

SHAYAMBHAR: CENTER FOR UNDERPRIVILEGED CHILDREN

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Abstract:

The word "Underprivileged" refers to a group of people deprived through social and economic condition of some of the fundamental rights of all members of a civilized society. Our society can see many people who are totally deprived of most their basic rights due to poverty. If we think of the underprivileged children, they drop off their school only to run their families, whereas the other children of the same society who are well off are blessed to continue their education. Those underprivileged children have no other choice than leaving the school and work for the family to earn some money. Most of them want to continue their education but are helpless. Being children of a society where others can get the light of education, they do not deserve to be deprived of this basic need.

My project "Shayambhar" intends to give these underprivileged children the platform where they can receive education and at the same time help their families by doing some productive works. It is hoped that in future the children will be educated and at the same time they will become self-dependent. I believe that there will be a time when these children will be referred as an asset for the nation rather than a burden of society if they are given proper opportunities.

Acknowledgement

End of the journey of B.Arch. will be fulfilled through this project –“Shayambhar”. Whatever I have cherished, achieved and learned through this project is only the implement of my learning of last 5 years. It wouldn't be possible if there weren't some supports of some people around me. First of all I am thankful to the almighty Allah who has blessed me with my parents without whom probably I wouldn't be able to continue architecture. Without the mentors I got in my studios I would not be able to learn about architecture this much. For this project I am specially thankful to my studio instructor

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Chapter 1

INTRODUCTION

1.1 Background of the Project

1.2 Project Brief

1.3 Project Introduction

1.4 Needs and Aims

CHAPTER 1:INTRODUCTION

Background of the Project

'All architecture is shelter, all great architecture is the design of space that contains cuddles, exalts, or stimulates the persons in that space.' – Bernie Warren, *Rehabilitation and education village for young drug addicts*, Sarah Ng Ka Ling, March 2000

Being underprivileged is one of the major curses a person can be under. The five basic rights a person must have are- Food, Clothes, Proper place to live, Education and Medical facilities. But those who are eventually underprivileged do not get any proper housing education and medical facilities. As a result the city is getting denser and many problems like unemployment, drug addiction, violence and other social issues are increasing. Not only in our beloved Dhaka city but also almost every other country across the world are facing the problem of homelessness.

Globally, more people now live in urban areas than in rural areas. Over the past few decades, most low-income countries have experienced a rapid population growth without adequate expansion of public services, and many cities in the developing world lack the infrastructure necessary to support high levels of urban population growth. As a result, globally, more than one billion people live in informal settlements or urban slums. Many others live where they can—at railway terminals and bus stations, at ports, and in empty markets, parks, and stairways

Bangladesh is undergoing rapid urbanization in recent decades. The urban population is growing at the rate of 7% compared to 1.5% nationally and projected to reach 5 million by 2030 from 39.4 million in 2005 (UN-POp 2007). They are mostly economic refugees' driven by both 'push' (poverty, landlessness, violence, natural disasters, etc.) and pull (job opportunities in formal and informal sectors, better wage rate, etc.) factors (Lee 1966). In case of children, role of violence and abuse by the family and the community is also emphasized underlying their rural-to-urban migration (Conticini and Hulme 2006). Major proportion of this migrant population land in the slums, but a substantial proportion squatter in the streets, becoming homeless or street dwellers. By definition, street dwellers "are the people who sleep on streets, railway

terminals and platforms, bus stations, parks and open spaces, religious centres, construction sites and around graveyards, and in other public places with no roof” (BBS 2001). They are the “mobile and vagrant category of rootless people who have no permanent dwelling units” (BBS 1999). In the western context, these street dwellers or the floating population are called homeless population.

A privilege is a right or an advantage, and people who are underprivileged lack such rights and advantages. Many times, this word is used as a synonym for poor. People often worry about underprivileged children who are living in poverty and may not have access to healthy food or good medical care. Underprivileged children often go to the worst schools too, which is another disadvantage.

Regardless of the reasons people live on the street, they are often blamed for crime and other antisocial activities that occur in cities, including commercial sex work, begging and drug use. Lacking regular employment and trapped in a vicious cycle of poverty, deprivation and social ostracism, with barely sufficient income to keep them above starvation level, some turn to crime. If acknowledged at all, city authorities are likely to view street dwellers in terms of social and environmental problems they may cause, such as blocking footpaths or creating hygiene hazards. In terms of public health, large numbers of poor people living in unsanitary conditions without access to 3.proper health care can constitute a source for disease transmission. People without sustainable access to safe drinking water and basic sanitation are also at significant risk for health problems.

On the contrary, this whole amount of homeless people can be seen as a manpower which can be used for our economic and social development. The starting can be done with the young age group of this huge population. In fact, there are some organizations which are thinking about this sort of development or solution. The street dwellers specifically the street children to youth group can be trained as an asset. But before they get trained they should be taken under the observation of medical facilitators or counselors. After that stage they can be trained in any sectors like horticulture, textiles, computer training, dance, art, crafts etc.

Thus, being aware of all the positive and negative aspects of underprivileged children, a solution can be derived for the betterment of our society. They can have education, medical facilities and training regarding horticulture and local crafts. When they will leave this place they can be

established and train other to have a better life style. The condition and value of local crafts and horticulture is very high now a days. These two aspects are easy to learn and train. So the holistic approach comprises these two sectors.

Hence, the aim of this project is to design a center for the underprivileged children with a notion of deducting the dropout rate of the educational institution and at the same time makes them self-dependend so that they can afford a better lifestyle through the learning and training

Project Brief

Project Title: SHOYOMBHAR- Centre for underprivileged children

Location: Bangshibari, Savar

Site Area: 12.5 acres

Client: JAAGO foundation

Project Introduction

Bangladesh has experienced one of the highest urban population growth rates (around 7% per year) over the past three decades. Dhaka, the capital city, attracts approximately 320,000 migrants from rural areas every year. The city is unable to provide shelter, food, education, healthcare, and employment for its rapidly-expanding population. An estimated 3.4 million people live in the overcrowded slums of Dhaka, and many more live in public spaces lacking the most basic shelter. While a small but growing body of research describes the lives of people who live in urban informal settlements or slums, very little research describes the population with no housing at all. Anecdotally, the homeless population in Dhaka is known to face extortion, erratic unemployment, and exposure to violence and sexual harassment and to engage in high-risk behaviors.

More than 60 million children live in Bangladesh; half of them grow up in the most abject poverty. Poverty, which affects a large majority of young Bangladeshi and is the result of a high unemployment rate, has severe repercussions on children's access to: a healthy diet, health services, an education, sufficient financial resources to overcome this poverty etc.

As a matter of fact they have to depend on very small type of earning sources like picking up from the waste, begging, laboring or even by being involved in criminal activity. They don't even

have proper housing and other facilities. They actually don't have any training regarding other work. So they are unemployed and cannot hope for a better lifestyle. But if anybody or any organization comes forward to help them they can hope for it. Fortunately there are some organizations which are thinking about this fact.

One of them is JAAGO who are thinking that a huge number of this mass can be trained as an asset. Eventually for doing that at first they should be under the observation of counselors. They can be given training regarding horticulture and local crafts as it is easy to learn and have demand both in our country and abroad. So this project is feasible as it can open many directions for the future.

Needs and Aims

Right now JAAGO is running 13 schools in our country for the street children in English version in our country. After a certain period of time these children will get vocational training in order to be employed and independent. JAAGO has a plan to open a vocational training centre with educational facility. What I want to do through this project is-

- Create a center that can facilitate the underprivileged children
- This center will work as a solution for decreasing dropout rate
- To provide recreational facilities, an environment of nature for the people there.
- To promote our local art, craft, clothing, agriculture as we have resources regarding these elements and they have value both in our country and abroad.
- Creating a stimulating, productive and healthy environment.
- Involving the community.
- Promoting productivity through activity and built environment "productive architecture".
- Serving community through providing spaces for common activities and selling products of inmates.
- Making JAAGO an enterprise where they will monitor both the school and the vocational training center and sell the products made by these children to different outlet or their own outlet.
- As a result the children will at the same time get an opportunity to have education and at the same time income for their daily need.

Given Program and Functions

There are four main sectors of the program of this Centre. They are-

- a. School
- b. Training center
- c. Craft production
- d. Enterprise

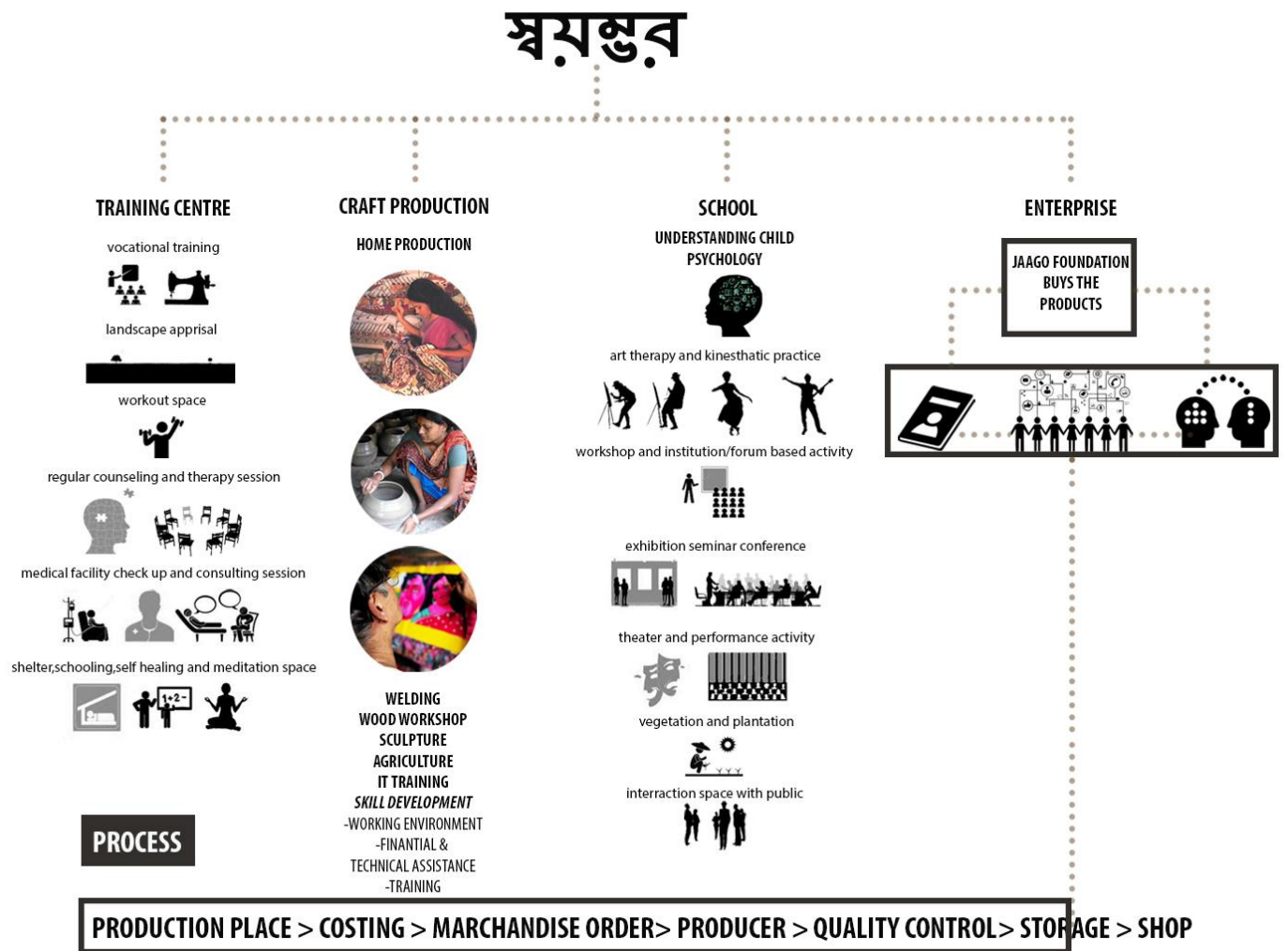


Fig:1.5: Project objectives (Source:Author)

The project aims to provide a comprehensive and radical solution for the issue of education for all in the Savar area. The broaden idea of the programs are given below-

- School
- School admin
- Classrooms

- Medical service zone
- Psychological counseling service
- Student and club activity
- Laboratory
- Child care service
- Interaction space
- Training centers
- Studios
- Allocated space for horticulture
- Allocated space for local crafts
- Exhibition point
- Buying and selling point
- Stimulation room
- Communication room
- Workshops
- Trainee's room
- Transitional spaces
- Audio visual room
- Enterprise's office area

Chapter 2

SITE

2.1 Reasons for choosing the stated site

2.2 Site at a Glance

2.3 climatic factor

2.4 Site Images

2.5 Site Topography

Chapter 2 : SITE

2.1 Reasons for choosing the stated site

JAAGO, a civil society organization (CSO) or a non-governmental organization(NGO) is the client for my project. Currently they are running 13 school under their observation. The senior most batch will take part in the JSC examination next year. After a certain period of time they will need some resources regarding vocational training.



Fig.2.1.1: Present location of JAAGO schools and student numbers (Source:Author)

Besides JAAGO has some plan regarding their future expansion. They are –

- Primary expansion
- Secondary expansion
- Tertiary expansion

According to their proposition savar is an area which is in their primary expansion zone. The area near bangshibari is mainly an industry and agriculture based area. Mostly low income people live here where their children do not get proper and quality education. So this can be an appropriate area where their children would be able to get quality education.

Another possibility is JAAGO has an online educational system which can be constructed in this area as there is a good communication system of internet. After proposing some site images and contextual analysis they were convinced to take this site as their own. They said that the natural setting they were looking for was here in the proposed site.

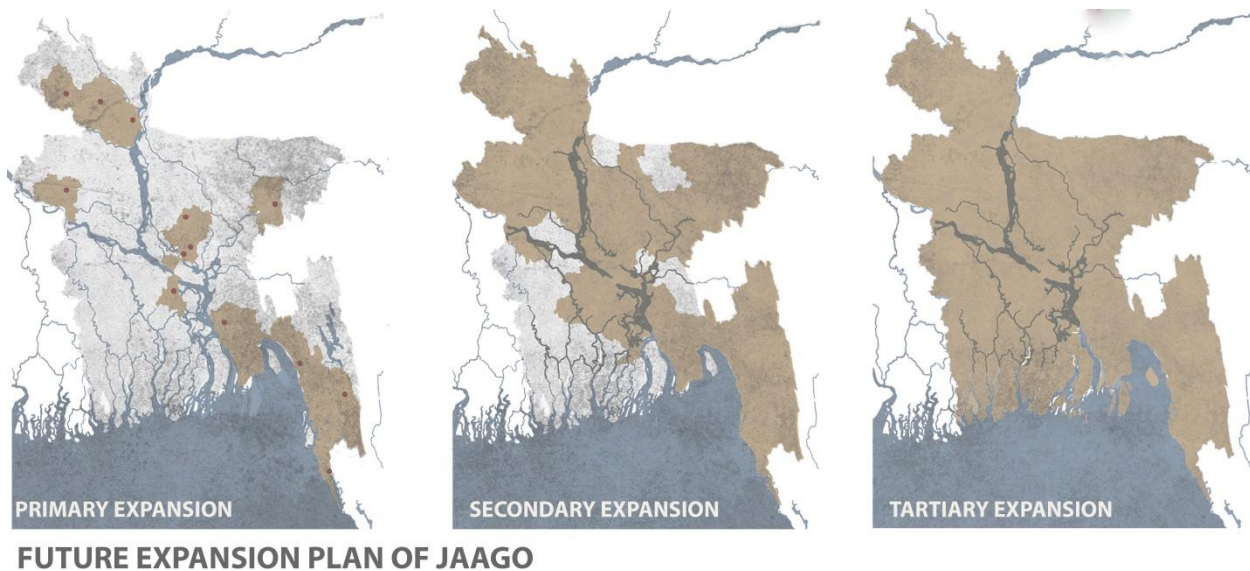


Fig 2.1.2: Future expansion plan of Jaago (Source: Author)

2.2 The Site

2.2.1 Background

2.2.1a About Savar

Savar is an Upazila of Dhaka District in the Division of Dhaka, Bangladesh. It is located at a distance of about 24 kilometres (15 mi) to the northwest of Dhaka city. Savar is mostly famous for Jatiyo Smriti Soudho, the National Monument for the Martyrs of the Liberation War of Bangladesh. Savar is located at 23.8583°N 90.2667°E. It has 66,956 units of household and a total area of 280.13 square kilometres (108.16 sq mi). It is bounded by Kaliakair and Gazipur Sadar upazilas on the north, Keraniganj upazila on the south, Mirpur, Mohammadpur,

Pallabi and Uttarathanas of Dhaka City on the east, and Dhamrai and Singairupazilas on the west. The land of the upazila is composed of alluvium soil of the Pleistocene period. The height of the land gradually increases from the east to the west. The southern part of the upazila is composed of the alluvium soil of the Bangshi and Dhalashwari rivers. Main rivers are Bangshi, Turag, Buriganga and Karnatali. The Bangshi River has become polluted due to industrial waste.

