO>
6. <http://icom.museum/the-vision/museum-definition/>
7. http://www.childrensmuseums.org/docs/acm_case_statement.pdf
8. <http://www.childrensmuseums.org/programs/start.htm>
9. <http://www.routledge.com/books/details/9780415521918/>
10. <http://www.childrenmuseum.org/documents/PlayFactSheet.pdf>
11. <http://www.prairieplay.org/3/what-is-a-children-s-museum>
12. <http://www.scribd.com/doc/9502684/The-Importance-of-Interactive-Exhibits-at-Childrens-Museums>
13. http://www.encatc.org/museums-and-municipalities/?page_id=7
14. <http://museumnotes.blogspot.com/2013/03/creativity-and-museums.html>
15. <http://www.dreamconference.dk/wp-content/uploads/2012/05/Ferreira.pdf>
16. <http://tlc.howstuffworks.com/family/technology-in-education2.htm>