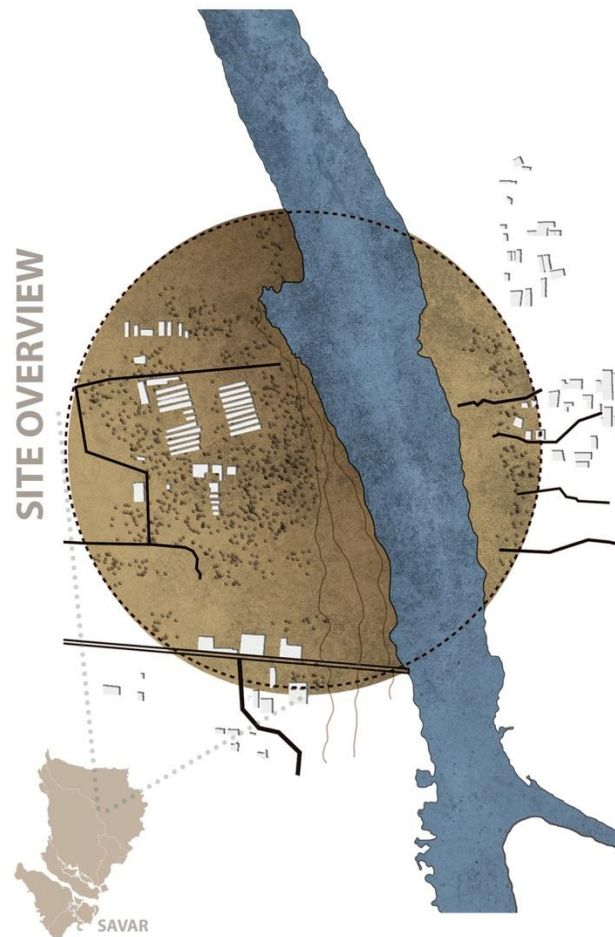


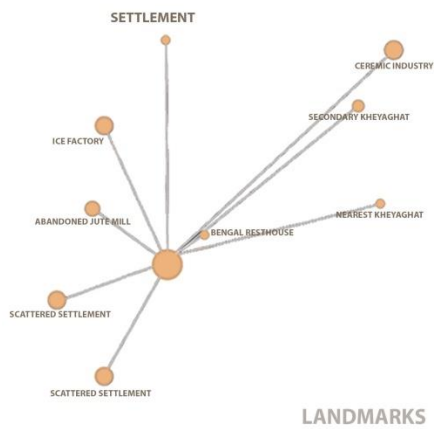
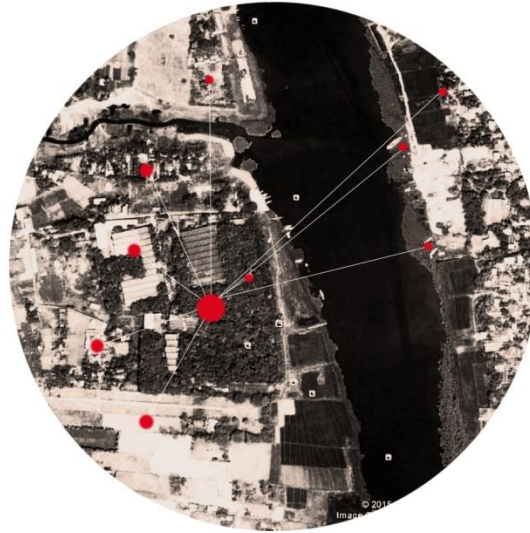
Fig.2.2.1.a: Site location (source: Author)

2.3 Site at a Glance

2.3.1 Site Location

The site is located in savar beside Bangshi River. The surrounding neighborhood is closely attached to this river. Overall topography is rather flat and local landscapes are very diverse. Degraded forest and settlement primarily occupy high land and areas used for agricultural mainly. The urban growth is very high in the east side and west side is filled with vacant land.

The only communication and transport way is boat between east and west sides. Transport by boat from savarthanaghaat, balurghaat and bhagolpurghaat.



LANDMARKS

SITE FORCES

Fig 2.3.1 a: Site connectivity and force (Source: Author)



Fig.2.3.1.b: Site communication way (source: Google earth)

CIRCULATION

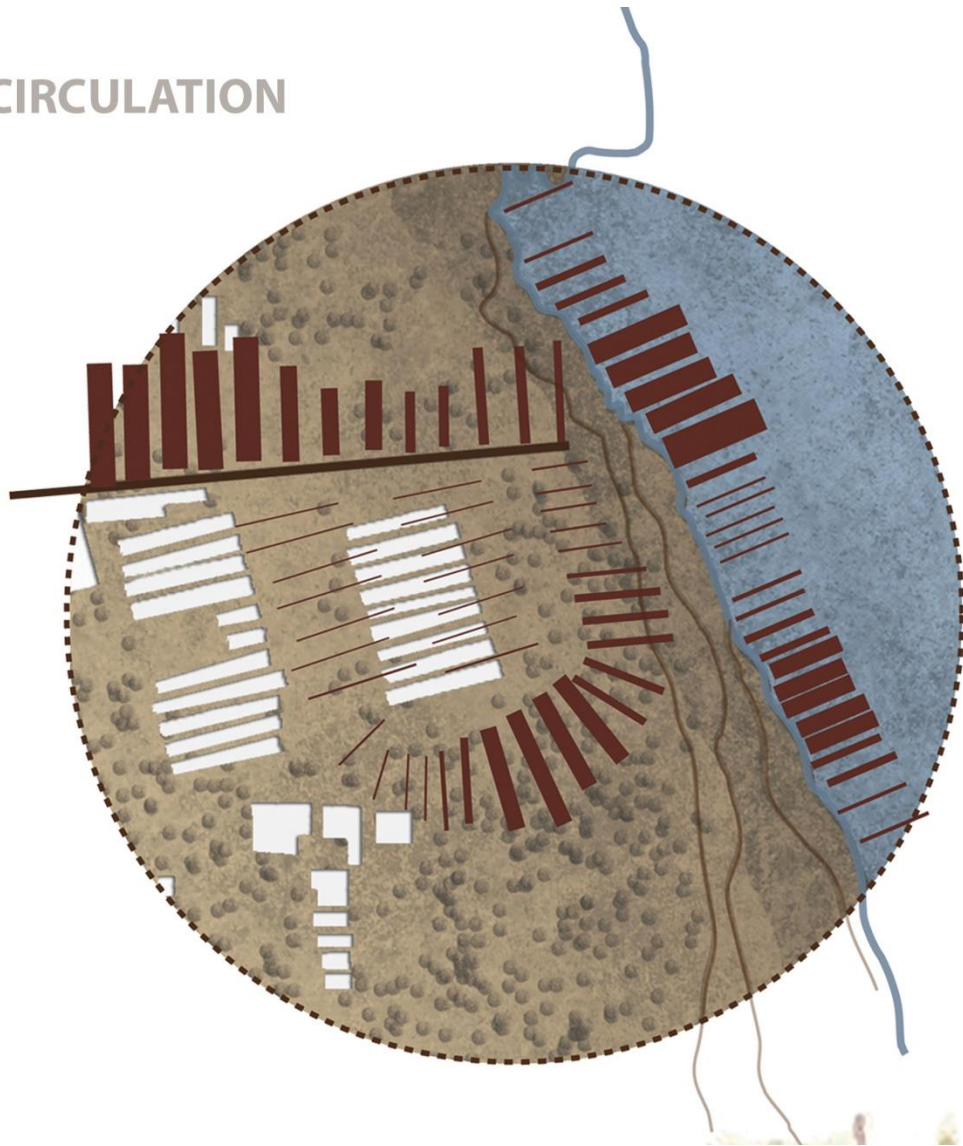


Fig: 2.3.1 c Circulation map (Source: Author)



SITE SECTION

Fig : 2.3.1 d Site section (Source: Author)

2.2 Climatic factors

2.2.1 Wind:

Wind speed of savar, Dhaka is quite low. In the month of June and July there is a rise in the speed when it reaches at 5 knots. The cyclonic wind occurs usually during the retreat of monsoon with the wind speed reaching up to 40-60mph. Most of the storm and stormy wind hits the locality from north-west side.

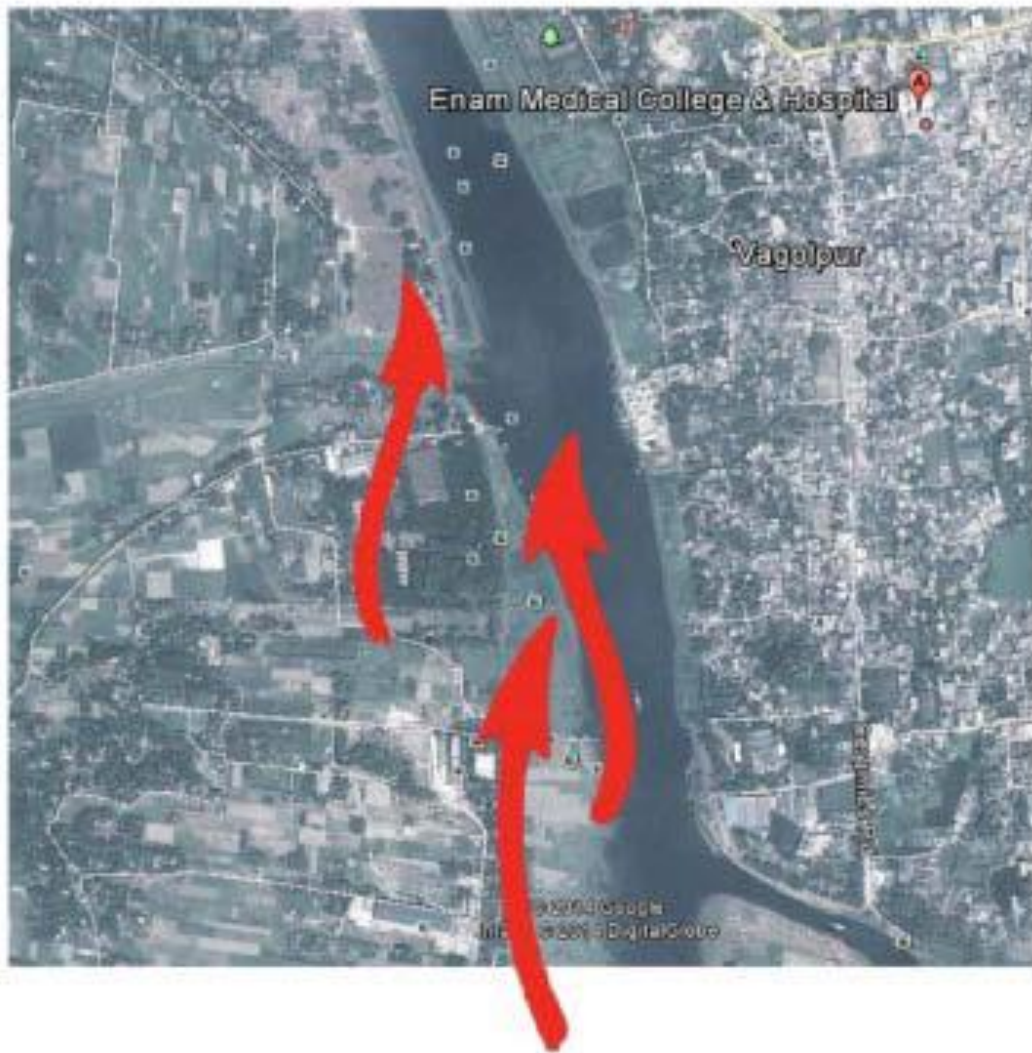


Fig.2.2.1.e: Site wind flow- north to south

2.2.2 RAINFALL

The driest month is December with 6 mm. Most precipitation falls in July, with an average of 372 mm.

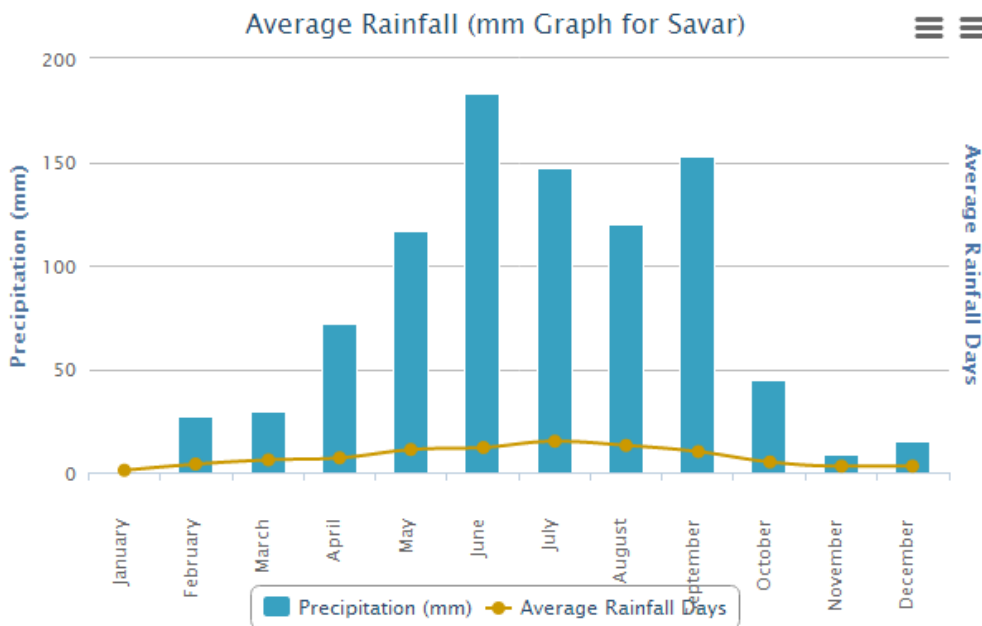


Fig.2.2.2.a Site's average rainfall

2.2.2 Temperature

The warmest month of the year is May with an average temperature of 28.9 °C. In January, the average temperature is 18.8 °C. It is the lowest average temperature of the whole year.

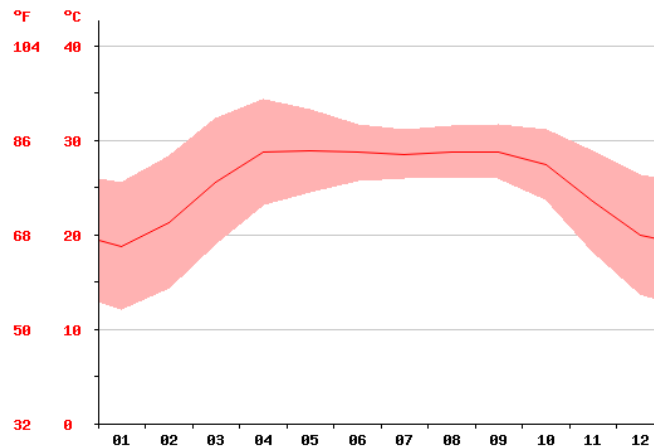


Fig.2.2.2.b Temperature graph of savar area (Source: <http://en.climate-data.org/location/123710/>)

2.2.3 Noise:

As the site is located just beside the river Bangshi and as this is the only way to go by boat so there is no noise problem around the site. The only noise comes from the engine boats and balurghaat, which is situated opposite of Bangshi River. Rows of trees provide several levels of buffer which also reduce the surrounding noises. Other than that, the entire site is very calm, quiet and soothing because of its natural settings.

2.3 Ecological factors

There are different kinds of trees located in scattered way throughout the site. There are some fruit trees like coconut, banana, guava, mango, jackfruit, papaya, Indian apple, lemon, etc. some flower trees are like krishnochura, radhachura, kathbadam etc. Timber trees such as mahogany, shegun etc are also there. There are couples of types of shrubs surrounding the site.

• Free floating plants

Name of trees: Krishnochura Beetle tree Mayhogoni Jambura Bamboo tree Koroil Coconut tree Punpata Banana tree Banyan tree There are two types of aquatic ecology, they are:

• Submerged floating plants

For example : floating grass, water hyacinth, water chestnut, water lily, etc.

2.4 SWOT Analysis

2.4.1 Strength:

- Bangshibari stands on the bank of bangshi river which creates dynamic characteristics.

- The site induces regional romanticism which provides inspiration as well as seclusion for contemplation required for creative exercise.
- The river separates the site from main urban dwelling which enables privacy.
- The traditional mode of transportation is by river which diminishes local dwellings.

2.4.2 Weakness:

- The remoteness of the site can be a problem in the time of emergencies.

The land can be flooded from river overflow. The dense wood surrounding the pose other possible threats.

2.4.3 Opportunities:

- The river can provide an extra attraction and experience for visitors as well as users.
- It will also help the local transporters and business.

2.4.4 Threats:

- The structure itself and dwellings can disrupt the natural habitats and ecology.

2.5 SITE PHOTOGRAPHS



Fig 2.5.a: site photos



Fig 2.5. b: Site photos

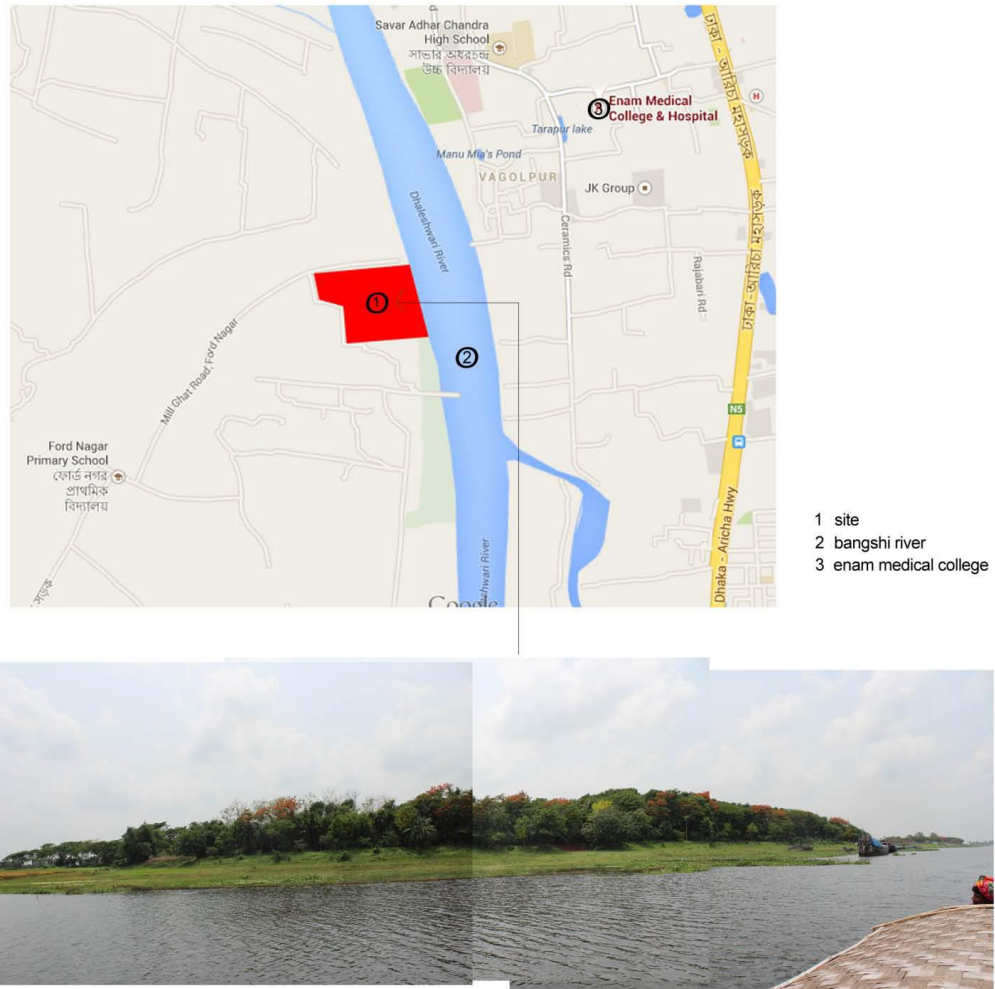


Fig 2.5.b: road map and panorama

CHAPTER 3

LITERATURE REVIEW

- 3.1 Understanding 'Underprivileged'
- 3.2 Understanding the importance of vocational training
 - 3.3 Condition of horticulture
 - 3.4 Condition of local crafts
- 3.5 Textile, Sewing and clothing production
 - 3.6 School and child psychology
 - 3.7 Enterprise System

CHAPTER 3: LITERATURE REVIEW

3.1 Understanding 'Underprivileged'

3.1.1 Definition and understanding

"People are not poor because it sounds like a great idea! They are poor, because they don't have other opportunities" -Rachel Maddow

Oxford dictionary states that being underprivileged is not enjoying the same standard of living or rights as the majority of people in a society: needy and underprivileged members of the community.

They are deprived through social or economic condition of some of the fundamental rights of all members of a civilized society without the money, possessions, education, opportunities, etc. that the average person has. The core problem that makes a person or a child underprivileged is poverty. Poverty, which affects a large majority of young Bangladeshi and is the result of a high unemployment rate, has severe repercussions on children's access to: a healthy diet, health services, an education, sufficient financial resources to overcome this poverty etc. As per definition of street dwellers, the respondents were drawn from the following four categories i) street children (≤ 18 years), ii) CSWs, iii) wage laborers (construction/transport/restaurant workers, street vendors, rickshaw/rickshaw-van pullers etc.), and iv) beggar.

3.2 Understanding 'Vocational training':

3.2.1 Definition:

Vocational training is used to prepare for a certain trade or craft. Decades ago, it used to refer solely to such fields as welding and automotive service, but today it can range from hand trades to retail to tourism management. Vocational training is education only in the type of trade a person wants to pursue, forgoing traditional academics.

Education is the most powerful weapon for fighting against poverty. In a developing country like ours VE is a must for economic upliftment and poverty alleviation. Poverty is probably the worst misfortune afflicting our countrymen. A very large percentage of our population remains miserably poor even today. It directly results in their being plagued by superstition, poor health and malnutrition and living in sub-human conditions in dark and dingy hovels. Of all the efforts that have been made to eradicate poverty, though total eradication of poverty from Bangladesh

is a distant dream, vocational education can play a vital role to improve their standard of life and to help them participate in national development.

3.2.2 Statement of the problem :

Vocational education means learning to change one's behaviour to enhance the quality of life through work and values, without or along with formal schooling. If the learning through the vocational approach enhances self-employment and economic productivity of the people then the war against poverty can be fought and conquered in a constructive way. Many countries like Thailand, Malaysia, Indonesia, Philippines have got a lot of economic benefits through Vocational Education (VE). So it has been proved that economic implications of VE are many, particularly for a country which has a vast population of adult illiterates. So the time has come for us to find out the role of vocational education in poverty reduction of Bangladesh. We also need to identify measures to make VE more effective in poverty reduction.

3.2.3 Rationale:

VE is basically life and need based education which can convert an un- skilled in experienced and illiterate population into human resources. Formal education system, because of its rigid chronologically graded structure and inflexible nature excludes the poor from its advantages. In this circumstance as the alternative of formal-education (FE) it is very much necessary to evaluate vocational education so that we can determine the extent of its success and weakness at any stage of poverty reduction as it is considered the best way to bring about longer lasting socio- economic change and self development.

3.3 Most common forms of rehabilitation process:

“A facility providing therapy and training for rehabilitation can be called as a rehabilitation centre. The center may offer occupational therapy, physical therapy, vocational training, and special training such as speech therapy.” (Mosby,2009)

Architecture fits into the process, as the outer shell providing the necessary support to the inner self-corrective therapy. There are of course no guarantees of success in such cases. However, at least the connection of interior design and community spirit as a means of molding a socially functioning individual forms an alternative that puts the individual first, as opposed to the medication institution like processes that have not managed to make any headway, both in attracting the trust of addicts who make the step to rehabilitation, as well as eradicating existing prejudices and public opinion views. The therapeutic community, as referred to earlier in the paper is not about being locked in, but a home in which the individual with the need for care, becomes part of the method of their gradual return to physical and emotional health, they become involved in the decision-making process, improving their creativity through the group.

The basic premise is to become the change within themselves, to sense that even though they live in a treatment community, the environment surrounding them is one in which they feel not part of the problem, but part of the solution on their way to re-learning the social process.

“Individual client members are involved in all decisions about their own care and treatment”

3.4 Understanding the importance of vocational training

Vocational training and education (VET) can be defined as a link between primary vocation training and further education within a structure of lifelong learning (Rauner, 2008). It is the means whereby past and present experiences could be reconciled to the present and future workforce. The effect would be lower operating requirements through better employment of workforce capability (Attwell, 1999). It plays an exceptional role in the development of a skilled workforce as a contribution on the road to innovation and economic competitiveness. It needs to come together with industry, commerce, craft trade, trade unions, other representatives of the social partners and with other appropriate organizations and agencies for the delivery and development of the VET programs and curricula (Attwell, 1999). In order for vocational training to be successful, the successes achieved through labor market, a knowledge-based economy, the struggle against social inequality as well as the awareness of a combined and highly qualified vocational framework is required. VET and higher education, each have distinguishing missions and the stakeholders of VET include students and the community.

The purpose of VET is not just to meet the needs of industry. However the way in which VET attempts to meet industry needs and the relative balance between task-focused and broader educational outcomes in VET may need to be re-evaluated (Wheelahan & Carter, 2001).

Skills development plays an integral part in the economic and social prosperity of individuals, employers, communities and nations worldwide:

FOR INDIVIDUALS

Individuals with higher levels of education earn significantly more over the course of their lifetimes than those with low skills.

- Training has a positive effect on mental health and physical health.
- Training can increase individuals' employability.
- Skills development gives people career progression and promotion opportunities.

FOR EMPLOYERS

Training can increase the likelihood of commercial survival. Firms which have a 'high enterprise dynamic', including a high level of skill amongst employees and individuals who are able to exercise judgment and responsibility, tend to have higher levels of productivity. Certain types of training can lead to improved quality, organizational strength, customer service, reduced complaints, staff retention, cost reductions and increased profitability.

FOR ECONOMY & SOCIETY

Increases in human capital have a positive and significant effect on economic growth. Skills development can play an important role in reducing poverty. Training can lead to reduced crime and repeat offending rates. Various aspects of education, such as curriculum design and communication, can have a positive impact on social capital and community cohesion. Lifelong learning can help redress gender inequities by supporting women to progress in their careers into higher paid jobs.

Skills development can have important benefits for local communities. DfID's Educating out of Poverty report, for example, stated: 'If individuals learn skills beyond the level of that of their family/immediate neighbours, they can confer benefits on their local community indirectly through starting enterprises that create employment, sending home remittances, introducing farming techniques that are imitated by neighbouring farmers, providing local services (e.g. teachers), providing positive female role models that challenge local perceptions, etc.

3.3 Condition of horticulture

3.3.1 History

Horticultural science is based on the fields of botany, plant physiology, and plant genetics. Other areas of study that are closely related to plant cultivation include soil science, chemistry and biochemistry, entomology, and plant pathology. Horticultural production relies on diverse technologies, depending on the species of plant being cultivated and its purpose. Specialized knowledge is required in various areas, such as pruning, sexual and asexual propagation techniques, and forcing flowering plants into bloom on schedule.

Horticultural research is conducted in the United States at land grant universities having horticulture programs. It is also carried out within private companies, at other academic institutions, and within state extension services. Extension services which are affiliated with a

land grant university, may also disseminate horticultural information and provide training through the master gardener program.

3.3.2 Present condition

Bangladesh has a primarily agrarian economy. Agriculture is the single largest producing sector of the economy since it comprises about 18.6% (data released on November, 2010) of the country's GDP and employs around 45% of the total labor force. The performance of this sector has an overwhelming impact on major macroeconomic objectives like employment generation, poverty alleviation, human resources development and food security.

3.3.3 Scope

Horticulture is a major business area, occurring on an international scale. Flowers are grown in many different countries and shipped around the world to their final destination. For example, many flower species and potted plants are sold through the Aalsmeer auction house in The Netherlands on a daily basis.

Seed production for the United States market often occurs in tropical areas to take advantage of the climate, which is mild enough to permit two to three cropping cycles each year. Lower labor costs provide another incentive, especially when hand-pollination is required, such as in production of hand-pollinated hybrid seed. In addition to production, many seed companies operate breeding programs in tropical areas, including Hawaii, Costa Rica and Kenya.



Fig: 3.5.3.a: Horticulture fair in India (source:google image)

Despite considerable improvement in the national rural health status, the nutritional well-being of rural people continues to be neglected. Children and women in Bangladesh suffer from high levels of malnutrition and micronutrient deficiencies such as low birth weight (LBW), undernutrition (underweight, stunting and wasting), vitamin A deficiency, iodine-deficiency disorders (IDD) and iron-deficiency anaemia (IDA). At the same time, new health problems related to over-nutrition such as obesity are emerging.

The underlying causes include (i) household food insecurity resulting from inability to grow or purchase a nutritionally adequate amount and variety of food; (ii) lack of dietary diversity; (iii) inadequate maternal and child care due to inappropriate hygiene, health and nutrition; (iv) low rates of exclusive breast feeding; (v) inadequate access to quality health services; (vi) poor environmental hygiene and sanitation along with low levels of income and maternal formal education. Malnutrition early in life has long-lasting and negative effects on overall growth, morbidity, cognitive development, educational attainment and adult productivity.

Because of this, the nutritional status of children, particularly below five years of age, is seen as one of the most sensitive indicators of a country's vulnerability to food insecurity and overall socio-economic development. Women of child-bearing age are also highly vulnerable to nutritional deficiencies because of increased need for food and nutrients during pregnancy and lactation.

Overall, it is estimated that up Inadequate consumption of fruits and vegetables is estimated to cause about 31 percent of consumption. Dietary diversification through horticultural food intake and supported by nutrition education is, therefore, seen as a sustainable approach to fighting micronutrient malnutrition. to 2.7 million lives could be saved every year with a sufficient increase in fruit and vegetable.

Most of the workers in Bangladesh are employed in the informal sector, with agriculture as the major sector of employment. The informal sector provides some 78 percent of total employment, of which 48 percent is in agriculture. Overseas employment of poorly skilled workers has also become a significant source of employment.

Every year, about 500,000 Bangladeshis migrate abroad. Around 10 million people of Bangladeshi origin are living and working abroad (SFYP, 2011). Agriculture was introduced as an essential course at the secondary level as a basic element of general education from

January 1994. The main areas the students study are an orientation to agriculture, horticulture, fishery and livestock. This kind of training will provide facilities for skill training through vocational education at the secondary level to about 0.7 million boys and girls. The subjects are taught initially by the field level experts (Rafique, 1994).

3.4 Condition of local crafts

3.4.1 History

A craft is a pastime or a profession that requires particular skills and knowledge of skilled work. In a historical sense, particularly as pertinent to the Middle Ages and earlier, the term is usually applied to people occupied in small-scale production of goods, or their maintenance, for example by tinkers. The traditional terms craftsman and craftswoman are nowadays often replaced by artisan and rarely by craftsperson (craftspeople).

Handicraft is the “traditional” main sector of the crafts, it is a type of work where useful and decorative devices are made completely by hand or by using only simple tools. Usually the term is applied to traditional means of making goods. The individual artisanship of the items is a paramount criterion, such items often have cultural and/or religious significance. Items made by mass production or machines are not handicraft goods. Handicraft goods are made with craft production processes.

Historically, craftsmen tended to concentrate in urban centers and formed guilds. The skill required by their professions is and the need to be permanently involved in the exchange of goods also demanded a generally higher level of education, and craftsmen were usually in a more privileged position than the peasantry in societal hierarchy. The households of craftsmen were not as self-sufficient as those of people engaged in agricultural work and therefore had to rely on the exchange of goods.

Once an apprentice of a craft had finished his apprenticeship, he would become a journeyman searching for a place to set up his own shop and make a living. After he set up his own shop, he could then call himself a master of his craft.

This system of a stepwise approach to mastery of a craft, which includes the obtainment functioning or its mass-produced goods would not or cannot satisfy the preferences of potential buyers. Moreover, as an outcome of these changes, craftspeople today increasingly make use of semi-finished components or materials and adapt these to their customers’ requirements or demands and, if necessary, to the environments of their customers of a certain amount of

education and the learning of skills, has survived modes of. Thus, they participate in a certain division of labour between industry and craft.in some countries of the world until today. But crafts have undergone deep structural changes during and since the era of the Industrial Revolution. The mass production of goods by large-scale industry has limited crafts to market segments. In our country this is also noticeable.

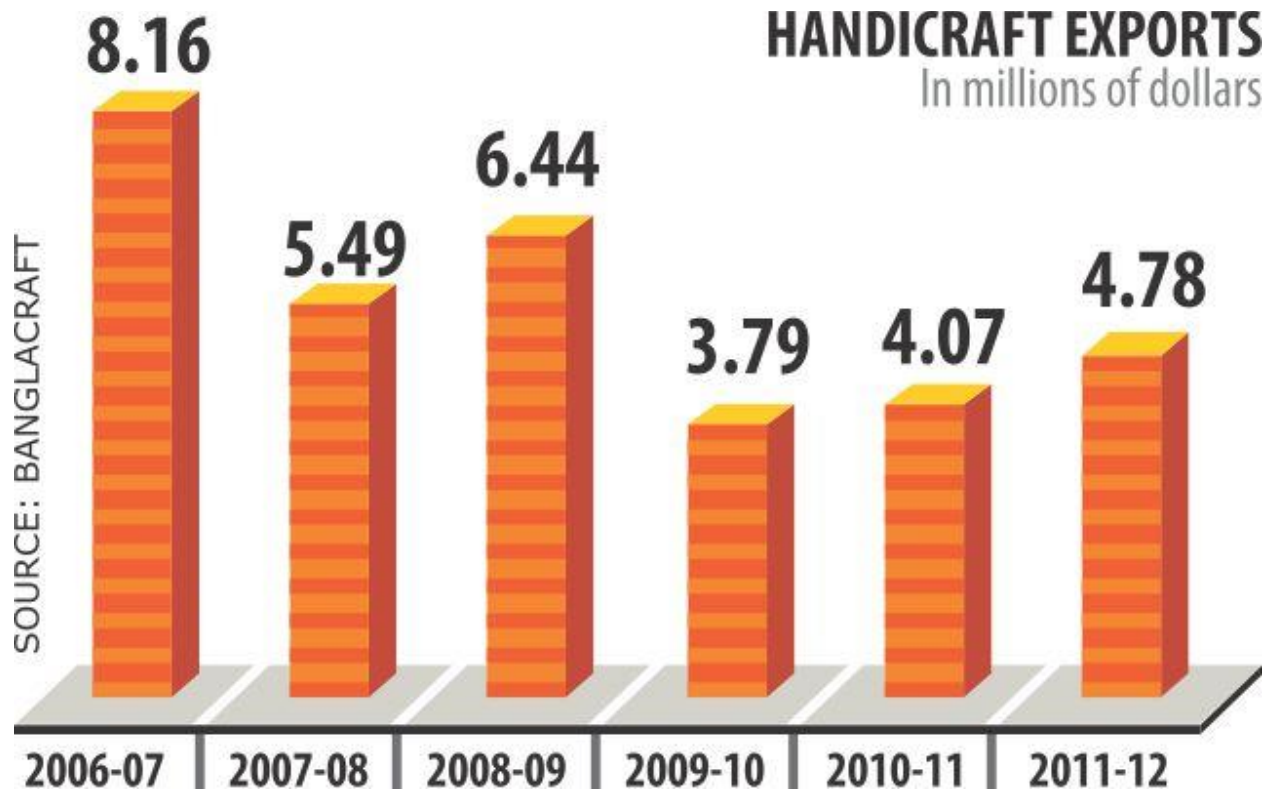


Fig 3.6.1 a Handicrafts exports percentage. (Source: BANGLACRAFT)

Handicrafts can pull millions out of poverty as women at grassroots levels are more or less able to produce handicraft items. Presently, more than 50,000 people are directly involved in the sector, but the number can be several millions if they are trained and given ideas on products and export markets, industry insiders said.

Though the US and Europe are the main markets for handicrafts, Latin America, central Asia, Africa and the Middle East could be the other potential destinations.

“Handicraft products are design-driven as consumers’ tastes change rapidly,” the Banglacraft president said.

But other countries are not sitting idle. They are exploring the export potential by investing in research and design.

So it is our core duty to regain our lost pride by promoting them and teaching others about them.

3.4.2 Traditional and economical value

Bangladesh is very rich regarding the field of local crafts. We have our own educational institution and museum in our country to expand the field of local crafts. We are to some extent successful to make this asset both nationally and internationally successful.

Although the demand for imports has drastically increased in recent years, the rich and indigenous handicraft products of Bangladesh have slowly but surely regained popularity. Our handicrafts are both beautiful and eco-friendly. The love for our own products is reflected in the interiors of our dwellings. We should highlight our natural, indigenous materials which we can use to furnish our homes with.

We chose not to focus on showcasing our local crafts, rather to concentrate on villages or peri-urban areas where people make livelihoods out of producing these eco-friendly handicrafts from clay, cane or bamboo.



Fig3.6.2.a: Rickshaw painting (source: google image)

The terra cotta art used in the Kantajee temple of Dinajpur is remarkable in terms of texture and quality. The “Neelpadma” found in the Lalmai of Comilla is unparalleled. Some of these artifacts have been kept in the site museums at various locations. The folk arts of these categories are now being used most tastefully in modern design.

Pottery has now become a commercially successful product in Bangladesh. The combination of pottery and green plants can be effectively used to enhance the interiors of any dwelling.

Glazed and unglazed khumba matkas (water pots), figurines of birds and animals, and other such products are easily available at Shishu academy, Mirpur road and the Dhaka railway station, among other places. Clay pots are widely available available in rural Bangladesh; kumars sell their products at the weekly village bazaars or in roadside stalls.



Fig 3.6.2.b: Pottery (source:google image)

Bamboo is widely available in many tropical countries; this is a popular choice of material for making baskets, fish traps, decorative toys, furniture and small accessories such as pen holders and pot plants. More people are waking up to the potential of bamboo furniture in city dwellings. Bamboo plays an instrumental role in the lives of Bangladesh's rural residents. Baskets made from bamboo are put to various uses; to carry fish, eggs, vegetables, fruits, bricks, other building materials and so on. In hilly areas like Bandarban, Khagrachari and Modhupur, tribal people still rely on eco-friendly goods for daily use, carrying grain, household goods and even their children in their baskets. (Banglapedia)

Bamboo painting is also magnificent art work. You might see "Muli baash" growing by the road on the way to Chittagong. Some of these muli baash have been placed amidst the potted greenery on the landing shown in the photos. They create a pleasant effect. It is easy to find bamboo artwork locally, as well as masks made of palm bark. These are usually made by illiterate people, and are not very expensive.

Cane is our traditional substitute for wood. Several hundred species of the Calmonideae family, better known as rattan or cane, are found in the tropical regions of Bangladesh, India, Indonesia, Malaysia, Thailand, China, as well as Africa and Australia. Cane furniture adds a classy touch to any household. Local cane baskets, table mats, place mats, trays and many other household goods are eye-catching. Rush is a beautiful eco-friendly resource. Rush is the name for tall, grass-like plants of various families, many of which have hollow stems. Rushes are used for basketwork, mats, chair seats and other articles. (Banglapedia)

Our pot chitro is an aesthetically brilliant artwork. In the past, the regions of Jessore and Mymensigh were popular for their specialization in pot chitro. Other well-liked home décor products are masks and handmade traditional pakhas, or hand-fans which are very vibrant and colourful. “Potochitra” is a very rich and very beautiful folk art of Bengal, and Shambhu Acharia is a legendary artist who works with this. A long potochitra has been placed in a narrow place for welcoming guests. Bamboo can be used for interior decoration as well.



Fig 3.6.2. c Cane and wood work for handicraft (Source: Banglapedia)

Rickshaw painting is another indigenous form of art that is unique to this region. In Bangladesh, R. K Das has been considered a pioneer of rickshaw painting since the 1950s. His subjects range from movie stars to depictions of village life and colourful cityscapes to pictorial interpretations of social issues to flora, fauna and animals. His work is exceptional in its combinations of colour and imagery. His painting “A Colourful City” looks striking on both white and blue walls. It is strongly reminiscent of our culture and tradition. (Banglapedia)

“Sarachitra” is another popular form of art. Sara refers to the lid of a clay pot. Folklorist Gurusaday Dutt once wrote that there was a time when each and every house in Bengal was like a little piece of art. Women of the households were known to decorate their walls, doors and windows by hand paint. (Banglapedia)

Bangladesh has a rich history of folk art. Although these art forms have transformed over centuries; it is a heritage of which we should be proud of for all time.

3.5 Textile, sewing and clothing production:

History and archeological discovery suggest that Bengal was famous in the distant past for her textile production. Cotton was the chief raw material for textile work and it was produced abundantly in Bengal. During the First century AD, Dhaka muslin became famous in Asia and Europe.

The varieties of muslin produced in Bengal were tanzeb, sarband, badan, khos, elebellay, sharbati, tarangam, kumish, turya, nayansukh, charkhana, malmal, jamdani, and addi. Besides muslin, weavers of Bengal produced such other fine fabrics as, shabnam (dewy) and abe rawan (running water).

These and many other fabrics of Bengal were noted for their fineness of texture, beauty of design, intricacy of weave, lightness of weight, and durability. Tantis however, produced many different types of clothes of daily use and most of them were coarse and cheap. The finer clothes are now rare in a tanti's workshop and they survive in the profession by weaving largely the daily wears for the common people.

Duarte Barbosa, a Portuguese traveler visiting Bengal in around 1518 mentioned in his writing some outstanding fabrics like 'memona', 'chowleri', 'cinebafa', and 'balilhar'. In 1670, the East India Company delivered a comprehensive detail of weaving in places of Bengal like Dhaka, Chittagong, Laxmipur, Kishoreganj and Bajitpur. Singham, kash, malmal, reshmi, nila and tofeta were the main forms of local fabrics.

Bengal textile industry began to decline from the beginning of the colonial rule. Textile of many varieties made the principal item of export trade of Bengal during the Mughal rule. The dominant status of textiles in export trade began to decline when England began to manufacture textiles soon after the Industrial Revolution. England imposed heavy duties on Bengal textiles and thus raising its prices in Britain. On the other hand Britain was exporting textiles to Bengal market duty free. Bengal textiles thus lost the world market. By the 1830s, Bengal lost her dominance in exporting textiles in the world market. From the 1850s, Bengal was turned into a market for British textiles. The main victims of British colonialism were the Tantis, who left textile manufacture for agriculture. (Banglapedia)

After 1947 and the partition of East and West Pakistan from India, most of the capital and resources of Pakistan came under the control of West Pakistanis. The textile industry thus stagnated in East Pakistan as momentum for development shifted from the eastern part of the country to the west. The west also grew more cotton than the east, which was used as a plea for developing the industry in the west instead of in the east. The majority of all industries in the east were also owned by West Pakistani industrialists. When Bangladesh gained its independence from Pakistan in 1971, the new government nationalized the textile industry, as it did with many other businesses in which West Pakistanis had been the principal owners. Although there were some Bangladeshi industrialists, they did not form a large or politically powerful group and thus had to surrender control of their factories to the government as well. All of the country's textile factories were then nationalized and organized under the Bangladesh Textile Mills Corporation, or BTMC. During the Pakistan period, the Pakistan Government allowed import of yarn on open general license and abolished sales tax on handloom products, which led to a tremendous growth of the industry in the early 1950s. After independence, Bangladesh Government set up a new Handloom Board in 1978, which took over the development of the handloom industry from the Small, and Cottage Industries Corporation. Since its formation, the Handloom Board has taken some policy measures to develop the industry. Handloom is considered as a priority sector for development because of some of its characteristics such as labor intensity, female employment, product demand and profitability. (Bangladesh Cotton and Textile Convention, 2006)



Fig 3.7.a Clothing of Bangladesh (Source: Google)

Currently, Handloom sector in Bangladesh consists of more than 0.183 million handloom units with 0.505 million handlooms and about 1 million handloom weavers of which about 50% are female worker. A manpower of about one million weavers, dyers, hand spinners, embroiderers and allied artisans have been using their creative skills into more than 0.30 million active looms to produce around 687 million meters of fabrics annually. Production of these handloom fabrics

is diffused in numerous production centers all over the country which are linked up by a network of primary, secondary and central markets. (Bangladesh Handloom Board, 2010)

As my client is JAAGO I wanted to incorporate their supporting projects as an sector too. Since 2009, JAAGO Foundation in collaboration with Bachhara, established our Sewing Centre to provide training and employment to parents – not only to reduce the drop-out rates but to empower women and create sustainable change.

To date the Centre has provided training to 460 women and employs 263 parents. Our ultimate objective of the Sewing Centre is to provide the women in Bangladesh with the opportunity to be self-employed and therefore strong and independent.

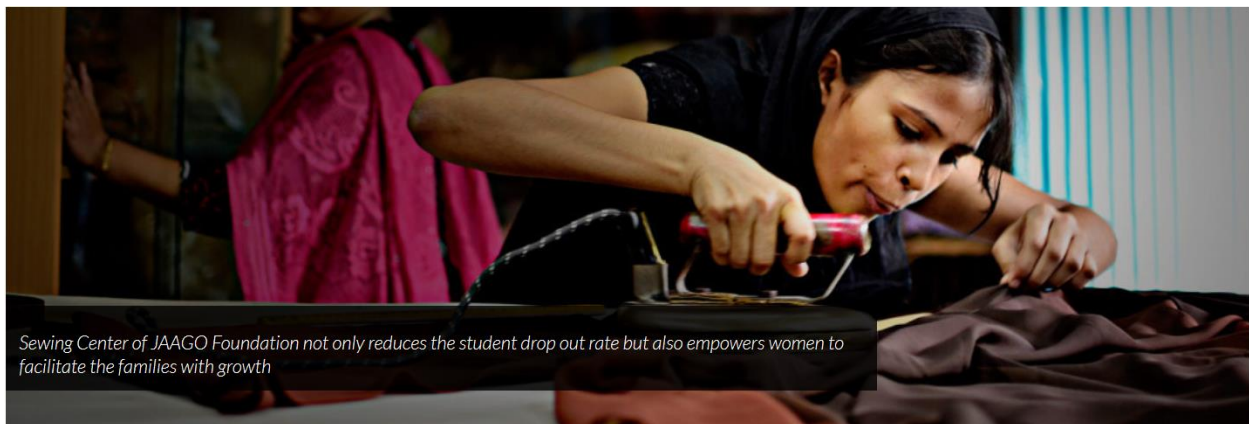


Fig 3.7.b Sewing center of JAAGO (Source: JAAGO)

Amanda Ryan, an Australian fashion designer who has spent her life volunteering with numerous charitable organizations, arrived in Dhaka just six months after the birth of JAAGO. In its infant days, JAAGO had trouble supporting itself, and Amanda identified the need for a sustainable stream of income. Thus, Amanda helped to establish our Sewing Centre and created her own fashion label, Bachhara. Bachhara retails items made at JAAGO's Sewing Centre in Australia, with each garment named after a JAAGO child and individualized by telling that child's personal story.

3.6 School:

A school is an institution designed for the teaching of students (or "pupils") under the direction of teachers. The concept of grouping students together in a centralized location for learning has existed since Classical antiquity. Formal schools have existed at least since ancient Greece, ancient Rome, ancient India (Gurukul), and ancient China (see History of education in China). The Byzantine Empire had an established schooling system beginning at the primary level. Islam was another culture that developed a school system in the modern sense of the word. Emphasis was put on knowledge, which required a systematic way of teaching and spreading

knowledge, and purpose-built structures. At first, mosques combined both religious performance and learning activities, but by the 9th century, the Madrassa was introduced, a proper school that was built independently from the mosque. They were also the first to make the Madrassa system a public domain under the control of the Caliph. (Wikipedia)

School provides education and it is meant to be for all. In every type of society in the developing countries education is sought because it is synonymous with power. It is a status-conferring symbol. It is the power that gives an individual or his family upward social mobility. One of the best ways to avoid being poor as an adult is to obtain a good education. People who have higher levels of academic achievement and more years of schooling earn more than those with lower levels of human capital. This is not surprising, since economists believe that schooling makes people more productive and that wages are related to productivity.

Learning environment is the fundamental right and an inevitable element for the child's overall development and has direct impact on psychological, physical and social well-being. Due to land scarcity and unplanned urban growth both government and private sectors are unable to provide sufficient area of land for school and college. So passive learning space of school such as play grounds, explore zone, experimental area, creative thinking, gathering and break out space are being lost day by day. To meet-up the demand of large number of students, classrooms are trapped into multi-storied buildings in a small site without consideration of passive learning and any other issues related to child development. As a result their overall development toward a successful citizen is greatly hampered. Turning this large population into a competitive human capital requires provision for proper learning spaces without any question. [Khan.M, 2014]

Few benches and a board do not turn a room into a classroom, and these rooms cannot make a school or a place where we are talking about nurturing tomorrow's future. A lot of a youngster's opportunity is spent sitting in a school classroom. This is the spot is where they will take in the different aptitudes esteemed fundamental and fitting for them to accomplish accomplishment in the worldwide society. The classroom is the place they will pick up a comprehension of their place on the planet and the endowments that they bring to the table it. It is the place the understudy creates what they need their future to resemble, and additionally learning of the abilities expected to achieve that objective. With the classroom being such a critical spot in the development of a tyke it is vital to comprehend the courses in which to influence this environment keeping in mind the end goal is to get the greatest adequacy in guideline.

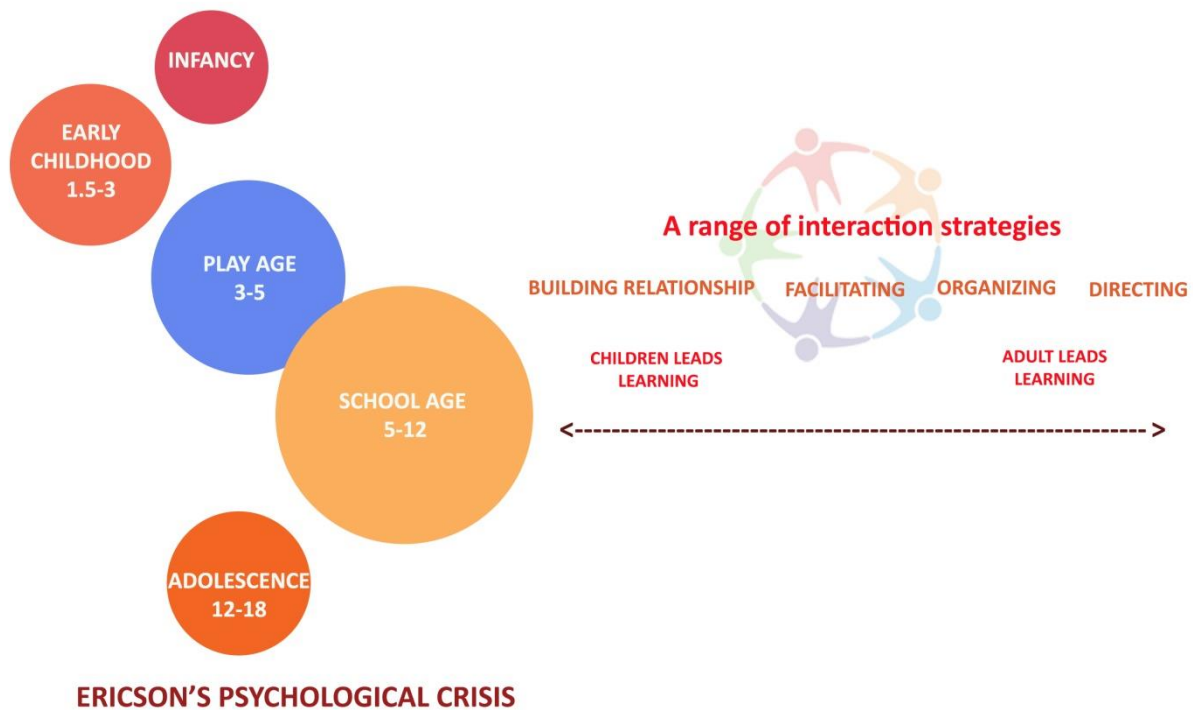


Fig 3.8.a Children interaction pattern (Source: Author)

In the event that schools truly do assume an expansive part in showing the cutting edge the most effective method to be fruitful individuals from society then every precautionary measure ought to be taken to verify that the learning environment is one that helps understudies flourish. These things matter as we are talking about EDUCATION not literacy. . [Khan.M, 2014]

But when we are talking about underprivileged children we have to consider some other aspects. For example they have a background history. Some of them are from broken family some are troubled children. Some of them are disable. So an additional training is needed for the teachers who will teach there. In Bangladesh, education is free, and it is mandatory for children between 6 and 10 to attend school. However, child labourers, handicapped children, native children, etc. only rarely have access to education. Their right to education is not respected.

This is also true for children from poor communities (especially boys) who must often abandon their education to be able to help their family financially. The quality of education is not very good because a third of professors teach without a diploma. Additionally, infrastructures are outdated: the lack of separate sanitary facilities for girls, the lack of ventilation and lighting, etc. Also, the abuse some children face in the school setting remains widespread. In fact, studies

have shown that children were physically abused by their teacher and that girls were often sexually harassed at school or on their way to school. Bangladeshi children, in public and private establishments as well as in their families, undergo different forms of violence and negligence. In school, for example, teachers often mistreat their students. The police are also known for their use of force, even towards juvenile offenders.



Fig 3.7.b Teaching process in JAAGO school (Source:Author)

In Bangladesh, corporal punishment and degrading treatments are the norm because they are allowed by law and society.

As distance is an obstacle to find proper teachers, Online school is an option for these sectors. Some schools offer remote access to their classes over the Internet. Online schools also can provide support to traditional schools, as in the case of the School Net Namibia. Some online classes also provide experience in a class, so that when people take them, they have already been introduced to the subject and know what to expect, and even more classes provide High School/College credit allowing people to take the classes at their own pace. Many online classes cost money to take but some are offered free. Internet-based distance learning programs are offered widely through many universities.

Instructors teach through online activities and assignments. Online classes are taught the same as physically being in class with the same curriculum. The instructor offers the syllabus with their fixed requirements like any other class. Students can virtually turn their assignments in to their instructors according to deadlines. This being through via email or in the course webpage. This is allowing students to work at their own pace, yet meeting the correct deadline. Students taking an online class have more flexibility in their schedules to take their classes at a time that works best for them. Conflicts with taking an online class may include not being face to face with the instructor when learning or being in an environment with other students. Online classes can also make understanding the content difficult, especially when not able to get in quick contact with the instructor. Online students do have the advantage of using other online sources with assignments or exams for that specific class. Online classes also have the advantage of students not needing to leave their house for a morning class or worrying about their attendance for that class. Students can work at their own pace to learn and achieve within that curriculum.

The convenience of learning at home has been a major attractive point for enrolling online. Students can attend class anywhere a computer can go—at home, a library or while traveling internationally. Online school classes are designed to fit your needs, while allowing you to continue working and tending to your other obligations. Online school education is divided in to three subcategories: Online Elementary School, Online Middle School, Online High school. (Wikipedia)

3.7 Enterprise system:

The term "enterprise" has two common meanings. Firstly, an enterprise is simply another name for a business. You will often come across the use of the word when reading about start-ups and other businesses..."Simon Cowell's enterprise" or "Michelle set up her successful enterprise after leaving teaching". Secondly, and perhaps more importantly, the word enterprise describes the actions of someone who shows some initiative by taking a risk by setting up, investing in and running a business. A person who takes the initiative is someone who "makes things happen". He or she tends to be decisive. A business opportunity is identified and the person does something about it. Showing initiative is about taking decisions and being bold – not everyone is like that!

Risk-taking is slightly different. In business there is no such thing as a "sure fire bet". All business investments carry an element of risk – which is the chance or probability that things

will go wrong. At the worst, the risk of an enterprise might mean the person making the investment loses all his/her money or becomes personally liable for the debts of the business. The trick is to take calculated risks, and to ensure that the likely returns from taking a risk are enough to make the gamble worthwhile. Someone who shows enterprise is an "entrepreneur". (Business today)

But there is some sustainable enterprise system that actually works if it is planned properly. For example finding out the proper plan what is now trending in the market or which is the demanding goods. Who are going to produce, where will be the production place, quality control method, marketing process these are important. For example the system of Aarong is one of them.

Aarong utilizes decentralised manufacturing process to accomplish its goal as a social business by employing production workers in various rural and semi-urban areas. A purely commercial business would locate its production centres in concentrated areas where infrastructure and a low-cost labour supply are available. Many of the products are produced in off-site locations by workers who have very little exposure to the final products that are sold at the retail level. Aarong has more than 800 micro, small, and medium entrepreneurs in 60 districts and produces goods through its own production centres, including the AAF production centres and sub-centres. The AAF production largely focuses on textiles while the external independent producers cover the non-textile items such as, pottery and jewellery expert tailoring work. Aarong's export business started in 1986, with an initial order from Traidcraft, a UK-based fair trade organisation. Aarong is a recognised fair trade organisation and a provisional member of IFAT, the global network of fair trade organisations. Based on Aarong's reputation as a social business, it has successfully grown its export customer base over the last 20 years through the addition of a number of fair trade organisations in Europe, North America, Australia and New Zealand. In 2007, nearly five per cent of sales came from exports, approximately 85 per cent of which were to fair trade organisations and the remaining 15 per cent to commercial organisations. The fair trade organisations are mostly wholesalers that channel products to retail outlets such as world shops or fair trade shops. Goods sold in this form are usually marketed under the importers' brand; however, retailers tend to attach stories in the tagline or promotional materials about Aarong and the social and financial benefits it provides for the development of the underprivileged artisans. Aarong maintained a London-based franchise that accounted for approximately 11 per cent of the total export sales in 2007. Aarong franchised itself in London to cater to the needs of the large Bangladeshi community living in the region. However, the

franchise was not continued after 2010 in anticipation of launching an e-commerce website. In 1991 and 1992, Aarong opened its own retail outlets in Vancouver and London. Due to poor management and inventory control both locations were closed in 1994; however, Aarong remains focused on a long term strategy to enter the mainstream Western markets.(Wikipedia)

CHAPTER 4:CONTEXT

4.1CONTEXTUAL ANALYSIS

4.1 Contextual analysis:



Industry
 Residence

Fig 4.1.a Site mapping (Source: Author)

The given site is surrounded by many industries. There are agricultural lands as well. So maximum people who live there has a profession based on industry or agriculture. Moreover, most of the people over here belong to low income group. They send their children to work in these industries instead of sending them to school. Because at some point these children become one of the major income sources for the family. For a society like this a center can be a solution for these children where they can read and earn at the same time.

Bangladesh is blessed with many horticultural crops. More than 90 vegetables, 60 fruits and 25 spices are being grown in the country. Major vegetables include potato, tomato, brinjal, cabbage, cauliflower, aroids, pumpkin, bottle gourd, cucumber, pointed gourd, bitter gourd, hyacinth bean and yard long bean. In case of fruits, banana, pineapple, papaya, jackfruit, mango, guava, lemons, pummelo, litchi and jujube are important. Major spice crops are chili, onion, garlic, turmeric and ginger. Flowers and ornamental plants including orchids are innumerable and their statistics on number and extent of cultivation/nd their statistics on number

and extent of cultivation/ production are not available. Some of the popular flowers are rose, gladiolus, tube rose, dahlia, chrysanthemum, marigold, night jasmynes and belly. The total cultivated area of horticultural crops is about 0.69 million hectare which is about 5% of the total cropped area (BBS 1996).



Fig 4.1.b: Site analysis (source: Bing map)

The chosen site is in savar. The nearby community across the river and mainly concentrated on the east side. The main occupation around the community in the west wing is mainly agro based works and only a few of the inhabitants work as an industrial worker. But in the east side there are diversity regarding occupation. As a result if horticulture and training on local crafts is promoted here through the centre. The USAID Horticulture Project in Bangladesh aims to educate and train local farmers on innovative agricultural technologies that help diversify crops to increase nutritional value. With their partners the International Potato Center, AVRDC – The World Vegetable Center, BRAC and Bangladesh Agricultural Research Institute (BARI), they are working with local farmers to diversify diets and agricultural production systems with potato, orange-fleshed sweet potato, summer tomato, and nutritious indigenous vegetables. Meet some of the women farmers that have benefited from training in grafting tomato and producing sweet potato seedlings. So this ample space can be an example which will eventually help the community to grow.

Lastly the chosen site gives us a notion of peace. So if this center is built this can be a breathing spot and inraction centre for the local community as well. For instance there is no vehicular access in the chosen site. The only communication and transport way is boat between east and

west sides. Transport by boat from savarthanaghaat, balurghaat and bhagolpurghaat. A rehabilitation centre is a healing space for the people. The calm and peaceful environment will eventually help in this aspect.

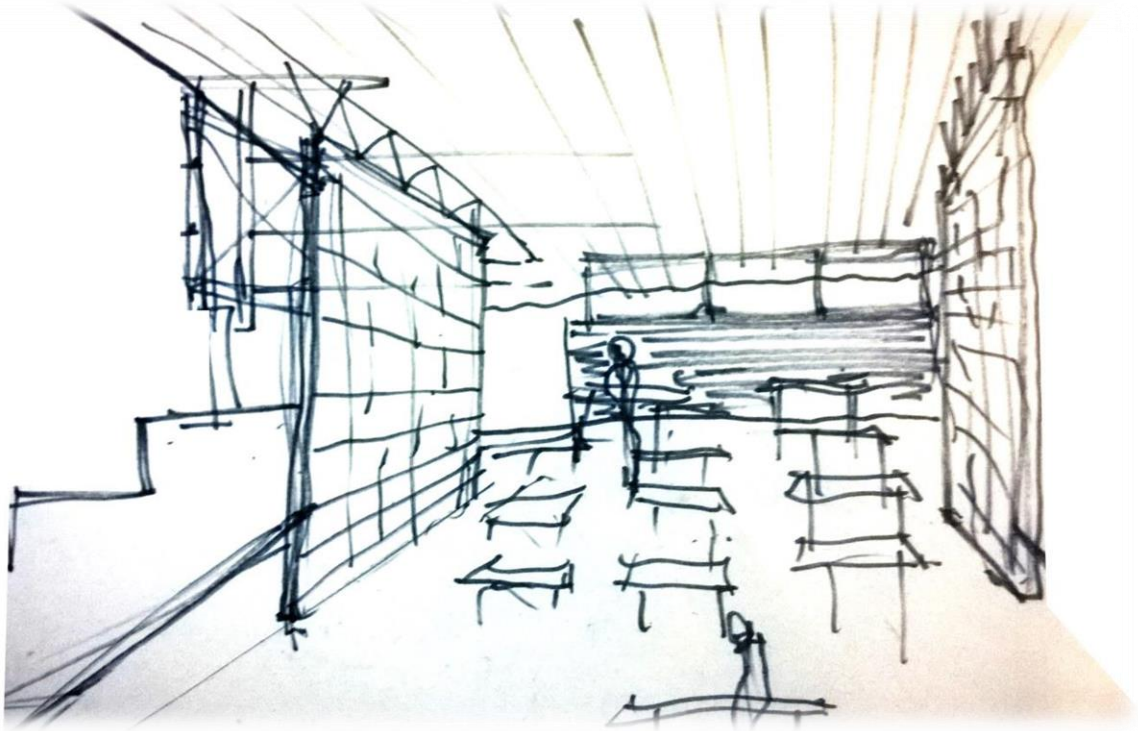


Fig 4.1.c:: conceptual space (source Author)

CHAPTER 5

5.1 Case studies

5.1.1 Local case study

5.1.2 International case study

CHAPTER 5:CASE STUDIES

5.1 Case studies

5.1.1 Local case study

SOS shishu polli bogra:

Design Criteria:

Central courtyard surrounded by 10 family houses admin, school, college & social center located near the entry community house+guest & aunts' rooms & multipurpose hall located beside the admin director's house, youth hostel & staff quarter at the rear side

Style:

- 5 acres site on 2 levels
- natural contours used to create landscape at different levels
- steps are for sitting by mothers & children, enhances community bonding

Maintain scale:

- one/two-storied buildings to have intimate & domestic scale
- pitched roof to scale down heights
- greens created in different layers for children's scale



Fig 5.1.1 a: typical building type and open spaces(Source: SOS shishupolli website)

Circulation

- pathways connect all functions
- whole village is pedestrian zed
- different levels of walkways breaks monotony changes vision
- defines individual space

Hierarchy of open space

- courtyard connects all houses,
- a view of open space
- gathering spaces for formal & informal chats >community spaces
- individual playground >sports
- public square >courtyard > slot & niches

Hierarchy of functions

- spaces connect interior & exterior through active transitional spaces
- public space > semi-public space> private space>institutional space(formal) > residential space(informal)



Fig 5.1.1 b:Hierarchy of spaces (Source: Farmin Ahsan , dissertation, BRAC UNIVERSITY)

Climatic aspects

- better wind flow
- orientation is considered
- cross ventilation & natural light
- using brick to reduce cost

5.1.2 International case study:

Rehabilitation Centre Groot Klimmendaal
 Firm: Architectenbureau Koen van Velsen
 Location: Arnhem, the Netherlands.
 Site Area: 14000.0 sqm
 Completion: 2011

Main program(s):

The three-storey building is clad in brown anodised aluminium and comprises offices, a clinic, sports facilities, a swimming pool, a restaurant and theatre.

Park:

Full height glazing along the central space connecting the various different internal elements of the building ensures an almost seamless continuity between interior and exterior. The meandering facade in the restaurant results in a building in between trees and invites the forest inside the building. The surrounding nature has a strong visual and tangible presence everywhere in the building; it allows the user to revalidate whilst walking.



Fig 5.1.2 a: Exterior (Source: Archdaily.com)

Diversity

The arrangement of the programme is clear. Below are offices, above are the clinical area's and on the roof a Ronald McDonald House with its own identity. The double-height ground floor at entrance level facilitates the special elements of the programme such as a sports facility, fitness, swimming pool, restaurant and theatre. Not only patients but also family members and members of the local community (schools, theatre groups etc) use these facilities on a regular basis. As a result, both patient and building are placed at the centre of the community.

Healthcare

The care concept is based on the idea that a positive and stimulating environment increases the well-being of patients and has a beneficial effect on their revalidation process. The design ambition was not to create a centre with the appearance of a health building but a building as a part of its surroundings and the community.



Fig 5.1.2.b:spaces (source: archdaily)

A combination of large and small voids and light wells ensure a spatial connection between different levels and allow natural daylight deep in the heart of the 30metres wide building. Interplay of striking but subtle colours and direct and indirect (artificial) lighting enlivens the interior.

There's actual science behind turning a health-care facility into a little, needle-wielding Walden, as Dr. Esther Sternberg writes in the fascinating, informative book *Healing Spaces: The Science of Place and Well-Being*. For instance, she describes how hospital patients with a view of trees require fewer pain meds than patients with a view of a brick wall. By that logic, the Groot Klimmendaal might as well toss its entire stash of morphine.

The architecture mucky mucks clearly see something in the rehab center, too. It was announced recently as one of six finalists in this year's European Union Prize for Contemporary Architecture "Mies van der Rohe Award".



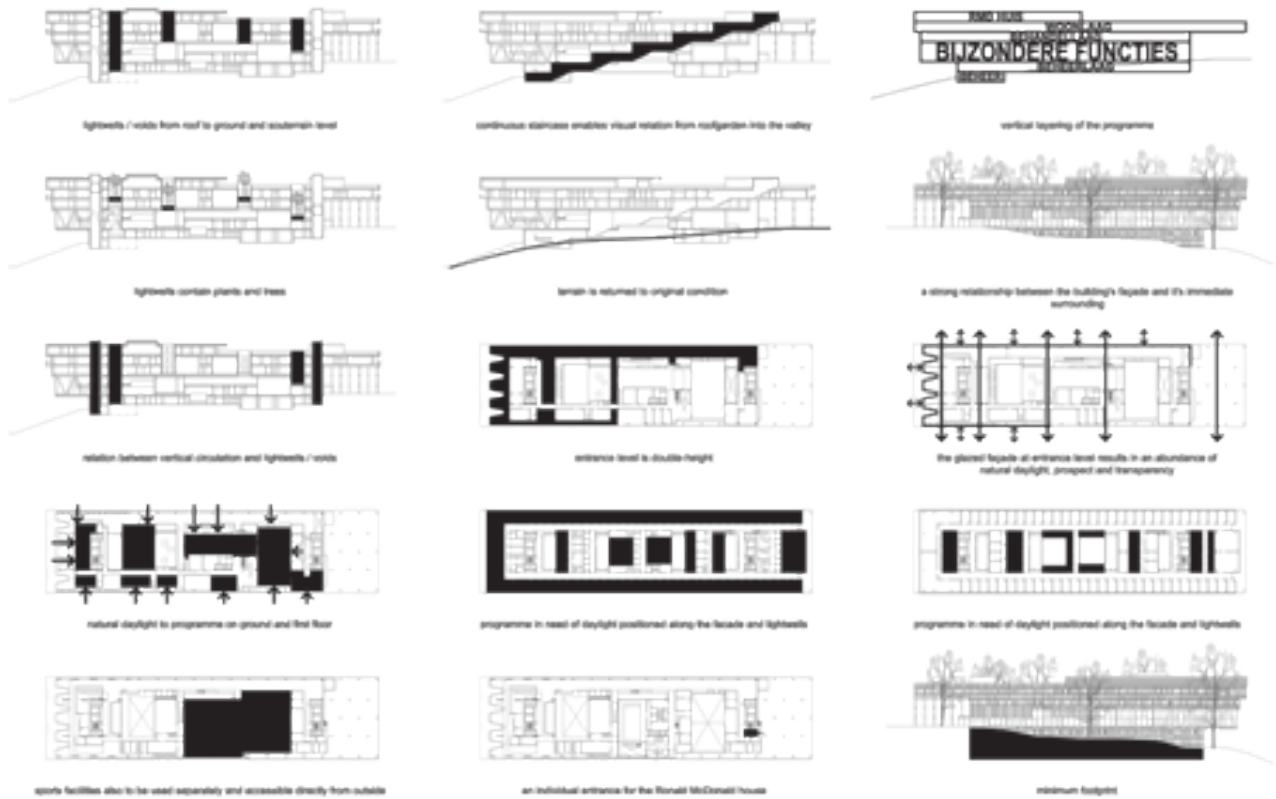
Fig5.1.2.c:Phase and site plan (source: Archdaily)

Sustainable

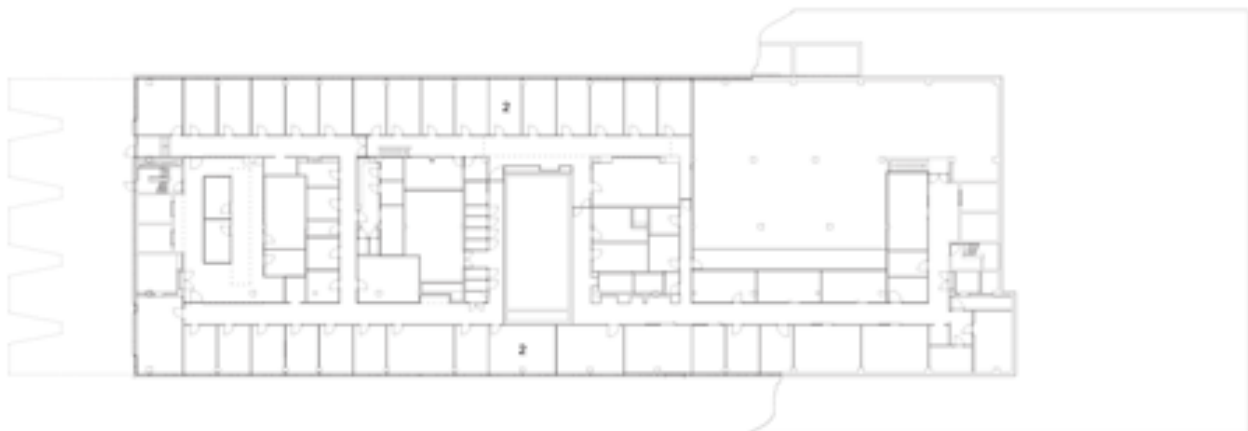
The use of energy is amongst others reduced by the compact design of the building and the design of the mechanical and electrical installations. Most notably the thermal storage (heat and cold storage) contributes to the reduction of energy consumption.



Fig 5.1.2.d:: interior (source:deezeen)



explanation



0 20 m

level -1

- 1 entrance
- 2 office
- 3 gymnasium
- 4 swimming pool
- 5 theatre
- 6 restaurant
- 7 fitness centre
- 8 room for patient
- 9 living room
- 10 ronald mcdonald house
- 11 void
- 12 patio

Fig 5.1.2.e::Concept formation and ground floor plan (source:arch20)

The choice of selecting sustainable building materials and materials requiring little maintenance for floor finishes, ceilings and facade cladding result in a building which can be easily maintained and with a long lifespan. The building has been custom made for its users but the design offers at the same time opportunities for different ways of using the building and the inevitable transformations of different departments within the client's organization.

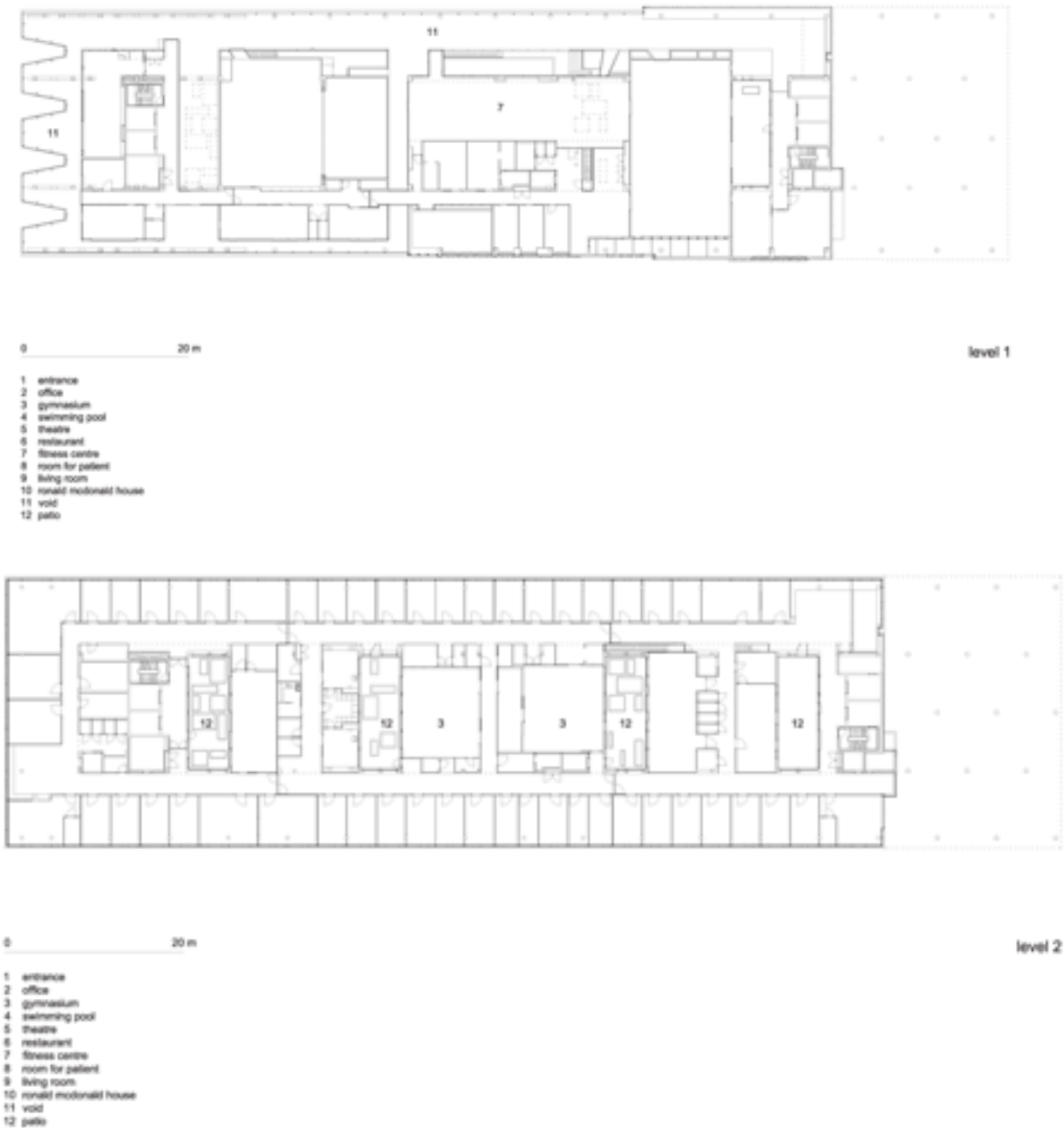


Fig 5.1.2.f: First and second floor plan (source: arch20)

Revalidation centres “Groot Klimmendaal’ is a coming together of both complexity and simplicity with attention for physical, practical and social details. Transparency, continuity, layering, diversity, the play of light and shadow and the experience of nature are all ingredients of this stimulating environment.

CHAPTER 6

6.1 PROGRAM DEVELOPMENT

Chapter 6: PROGRAM

6.1 Program development:

Based on the types of activities to be hosted here, this thesis proposal categorizes its programmatic development into three distinct typologies: rehabilitation spaces , training spaces and interaction space. Please note that these categories of spaces are further broken down to specialized spaces, and are to be further connected to each other through transitional thresholds.

Zone	Functional activity	Number of people	Area
School	Reception		2000
	Lobby & waiting		1500
	School admin	10	1000
	Toilet (M-3,F-3, Disable-1)		400
	Preschool learning	50	1500
	Day care	20	1500
	kitchen		300
	Toilet (M-3,F-3, Disable-1)		400
	8 Classroom(class 1-8)	25x8=200	1000x8=8000
	Toilet block 3 (M-3,F-3, Disable-1)		400x3=1200
	Library	150	6000
	Outdoor reading area	100	4000
	Semi outdoor reading area	50	2000
	Primary school interactive zone		5000
Junior interactive zone		5000	
6 Classrooms (Class9,10)	25x6=150	1000x6=6000	
Toilet block 2 (M-3,F-3, Disable-1)		400x2=800	
Club activity	20-25	1000	
Laboratory (3)	25	1500x3=4500	
Indoor games room	100	10000	
total		62100	
30% circulation		18630	
Total		80730	
Training center	Trainer's room	15	1500
	Medical support	10	2000

	Agriculture workshop	25	1750x2=3500
	Storage		500
	Mechanical workshop	30	5500
	Electrical workshop	30	4000
	Locker and shower room		650
	Sculpture & pottery	30	5000
	Graphic art and painting	30	2500
	Handicraft	40	4000
	IT training	30	3500
	Storage		1500x2=3000
	Washroom		400x2=800
	Total		36450
	30% circulation		10935
	Total		47385
Enterprise	Reception		2000
	Waiting		1500
	General office		2500
	Finance and IT sector		1500
	HR office		2000
	Meeting room		1000
	Storage		1500
	Shop		2500
	Audio visual room		5000
	Training room		3000
	Washroom		400x2=800
	Total		23300
	30% circulation		6990
	Total		30290
Other	Café		15000
	Amphitheater		12000
	Exhibition court		5000
	Walkthrough Gallery		8000
	Open classroom		2500
	Total		42500
	30% circulation		12750
	Total		55250
	Grand total		213655

Chapter 7: Conceptual Stage and Design Development

7.1 Introduction

7.2 Concept Development

7.3 Form Development & Programmatic Layout

7.4 Final Design Drawings

7.5 Final design models

Chapter 7: Conceptual Stage and Design Development

7.1 Introduction

Unprivileged children are very sensitive group of human being. They have different background. They are insecure, some have some physical disabilities, some belong from broken families and some of them don't even have a family. So My aim was how to make them confident and how can they continue to get education and at the same time support their family by being self-dependent.

7.2 Concept Development

As one of my design priority was low cost construction I used one of my man site force which is an existing abandoned industry. It was a jute mill industry with a clear height of 30 feet.



Fig 7.2.a Existing industry

As there was two separated form in the industry I took one of them as a school block and another one as the block for vocational training which will be later connected by another form which will contain the enterprise.

FORM GENERATION

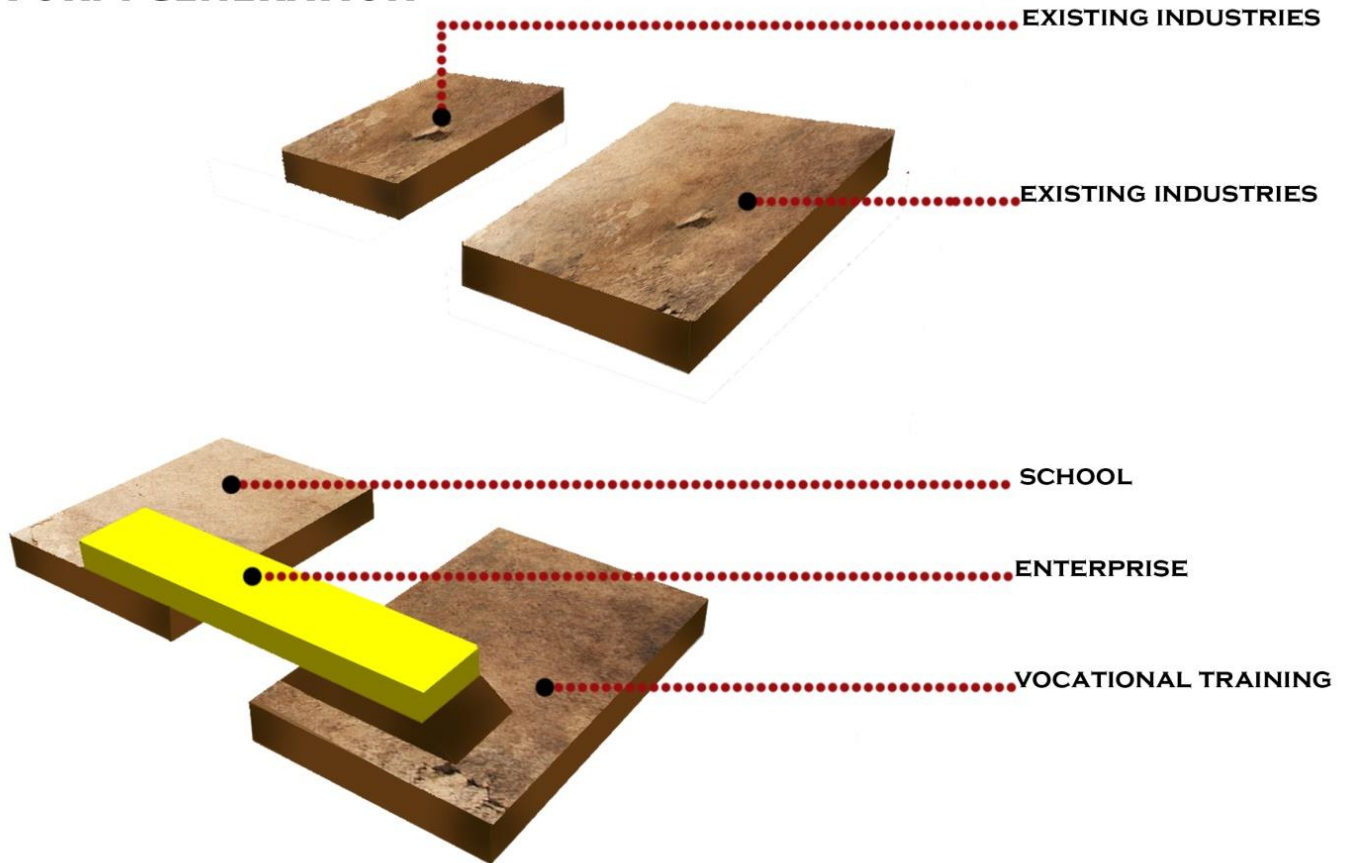


Fig 7.2.b Form generation (source: Author)

As the site is full of green area I didn't want to hamper it. It will be a breathing spot for the outsiders as well as the insiders. This was another constraint.



Fig 7.2.c Site sketch (Source: Author)



Fig 7.2.d Conceptual section and view from the river.(Source: Author)

While working along with them first I wanted to understand their psychology. I studied Erikson's child psychology and tried to match that up with what a child requires and how does he or grows up. According to that my zoning came. "Shayambhar" intends to give these underprivileged children the platform where they can receive education and at the same time help their families by doing some productive works. It is hoped that in future the children will be educated and at the same time they will become self-dependent.

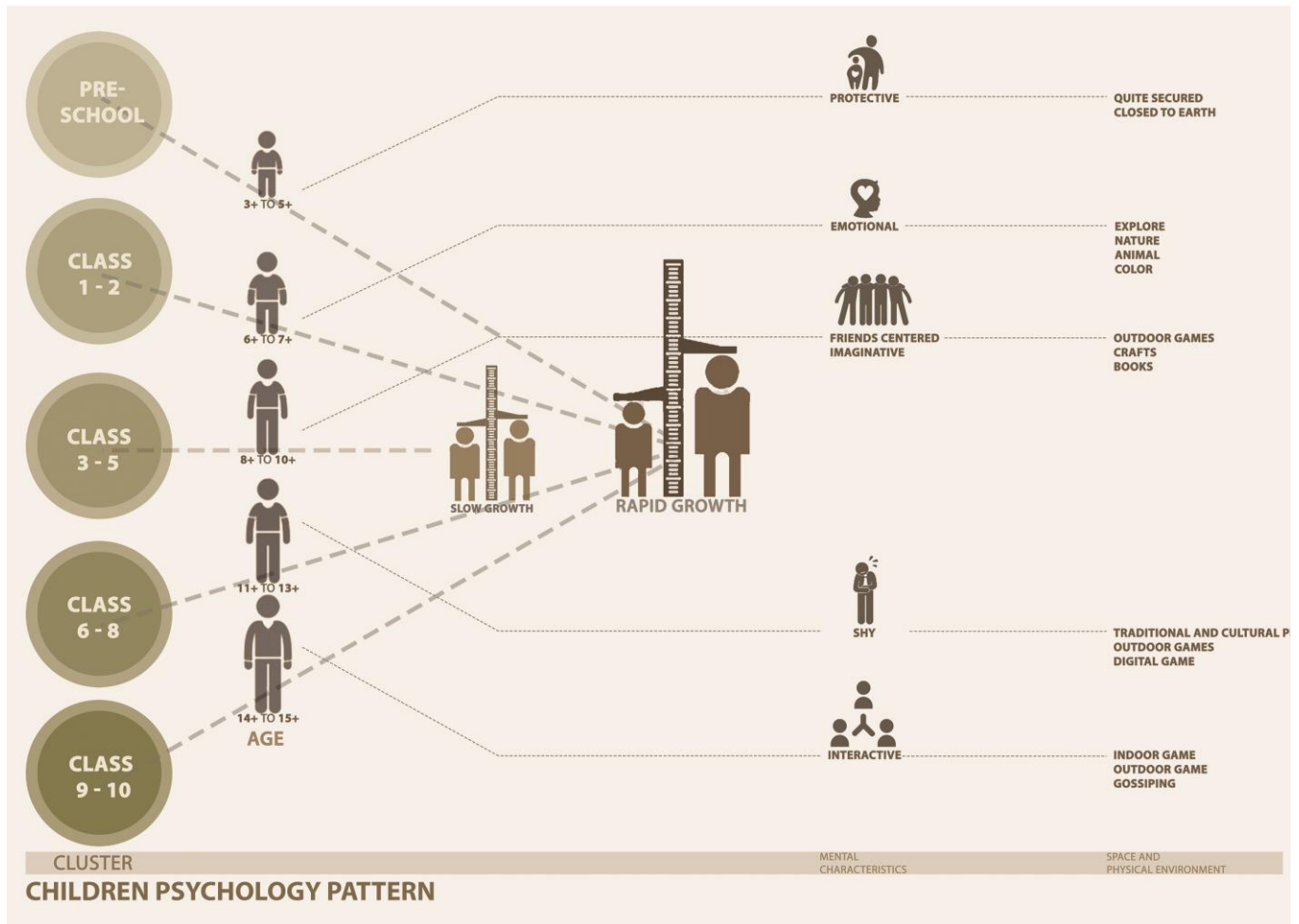
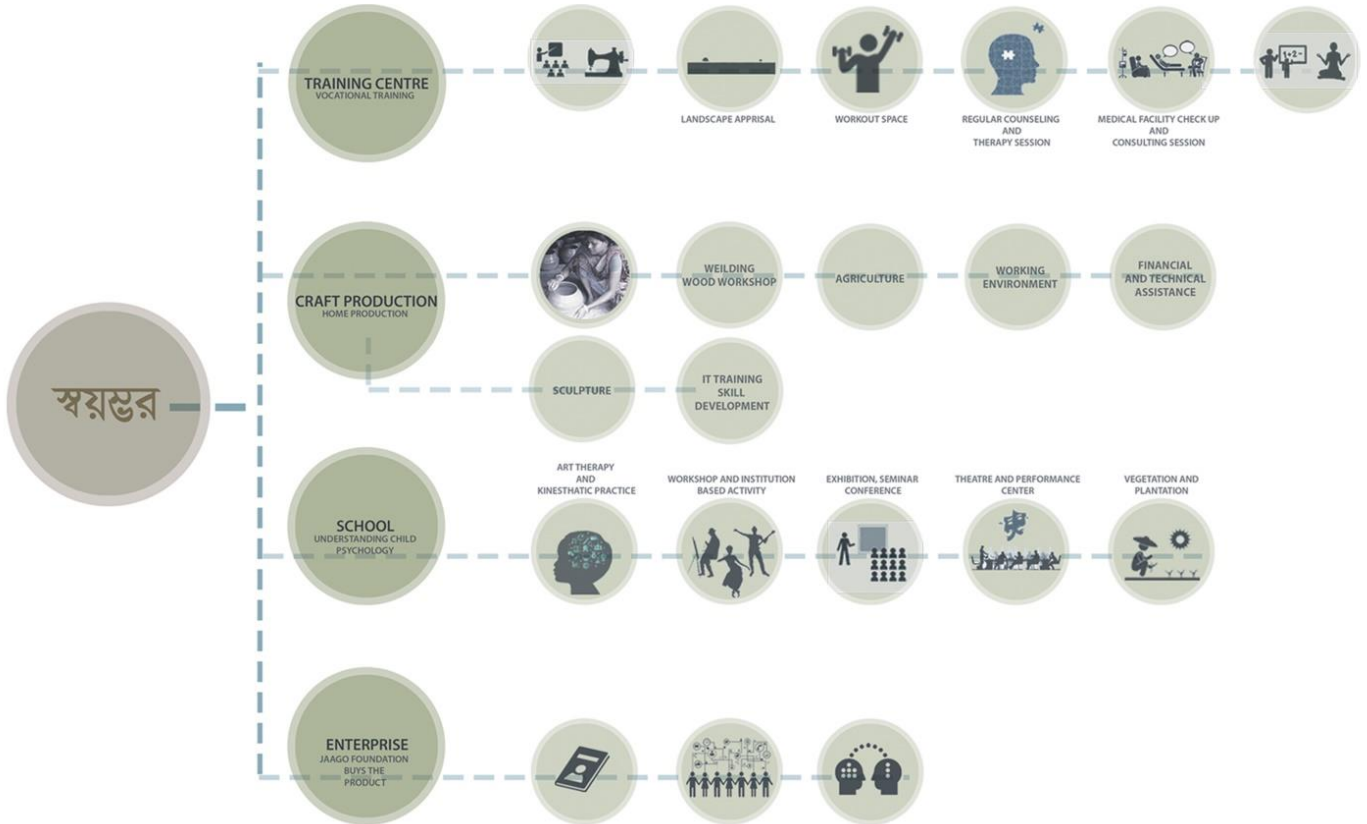


Fig 7.2.e Child psychology pattern of underprivileged children (source: Author)

Then I undergo the whole idea and try to find out what does it demand. According to my study I came to know that the word "Underprivileged" refers to a group of people deprived through social and economic condition of some of the fundamental rights of all members of a civilized society. Our society can see many people who are totally deprived of most their basic rights due to poverty. If we think of the underprivileged children, they drop off their school only to run their families, whereas the other children of the same society who are well off are blessed to continue their education. Those underprivileged children have no other choice than leaving the school

and work for the family to earn some money. Most of them want to continue their education but are helpless. Being children of a society where others can get the light of education, they do not deserve to be deprived of this basic need. So this center will have some objectives like-



WHAT THIS CENTER AIMS TO PROVIDE

Fig 7.2. f Aim of the center (Source: Author)

After that I derived a sustainable cycle for the enterprise which will eventually help the children and other local investor to be self-dependent.

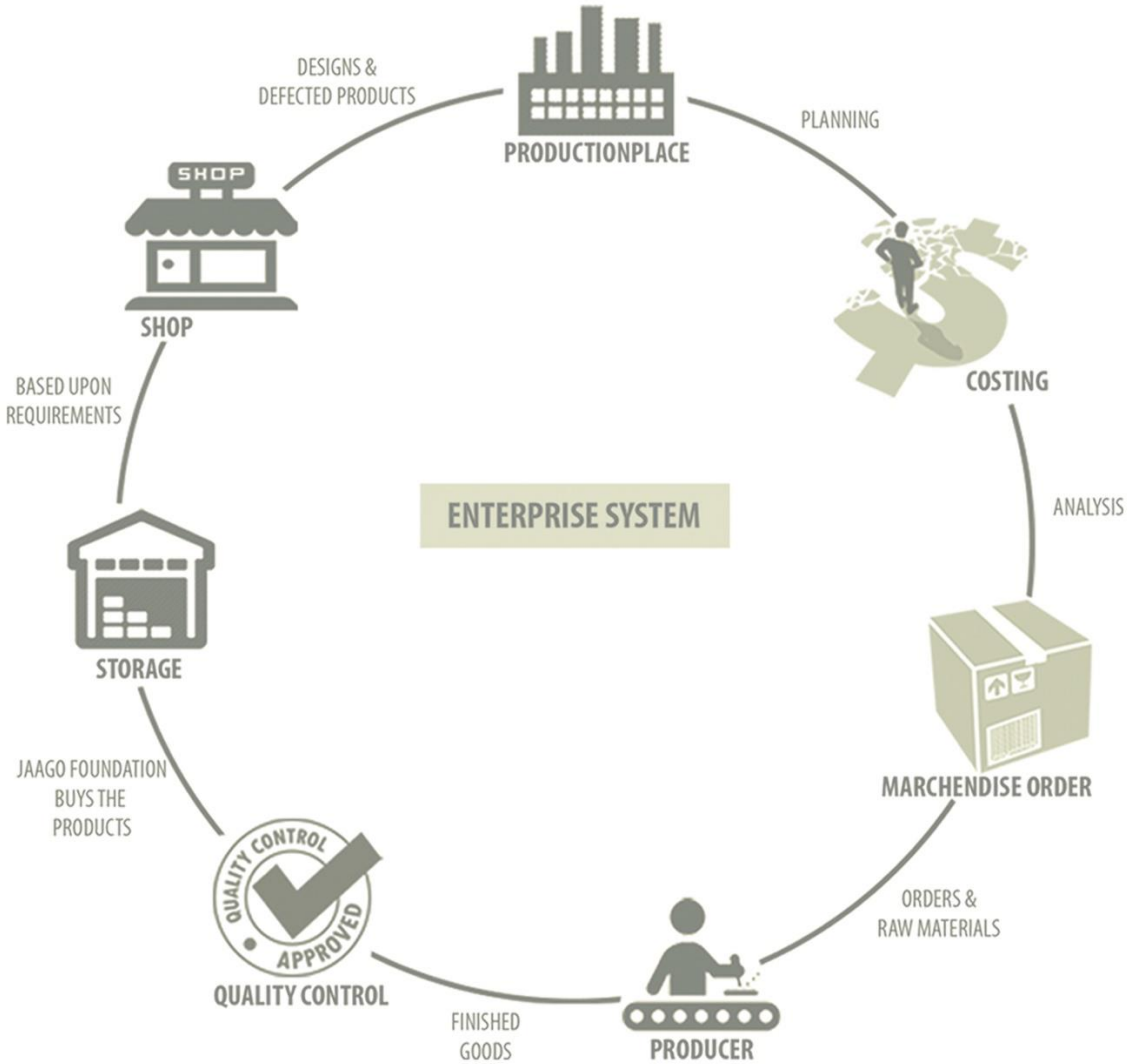


Fig 7.2. g Enterprise system (Source: Author)

7.3 Form Development & Programmatic Layout

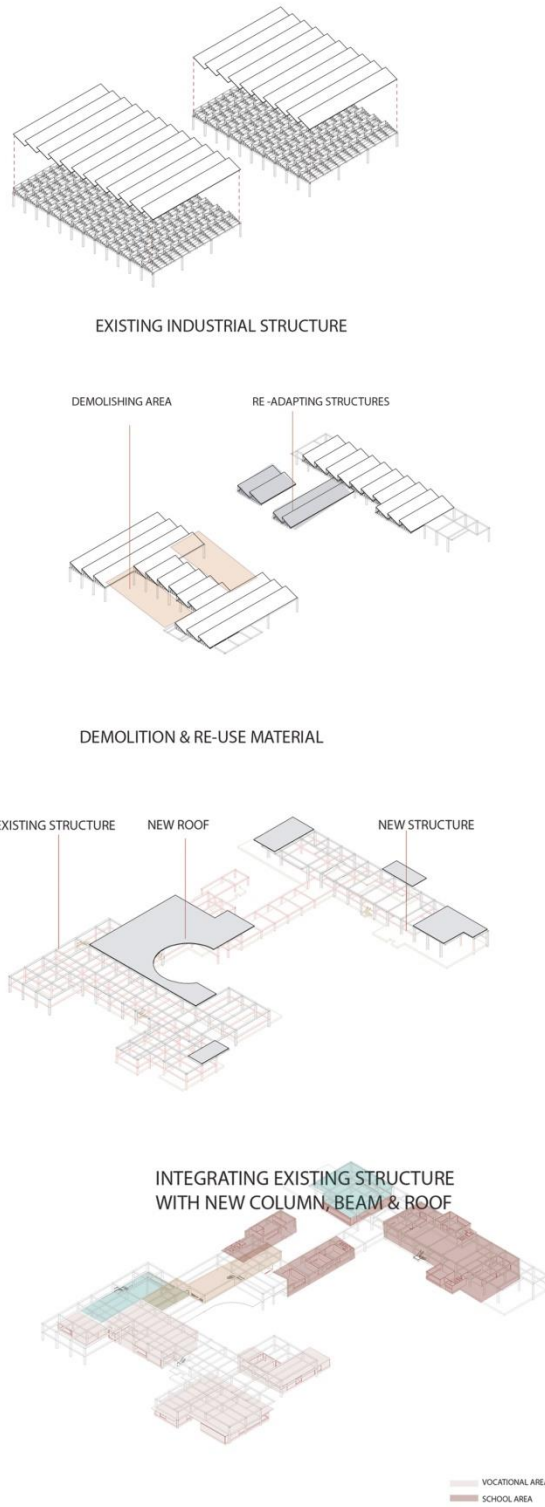


Fig 7.3. a. Structural development (Source : Author)



Fig 7.3. b. Plan development (Source : Author)

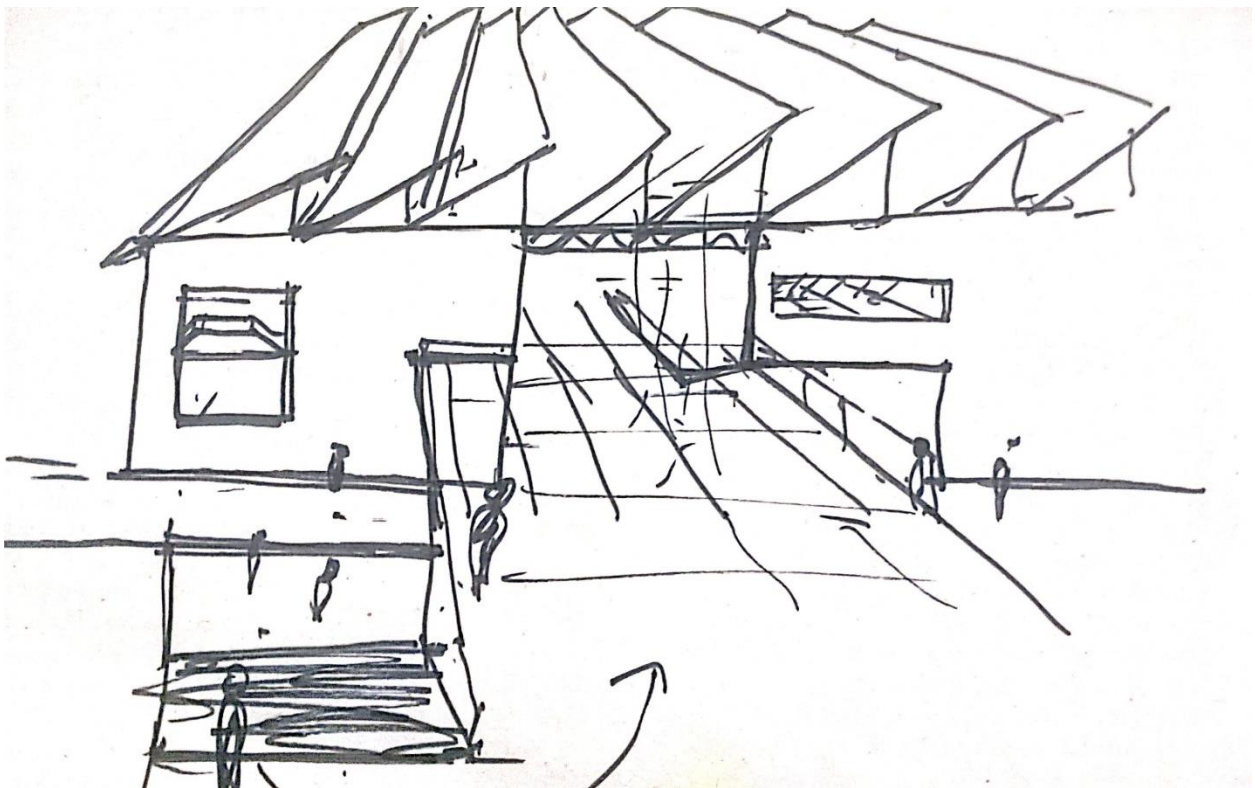


Fig 7.3.c Conceptual space (Source: Author)



Fig 7.3.d Programmatic zoning and circulation (Source: Author)

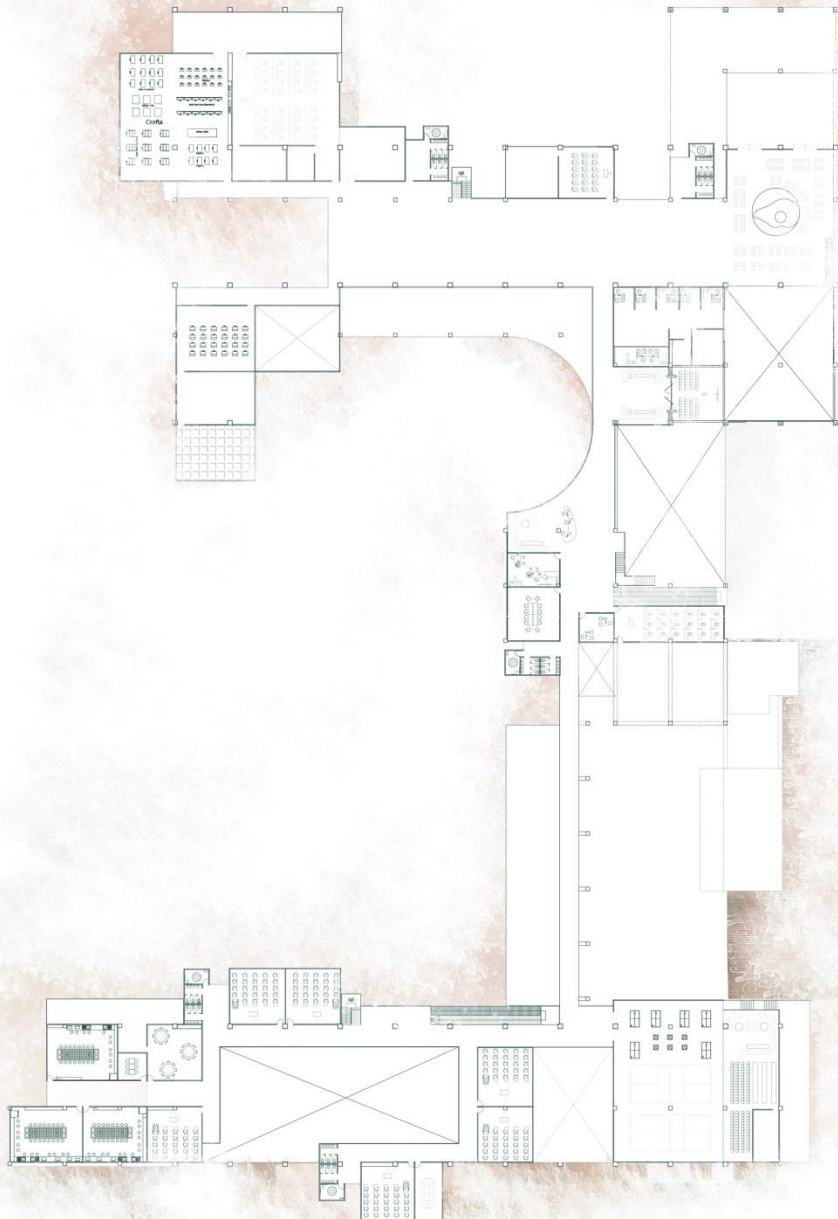
7.4 Final Design Drawings



Fig 7.4. Site plan (Source: Author)



Fig 7.4.a Ground floor plan (Source: Author)



FIRST FLOOR PLAN
SCALE=1/16"=1'



Fig 7.4.b First floor plan (Source: Author)



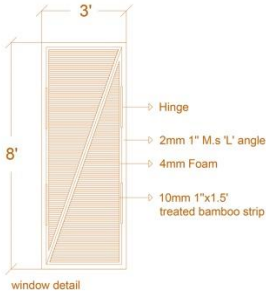
SECTION AA



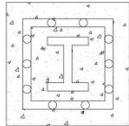
SECTION BB

Fig 7.4.c Section (Source: Author)

DETAILS



TRUSS JOINT



COLUMN BRACING FOR RETROFITTING

Fig 7.4.d Detail drawing (Source: Author)

WEST ELEVATION



Fig 7.4.e Elevation (Source: Author)

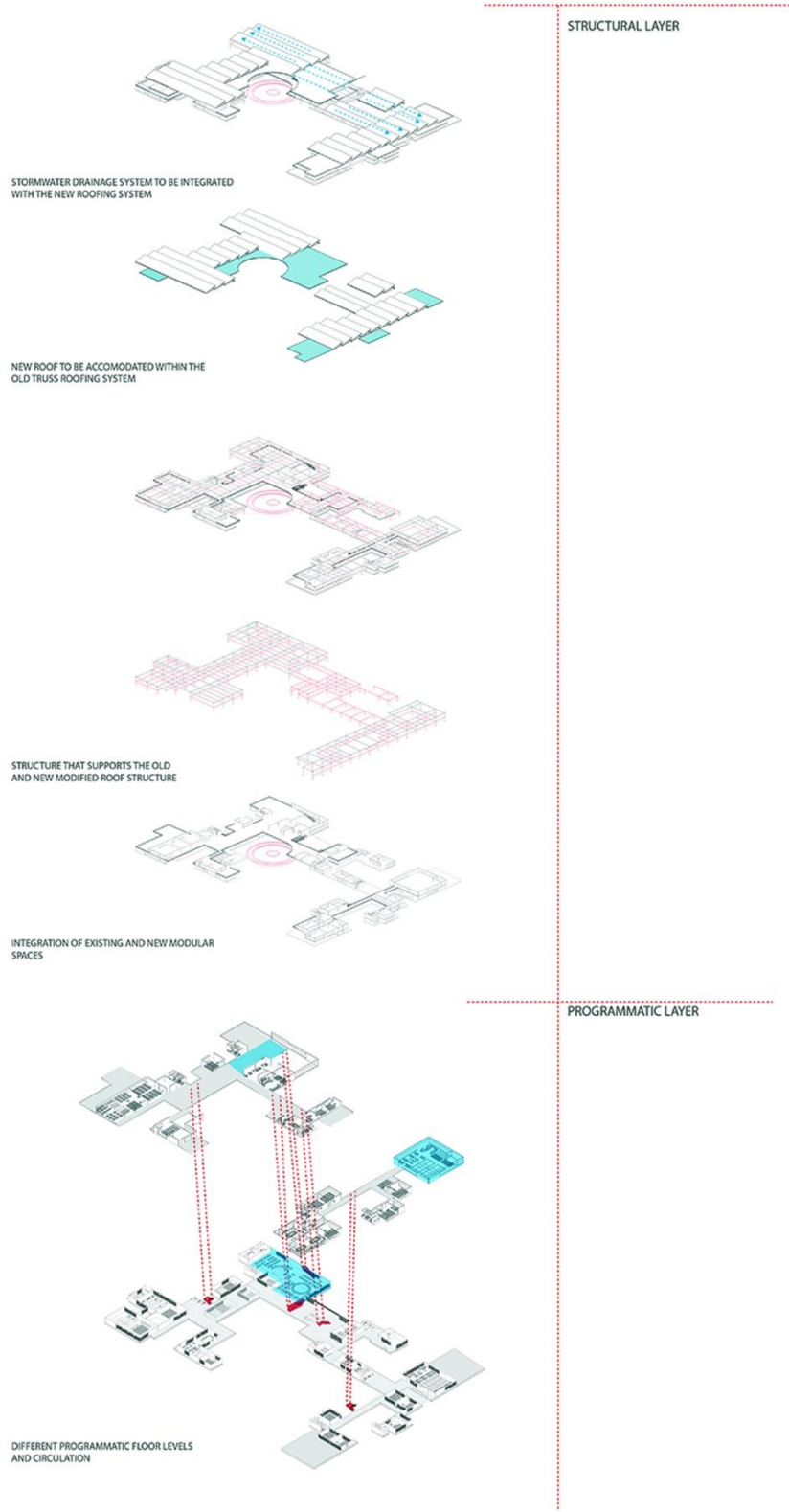


Fig 7.4.f Axonometric view – Structural And programmatic layer (Source: Author)



Fig 7.4.g Aerial view –Source: Author)

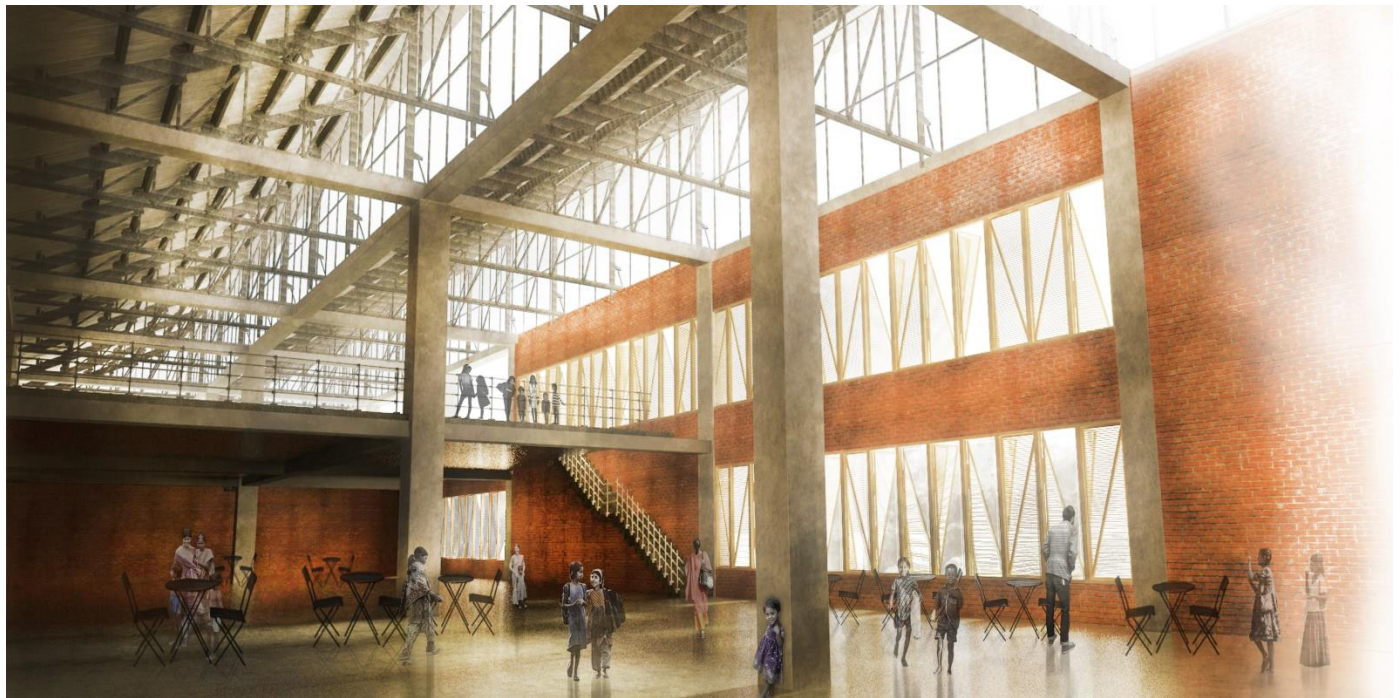
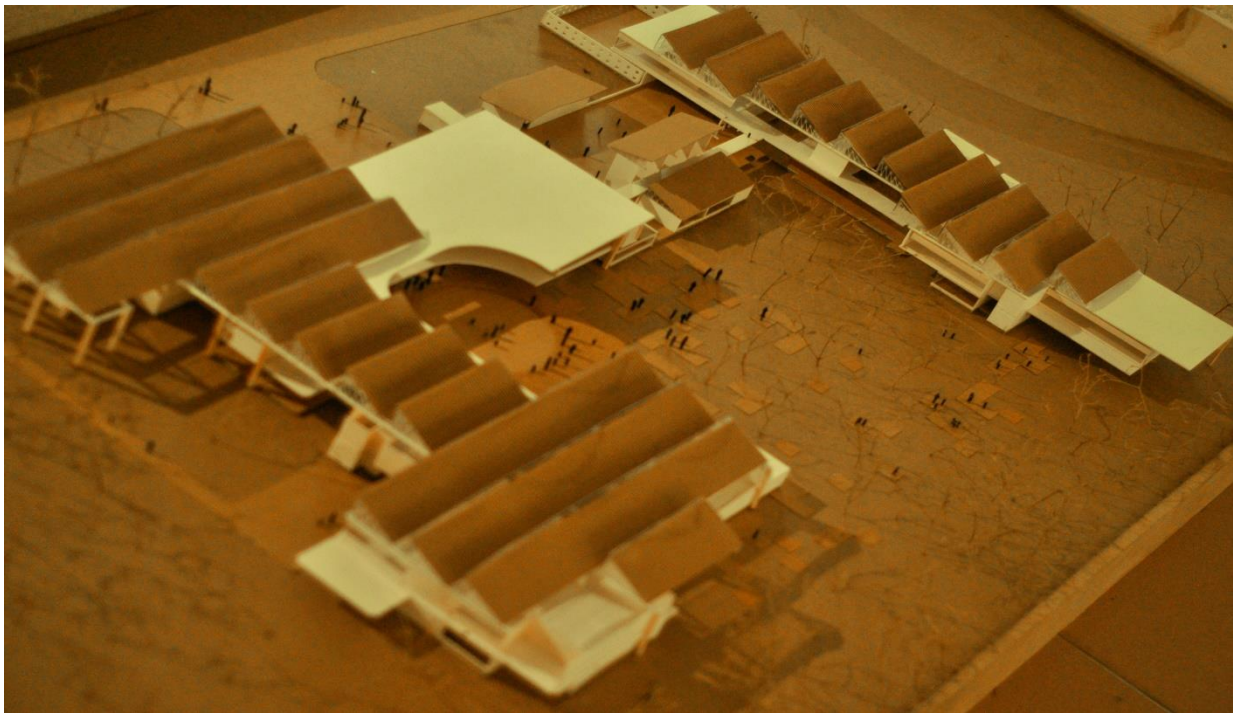
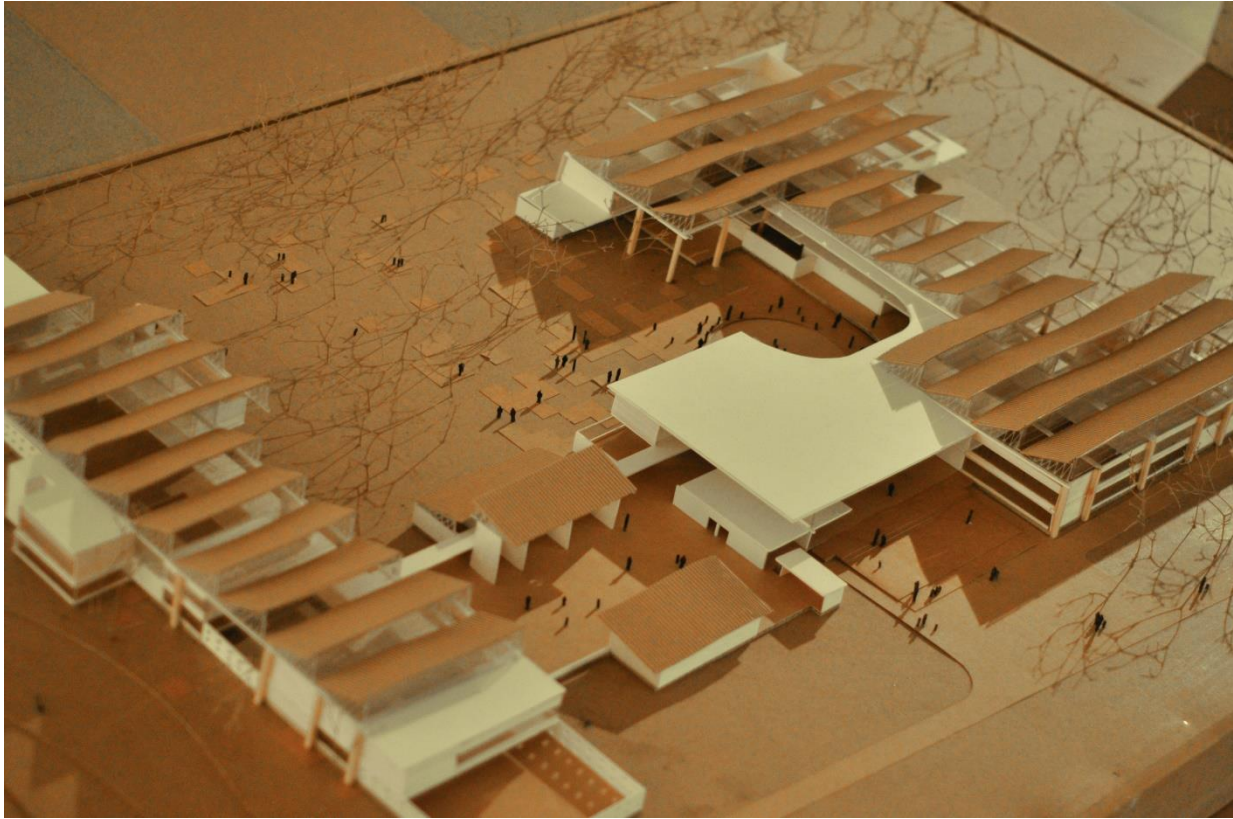


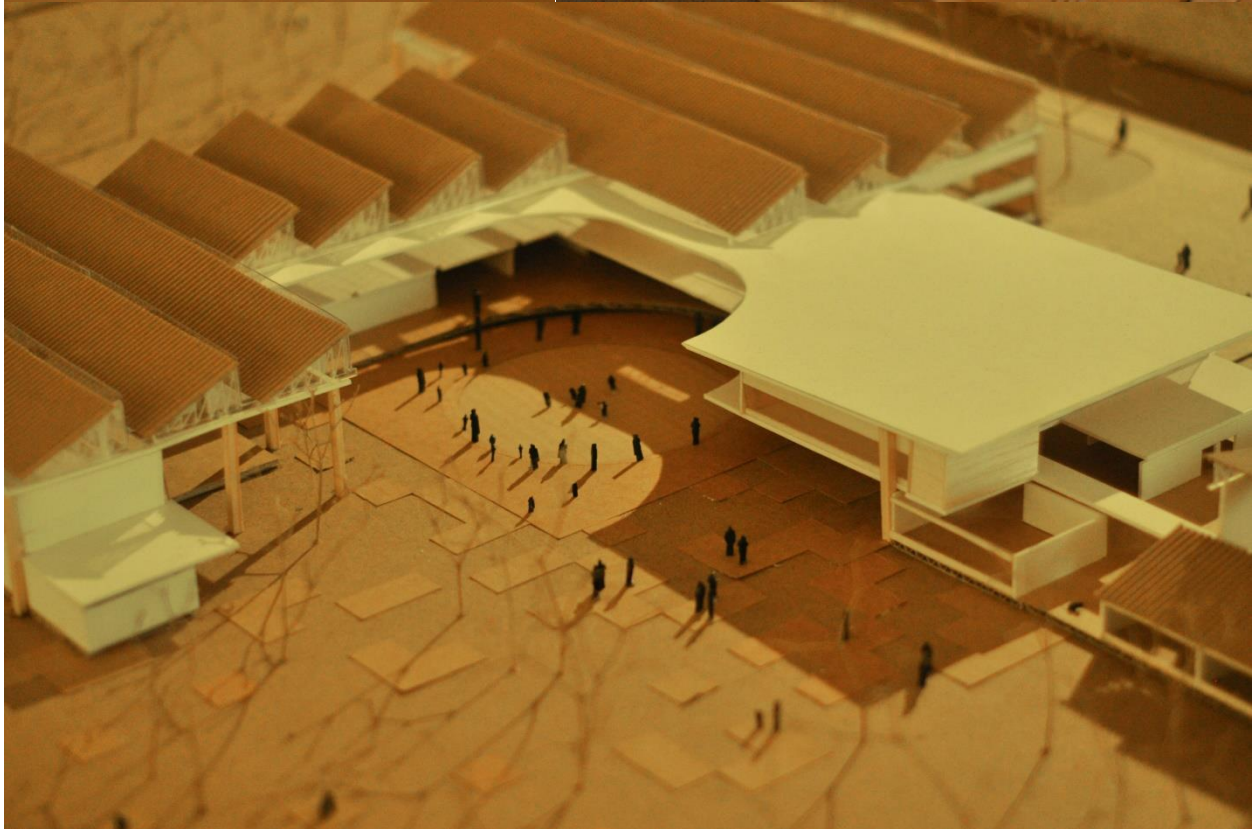
Fig 7.4 h Rendered view (Source: Author)



Fig 7.4 i Rendered view (Source: Author)

7.5 Final design models:





Conclusion

The journey of five years hasn't been easy for me. I had many ups and down within these years. I always wanted to do something for the people around me. Most of the people around us think that architecture is a subject of luxury. Only the rich people or elites can afford us. Through my journey of architecture I came to learn that it's not at all true. Rather it's a duty of an architect to facilitate a human being. The people who we call underprivileged are really not different from us. The only difference is they are not fortunate enough to get enough opportunities. I think as an architect it's our duty to be sensible about them. We have to facilitate them to that extend which is possible for us. All the phases of this was done by being sensitive towards the underprivileged children. Because I believe if these children are nurtured properly and given opportunities they can be a true asset for the development of our country.

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